

Industrial IoT Gateway BL101 BL103



BLIIOT MAKE IIOT EASIER

BL101 BL103 User Manual

Version: V1.0

Date: 2022-8-31

Shenzhen Beilai Technology Co.,Ltd

Website: https://www.bliiot.com



Foreword

We appreciate your use of BACnet IoT Gateway BL103 from Beilai Technology Co., Ltd. You can rapidly understand how to use and operate this product by reading this user manual.

Copyright

Shenzhen Beilai Technology Co., Ltd. owns the rights to this document. No unit or person may copy, distribute, or reproduce any part of this manual in any way without the prior consent of Beilai Technology, and Beilai Technology will be held liable for any violations.

Disclaimers

This document is only intended to help the reader use this product. The products and texts described in this document are constantly being developed and improved, and our company reserves the right to make updates and revisions to the product specifications at any time and without notice. This product is primarily used for data transmission in industrial Ethernet networks and data transmission in 4G networks. Please use the product in accordance with the parameters and technical specifications specified in the manual, as well as the precautions that should be taken when using it, and Beilai Technology will not be liable for property or personal injury caused by abnormal or improper use of the product.

Revision History

Update Date	Version	Description	Owner
August 31, 2022	V1.0	First Edition	HYQ



Content

1 Product Introduction	7
1.1 Overview	7
1.2 Application Diagram	9
1.3 Packing List	
1.4 Features	12
1.5 Technical Parameters	
1.6 Model List	15
2 Hardware Description	16
2.1 Outline Dimension	16
2.2 Power Supply Interface	17
2.3 SIM and SD Card Slot	17
2.4 Debug and Firmware Upgrade Interface	17
2.5 Gateway Grounding	17
2.6 4G Antenna Connection Port	
2.7 LED Indicator Light	
2.8 Reset Button	19
2.9 COM Port and Power Output Interface	19
2.10 WAN and LAN	20
3 Installation	20
3.1 Wall-Mounting(Optional)	
3.2 DIN Rail Mounting(Optional)	
4 Configuration Software Instructions	21
4.1 Login to Configuration Software	21
4.1.1 Open Configuration Software	22
4.1.2 Search for Gateway	
4.1.3 Connecting Gateway	23
4.2 Configuration Instructions	24
4.2.1 System Features	24
Shenzhen Beilai Technology Co., Ltd.	V1.0

Industrial IoT Gateway BL101 BL103



4.2.2 Advanced Settings
4.2.3 COM Port Introduction
4.2.3.1 COM Port Attribute Configuration
4.2.3.2 Add COM Port Devices
4.2.3.3 Add COM Port Device Data Point
4.2.4 LAN Port Introduction
4.2.4.1 LAN Port Attribute Configuration
4.2.4.2 Add LAN Port Device
4.2.4.3 Add LAN Port Device Data Point
4.2.5 WAN Port Introduction
4.2.5.1 WAN Port Attribute Configuration
4.2.5.2 Add WAN Port Devices
4.2.5.3 Add WAN Port Device Data Point
4.2.6 4G Introduction
4.2.7 OpenVPN Introduction
4.2.8 Alarm and Event Configuration
4.2.8.1 Alarm Points Configuration
4.2.8.2 Alarm Event Configuration
4.2.9 Task Schedule Configuration
4.2.10 Data Services
4.2.10.1 Transparent Transmission
4.2.10.2 Modbus RTU to Modbus TCP 47
4.2.10.3 Modbus TCP Server
4.2.10.4 BACnet/IP
4.2.10.5 OPC UA
4.2.11 Cloud Platform
4.2.11.1 MQTT Client
4.2.11.2 MQTT Client II
4.2.11.3 Alibaba Cloud
4.2.11.4 HUAWEI Cloud
Shenzhen Beilai Technology Co., Ltd. V1.0

Industrial IoT Gateway BL101 BL103

C BLIIOT	
MAKE IIOT EASIER	

4.2.11.5 AWS(Amazon Web Service)	
4.2.11.6 King Pigeon Cloud via MQTT64	
4.2.11.7 King Pigeon Cloud via Modbus66	
5 BL103 Gateway Application Example	
5.1 Modbus Protocol Devices Data Acquisition	
5.1.1 M140T and S475 Connect to BL10369	
5.1.2 COM Port Configuration for Data Acquisition70	
5.1.2.1 COM Port Configuration	
5.1.2.2 Add COM Port Device M140T71	
5.1.2.3 Add M140T Data Point72	
5.1.3 Ethernet Port Configuration for Data Acquisition	
5.1.3.1 LAN Port Configuration73	
5.1.3.2 Add LAN Port Device S475 74	
5.1.3.3 Add S475 Data Point75	
5.1.4 Data Upload to Various Platform	
5.2 Electricity Meter Data Acquisition	
5.2.1 COM Configuration for Electricity Meter Data Acquisition	
5.2.1.1 COM Port Configuration	
5.2.1.2 Add COM Port Electricity Meter77	
5.2.1.3 Add Electricity Meter Data Point	
5.2.2 Ethernet Port Configuration for Electricity Meter Data Acquisition	
5.2.3 Data Upload to Various Platform	
5.3 BACnet Devices Data Acquisition	
5.3.1 COM Configuration for BACnet MS/TP Devices Data Acquisition	
5.3.1.1 COM Configuration79	
5.3.1.2 Add COM Port BACnet MS/TP Device	
5.3.1.3 Add BACnet MS/TP Device Data Points	
5.3.2 Ethernet Configuration for BACnet MS/TP Devices Data Acquisition	
5.3.2.1 WAN Port Configuration	
5.3.2.2 Add WAN Port BACnet/IP Devices	
Shenzhen Beilai Technology Co., Ltd. V1.0	

Industrial IoT Gateway BL101 BL103

	B
C BLIIOT	-
MAKE IIOT EASIER	2

5.3.2.3 Add BACnet/IP Devices Data Points	84
5.3.3 Data Upload to Various Platform	86
5.4 Data Upload to Various Platform	86
5.4.1 Modbus TCP Server Configuration	86
5.4.2 View and Send Command by KingView	87
5.4.3 BACnet/IP Configuration	90
5.4.4 View and Send Command by KEPServerEX 6	92
5.4.5 OPC UA Configuration	94
5.4.6 View and Send Command by UaExpert	95
5.4.7 MQTT Client Configuration	97
5.4.8 View and Send Command by MQTT.fx	99
5.4.9 Alibaba Cloud Configuration1	03
5.4.10 View and Send Command by Alibaba Cloud1	04
5.4.11 HUAWEI Cloud Configuration1	08
5.4.12 View and Send Command by HUAWEI Cloud 1	10
5.4.13 AWS(Amazon Web Service) Configuration1	13
5.4.14 View and Send Command by AWS1	14
5.4.15 King Pigeon Modbus Cloud Configuration 1	16
5.4.16 View and Send Commands by King Pigeon Cloud 1	17
5.4.17 King Pigeon MQTT Cloud Configuration1	20
5.4.18 View and Send Command by King Pigeon Cloud	21
5.4.19 King Pigeon MQTT Data Format1	24
6 Firmware Upgrade	27
7 Warranty	28
8 Technical Support	28



Difference Between BL101 and BL103

BL103 BACnet IoT gateway add BACnet protocol compare to BL101 Modbus IoT gateway, the hardware of these two models is the same.

BL101 downlink support: Modbus RTU Master, Modbus TCP Master, DL/T645, etc.

BL101 uplink support: Modbus TCP, MQTT, OPC UA, Huawei Cloud IoT, Ali Cloud IoT,

AWS IoT, ThingsBoard, Sparkplug B, King Pigeon Cloud and other protocols.

BL103 downlink add BACnet/IP and BACnet MS/TP protocols compare to BL101

BL103 uplink protocol add BACnet/IP protocol compare to BL101

1 Product Introduction

1.1 Overview

BL103 BACnet gateway is an economical IoT gateway for building automation and HVAC control systems that converts protocols such as Modbus RTU, Modbus TCP, DL/T645, BACnet IP, BACnet MS/TP to Modbus TCP, OPC UA, MQTT, BACnet IP, Huawei Cloud, Amazon Cloud, Alibaba Cloud, ThingsBoard, King Pigeon Cloud and other protocols.

BL103 Downlink Support: Modbus RTU Master, Modbus TCP Master, DL/T645, BACnet IP, BACnet MS/TP, and other protocols.

BL103 Uplink Support: Modbus TCP, MQTT, OPC UA, BACnet IP, Huawei Cloud, AWS Cloud, Alibaba Cloud, ThingsBoard, Sparkplug B, King Pigeon Cloud and other protocols.

BL103 uses an embedded ARM MCU, and it is built on a stable Linux OS system. It has one RS485 (optional RS232) serial port input, two power inputs, one power output, two Ethernet ports (WAN and LAN), and two USB ports, support SIM and SD cards. Internet access via 4G network or Ethernet, with high speed and low latency.

BL103 has a powerful protocol conversion function that allows it to acquire multiple protocols at the same time, including BACnet MS/TP, BACnet/IP, Modbus RTU, Modbus TCP, and DL/T645. Uplink support BACnet/IP, Modbus TCP, MQTT, OPC UA protocols. Cloud drivers such as Huawei Cloud, Ali Cloud, King Pigeon Cloud, Amazon Cloud, Thingsboard Cloud, Sparkplug B, and others can connect directly to popular cloud platforms. Multiple platforms and master computer systems can be online at the same time.

BL103 supports TSL\SSL encryption for data security.

Shenzhen Beilai Technology Co., Ltd.



BL103 supports remote gateway management or configuration through OpenVPN channel. BL103 supports routing function as well as cascade switch data acquisition to acquire data from more industrial equipment, with fully functional software covering most application scenarios. Users only need to go through a simple setup to use the user-friendly configuration interface adhered to by BLIIoT, such remote configuration, remote firmware upgrade, etc. BL103 features a fastening structure, a redundant power supply, and standard DIN35 rail mounting.



1.2 Application Diagram

BL103 Application Diagram







1.3 Packing List

Before installing and using BL103 gateway, please confirm that the following materials are in the box. Please contact sales representative if any of the items missing or damaged. The following pictures are for reference only, the actual product may be different from the picture because of the updating, please refer to the actual product.

• 1x Gateway



• 1x 4PIN 3.5mm wiring terminal for power input



• 1x 5PIN 3.5mm wiring terminal for power output



• 1 x 4G SMA Cellular Network Antenna





• 2 x Wall-Mounting Clip Kit(Optional, Please noted if you need)



• 1 x Din Rail Mounting Clip Kit(Optional)



• 1 x User Manual(PDF)

Note: Please scan the card QR code on the card to download it

• 1 x SIM card eject pin



• 1 x Product Qualification Certificate



• 1 x Warranty Card





1.4 Features

> Downlink support: Modbus RTU Master, Modbus TCP Master, DL/T645,

BACnet/IP, BACnet MS/TP, and other protocols.

Uplink support: Modbus TCP, MQTT, OPC UA, BACnet/IP, HUAWEI Cloud, Alibaba Cloud, AWS, ThingsBoard, Sparkplug B, King Pigeon Cloud, and others.

9-36V DC power supply with terminal wiring, and 2 power input interfaces protected against reverse connection, either interface can be used.

> 1 Power Output, output voltage is equal to the input voltage

▶ 1 RS485(RS232 is optional)

Serial port baud rate support 1200bps-115200bps; Stop bit support 1, 2; Data bit support 7, 8; Parity bit support None, Odd, Even

➢ 2 RJ45 Ethernet Ports, 1LAN and 1WAN, WAN and LAN ports can acquire data from devices directly or via cascade switches, with link and data indicators. Built-in isolation transformers for network ports, with electromagnetic isolation up to 2KV.

- Support POE PD(optional function), save wiring cost.
- Support TSL\SSL encryption to protect data security
- Support routing function
- Support 4G network with APN setting; Ethernet access is the priority method when

connect to external network, it will switch to 4G automatically if Ethernet disconnected

- Support remote management or configuration through OpenVPN channel
- > Support sending configuration files remotely via MQTT to change the configuration
- > Support Modbus RTU to Modbus TCP, transparent transmission

▶ RESET button to restore the factory settings (long press RESET in the power-on

state until the RUN indicator goes off) to prevent parameter setting errors

- Support software watchdog with high reliability
- Support gateway timed restart

Metal case with IP30 protection, safely isolated from inner system, especially suitable for industrial control applications

Dimension: 30mm*83mm*110mm, support wall-mounting and DIN Rail mounting.



1.5 Technical Parameters

Category	Parameters	Description		
	Processor	Main frequency 300Mhz		
System	Storage	128MB(can be extended to 1G)		
	Memory	64MB		
	Input Voltage	DC 9~36V		
Power Supply	Power Consumption	Normal: 85mA@12V, Max: 117mA@12V		
	Wiring	Support reverse wiring prevention protection		
	Specification	2 x RJ45, 10/100Mbps, Adaptive MDI/MDIX.		
Ethernet Port	Protection	ESD ±16kV(Contact), ±18kV(Air) EFT 40A (5/50ns); Thunder strike 6A (8/20μs)		
	Quantity	1 x RS485(RS232 is optional)		
	Baud Rate	1200bps-115200bps		
	Data Bit	7,8		
Serial Port	Parity Bit	None, Even, Odd		
	Stop Bit	1,2		
	Protection	ESD ±8kV(Contact), ±15kV(Air); EFT 2KV, 40A (5/50ns) 。		
Power Output	Output Voltage	$1 \times 9 \sim 36 \text{ V DC}(\text{equal to the input voltage})$		
	Quantity	1		
SIM Card Slot	Specification	Drawer Type, Support 1.8V/3V SIM/UIM card (NANO)		
	Protection	Built-in 15KV ESD Protection		
SD Card		Reserved for future development		
	Quantity	1xDownload program, 1xProgram debugging		
USB Port	Specification	Micro USB OTG		
	Protection	Over current protection		
	Antenna Quantity	1		
	Antenna Type	SMA Hole		
4G (Optional)	L-E	GSM/EDGE:900,1800MHz WCDMA:B1,B5,B8 FDD-LTE:B1,B3,B5,B7,B8,B20 TDD-LTE:B38 B40 B41		
		GSM/EDGE:900.1800MHz		
		WCDMA:B1.B8		
	L-CE	TD-SCDMA:B34.B39		
		FDD-LTE:B1,B3,B8		
		TDD-LTE:B38,B39,B40,B41		
	L-A	WCDMA:B2,B4,B5		



		FDD-LTE:B2,B4,B12		
		GSM/EDGE:850,900,1800MHz		
	I ATT	WCDMA:B1,B2,B5,B8		
	L-AU	FDD-LTE:B1,B3,B4,B5,B7,B8,B28		
		TDD-LTE:B40		
	LAE	WCDMA:B2,B4,B5		
		FDD-LTE:B2,B4,B5,B12,B13,B14,B66,B71		
		GSM:900,1800		
	CAT-1	FDD-LTE:B1,B3,B5,B8		
		TDD-LTE:B34,B38,B39,B40,B41		
		Always on when powered on, flickering when		
	RUN	the system is running, and goes off when the		
		system is not running.		
		Flickering when communicating with Ethernet,		
Indicator	NET	always on when communicating with 4G, and		
Indicator		goes off when unable to communicate.		
	TVD	Flickering when sending data, otherwise goes		
		off.		
	DVD	Flickering when receiving data, otherwise goes		
	KAD	off.		
	Internet Protocol	IPV4, TCP/UDP, DHCP, DNS, etc.		
	IP Retrieving	Static IP/DHCP		
	Data	Support transparent transmission		
	DNS	Support Domain Name resolution		
Software	Conformation	PC software configuration, Support WIN XP,		
	Configuration	WIN 7, WIN 8 and WIN 10		
	Network Cache	Transmitting: 8Kbyte; Receiving: 8Kbyte		
	Login Package	Support custom login package		
	Heartbeat Package	Support custom heartbeat package		
	MTBF	≥100,000 hours		
		EN 55022: 2006/A1: 2007 (CE &RE) Class B		
		IEC 61000-4-2 (ESD) Level 4		
		IEC 61000-4-3 (RS) Level 4		
Safety	EMC	IEC 61000-4-4 (EFT) Level 4		
5		IEC 61000-4-5 (Surge)Level 3		
		IEC 61000-4-6 (CS)Level 4		
		IEC 61000-4-8 (M/S) Level 4		
	Others	CE FCC		
	Working	-40~80°C 5~95% BH		
Environment	Storage	-40~85°C 5~95% RH		
	Case	Matal Case		
	Dimension	Wittill Case 30mm×83mm×110mm/(I *W/*U)		
Others	Protection			
Others	Net Weight	201.2α		
		291.2g		
	Iviounting	DIN Kall Wounting/ wall-mounting		



1.6 Model List

Model	WAN	LAN	COM (Default RS485) (RS232 is an option)	OPC- UA	4G	Open VPN	POE PD
BL101 BL103	~	~	~	×	~	×	Optional
BL101E BL103E	~	~	~	×	×	×	Optional
BL101UA BL103UA	~	~	4	~	×	×	Optional
BL101Pro BL103Pro	~	~	~	~	~	~	Optional

Note: Difference Between BL101 and BL103

BL103 BACnet IoT gateway add BACnet protocol compare to BL101 Modbus IoT gateway, the hardware of these two models is the same.



2 Hardware Description

2.1 Outline Dimension





2.2 Power Supply Interface



2 Channels 9-36V DC power input with reverse connection protection

2.3 SIM and SD Card Slot



Make sure the device is powered off when inserting or removing the SIM card, then put the card eject pin into the card slot hole, and press slightly to push the card slot out. Make sure device is placed flatly like above picture when inserting or removing SIM card

2.4 Debug and Firmware Upgrade Interface



DEBUG is program debugging port, DOWNLOAD is firmware upgrading interface

2.5 Gateway Grounding



Make sure gateway grounded with grounding screw to prevent electromagnetic interference before connecting gateway



2.6 4G Antenna Connection Port



2.7 LED Indicator Light



LED Indicator Introduction				
Item Status Description				
DIDI	Dumning	Flickering	Running Normally	
KUN	Kunning	Off	Equipment Failure	
	D41. arm at	Flickering	Ethernet working	
NET		Always on	4G network working	
	/40	Off	No network	
ТХ	Data	Flickering	Data is transmitting	
	transmit		through serial Port	
		Off	No data transmitting	
RX]	Data	Flickering	Data is receiving	
	Data		through serial port	
	Receive	Off	No data receiving	
Note: RUN indicator always on once it's powered on, please				
check whether there is a issue with power or it's reversely				
connected when the light goes off				



2.8 Reset Button

When the gateway is running normally, use the card eject pin to continuously press the Reset reset button for about 10 seconds until the RUN indicator goes off, the gateway reboots to restore the factory default settings.



2.9 COM Port and Power Output Interface



RS485(or RS232) and Power Output			
Item	Description		
VOUT+	Power supply output positive		
VOUT-	Power supply output negative		
B/RX	RS485 Data-(B)/Receiving Data		
A/TX	RS485 Data+(A)/Transmitting Data		
GND	Grounding		
Note: Output voltage is equal to the input voltage Range:			
DC 9~36V			



2.10 WAN and LAN



Ethernet Port								
Indicator	Color	Status	Description					
Network	Cream	Always on	100Mbps mode					
Speed	Green	Off	10Mbps mode					
N a trava ala		Always on	Network Connected					
Link	Yellow	Flickering	Data is transmitting					
		Off	Network Disconnected					

3 Installation

Gateway can be places on flat surface, mounted on the wall, and DIN Rail Mounted

3.1 Wall-Mounting(Optional)



Wall-Mounting



3.2 DIN Rail Mounting(Optional)



4 Configuration Software Instructions

4.1 Login to Configuration Software

Connect BL103 to the router or switch through WAN port with a standard cross or direct connection network cable. The IP of router or switch cannot be the same as gateway IP 192.168.3.1, WAN and LAN of gateway cannot in the same local area network, and make sure BL103 gateway and PC in the same local area network.

If you want to connect the gateway to PC directly, then use a standard cross network cable to connect through BL103 gateway LAN port (When gateway connect to PC directly, the IP of PC should be set to specified IP, the IP should be the network segment 192.168.3.1, because the factory default IP of the LAN port is 192.168.3.1; IP address, subnet mask, MAC and DNS need to be set when PC is assigned an IP.)

Note: WAN port IP is retrieved automatically, LAN port IP is 192.168.3.1 from factory setting Wiring of Connecting BL103 gateway to Router, Switch and PC:



Shenzhen Beilai Technology Co., Ltd.



4.1.1 Open Configuration Software

Double click " ^OBL10x_ConfigurationTool_V1.1.3.8.exe " to execute BL103 configuration

software, Shown as below:

BLiiot Be	iLai Indi	ustrial Ga	teway w	ww.BLiiot.com \	/1.1.3.8							σ×
) Search	Clear	S Import	Export	Read Config.	Write Config.	() Monitor	() Remote	D Log		① (中文 H	? lelp	() About

4.1.2 Search for Gateway

Click "Search" and all devices in the same local area network with the PC will appear. For example, WAN port is connected to the switch, PC and gateway are in the same local area network, and the gateway whose IP is 192.168.1.196 will be found. If there is no device found, please make sure gateway and computer is in the same local area network, and the computer UDP broadcast is normal. If the device cannot be found because of the computer network environment issues, you can enter the IP in the "IP" bar, click connect, login. Note: You should close the configuration software and reopen it when the computer changes IP or gateway.



BLiiot Be	iLai Indi	ustrial Ga	teway ww	ww.BLiiot.com \	/1.1.3.8							-	ΟX
Ø	A										A	?	1
Search	Clear	Import	Export	Read Config.	Write Config.	Monitor	Remote	Log			中文	Help	About
						C	evice Sele	ction	×				
					Model	IP		Name	Version				
					BL103Pro	192.168.1.19	6 Bei	Lai Gateway	V1.1.3				
					Device IP	8			Connect				
							Refresh						

4.1.3 Connecting Gateway

Choose the gateway device you want to configure, and double-click it(For example: double-click the gateway device whose IP is: 192.168.1.196) to enter the gateway device configuration interface. You can enter the IP and directly connect to log in if there is no display device because of the network environment.

BLiiot Be	eiLai Industrial Gate	eway wv	w.BLiiot.com	V1.1.3.8										-	σ×
© Search	Clear Import	Export	nead Config	. Write C	onfig.	() Monitor	Remote	e Log					中文	? Help	() Abou
⋳ -,∰B	L103Pro COM1 LAN		^												
	WAN			Name		Value			Cloud		Status	Port	Device Name	S	tatus
	"Å"4G		Name		BeiLai G	ateway		MQTT C	lient		•				
Þ	VPN		Time		14:07:05	08/26/202	2	MQTT C	lient II		•				
	└ OpenVPN		Mode	I	BL103Pr	ō		Ali IoT			•				
	试Alarms		Versio	m	V1.1.3			HUAWE	I IoT		•				
			4G M	odule	EC200SC	CNAAR01A	09M16	AWS lo	r°		•				
			IMEI		8686180	52294261		KingPig	eon IoT		•				
티	BDataServices		Signa	Strength	17 (Norr	mal:14-31)		KingPig	eon Modbus	ToT	•				
	- Pass Through		opera	tor	NULL										
	- Modbus RTU:	≒TCP	SIM I	CID	NULL										
	- Modbus TCP	Server	SIM S	tatus	Failed										
	- BACnet/IP														
	OPC UA														
ė.	Cloud							J [
T									Re	efresh					
	- MQTT Client I														
	- 🖓 Ali IoT														
	- HUAWEI IOT														
			× .												



4.2 Configuration Instructions

4.2.1 System Features

BLiiot BeiLai Industrial Gateway www.BLiiot.com V1.1.3.8 – 🗇 🗙							
Search Clear Import Export Read 0	Config. Write C	Config. Monitor Remo	te Log			。 中文	?iHelpAbout
白-品BL103Pro ^							
-COM1							
—— 🖾 LAN							
—@WAN	News	Webse	daud	Charles	Dent	De la Naca	Chatan
—('Å)'4G	Name	BeiLai Gateway	MQTT Client	Status	Port	Device Name	Status
	Time	14:07:05 08/26/2022	MQTT Client II				
	Model	BL103Pro	Ali IoT	•			
— 泣 Alarms	Version	V1.1.3	HUAWEI IoT	•			
	4G Module	EC200SCNAAR01A09M16	AWS IoT	•			
	IMEI	868618052294261	KingPigeon IoT	•			
	Signal Strength	17 (Normal:14-31)	KingPigeon Modbus IoT	•			
- @Pass Through	operator	NULL					
—	SIM ICCID	NULL					
→ → Modbus TCP Server	SIM Status	Failed					
- 🕀 BACnet/IP							
OPC UA							
Cloud							
- @ MQTT Client	-@MQTT Client Refresh						
- @ MQTT Client II							
- Ali loT							
- CHUAWEI IOT							

System Function							
Item	Description						
Search	Search for all BL103 gateways in the same local area network						
Clear	Open a new default configuration file						
Import	Import gateway configuration file						
Export	Export gateway configuration file						
Read configuration	Read logged in BL103 gateway configuration parameters						
	Save all configuration parameters by click "write configuration".						
Write configuration	Make sure to click "write configuration" every time after						
white configuration	modifying the configuration. The setting will be valid after device						
	restarts automatically.						
	Monitor the value of the data point of the currently connected						
Monitor	device, and the data in the "Value" item of the display data point						
	page. If it is numeric data, it is the value after multiplying the						
	coefficient.						
	System log. If there is a issue with the gateway device, you can						
Log	click to save the log file and send the file to the mailbox indicated						
	in it.						
English	Change language to English						



Help	Under development
About	Software version, Issue date, Firmware upgrade information

	Basic Information of BL103 Gateway			
Item	Description			
Name	BeiLai Gateway. Can be customized			
Time	Local time when reading the gateway			
Model	Gateway device model			
Version	Gateway device version			
4G module	Model of 4G module. If it's null, it means no 4G module			
IMEI	Device IMEI Code			
	The signal value of 4G module, if the signal value is lower than			
Signal strength	14, it means that the signal is extremely poor, and 31 is a full			
	signal.			
Operator	SIM card service provider			
SIM ICCID	Read SIM card ICCID			
SIM status	"OK" means the SIM card is successfully registered, "Failed"			
Silvi status	means it is not registered			
MOTT Client	Green light means MQTT Client is connected, gray means			
MQTTChem	MQTT Client is not connected.			
MOTT Client II	Green light means MQTT Client II is connected, gray means			
	MQTT Client II is not connected.			
	Green light means Alibaba cloud is connected, gray means			
	Alibaba is not connected.			
HUAWELLOT	Green light means HUAWEI cloud is connected, gray means			
	HUAWEI not connected.			
AWS IOT	Green light means AWS is connected, gray means AWS is not			
AWS 101	connected.			
King Pigeon IoT	Green light means King Pigeon MQTT Client is connected, gray			
	means King Pigeon MQTT Client is not connected.			
King Pigeon Modbus	Green light means King Pigeon Modbus cloud is connected,			
IoT	gray means King Pigeon Modbus cloud is not connected.			
Device online prompt	Green light indicates gateway can communicate with the slave			
box	device, gray indicates the communication fails.			
Refresh	Refresh the basic information of gateway			



4.2.2 Advanced Settings

The private network setting is to allow the dedicated Ethernet or dedicated 4G network to set the IP that can be used or the server that can be connected. If it is an ordinary Ethernet or 4G network, no settings are required.

BLiiot BeiLai Industrial Gateway www.B		– 🗗 🗙		
Search Clear Import Export Rea	ad Config Write Config Monitor Rom		中文	(?) (i) Help About
	Advanced Settings			
—('A') 4G	Private Network	Network Diagnostics		
E WWVPN				
└─ ۞ OpenVPN				
— 岱 Alarms	Private Network NULL *		ort Device Name	Status
Tasks	Keepalive IP	Ping 192.168.1.1		
DataServices	NTP Server cn.pool.ntp.org			
Pass Through				
- 🖓 Modbus TCP Server	Password	Gateway Management Platform		
OPC UA				
Cloud	Default Password : 123456	Enable		
- MQTT Client	Old Password	URL		
- MQTT Client II	New Password	User Token		
Ali loT				
- HUAWEI IOT				
- @ AWS IoT		OK Cancel		
- SkingPigeon IoT	L	UK Caller		
G KingPigeon Modbus IoT				
-{ゔ} Advanced Settings	¥			

Advanced Setting					
	Item	Description			
Private	Private network	Choose from "WAN" and "4G" according to your needs, and only configure it with a dedicated network.			
network	Keepalive IP	Dedicated IP that can be used			
	NTP Server	Dedicated connected NTP server			
Network Diagnosis	Ping	Network diagnosis, such as: Ping the gateway IP connected to the network port, you can judge whether the LAN connected to the BL103 gateway network port is normal, enter the gateway IP, click the Ping button, green means normal.			



4.2.3 COM Port Introduction

4.2.3.1 COM Port Attribute Configuration

Double click COM1 to enter COM Port Attribute configuration box.

Image: Search Clear Import Export Import Export Read Config. Write Config. Monitor Remote Log		?	1
	甲乂F	Help A	About
Image: Second part of the second part	Map Addre	ss f	Ratio

	Serial Port Properties								
Item		Description	Default						
Mode Selec	tion	Select from "Collection", "Pass through", "Modbus RTU to TCP"	Collection						
	Device Brand	Select from "Modbus", "BACnet"(No BACnet option for BL101)	Modbus						
Protocol Settings	Device Model	Select slave device according to selected brand To set the device command	Modbus RTU Polling Interval						
	Polling Interval And Time out	interval time and device return timeout time, click the button next to the device model to set it.	: 20ms Timed out: 200ms						
Serial Port	Baud	Select from 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	9600						
Settings	Stop Bit	Select from 1Bit, 2Bit	1Bit						
	Data Bit	Select from 7Bit, 8Bit	8Bit						



	Parity Bit	Select from None, Even, Odd	None
OK		Confirm COM configuration	
Cancel		Cancel COM configuration	

4.2.3.2 Add COM Port Devices

Right click COM1 and click Add to enter device configuration box. Double click it to show added device configuration information. Right click to delete device.

The byte order of the configuration data points is also set here

Note: Total 50 Modbus RTU devices can be connected through the COM ports.







BLiiot BeiLai Industrial Gateway www.BLiiot	t.com V1.1.3.8							_	ΟX
Search Clear Import Export Read C	onfia Write Confia	Monitor Remo)				⊕文	? Help	(i) About
	Variable Name	Address Type	Address	Value Unit	Data type	Varibale Kev	Map Add	ress	Ratio
- Callete									
— 🗇 WAN									
—(Å),4G									
E- WPN									
OpenVPN									
— <u>朮</u> 、Alarms									
D-DataServices									
—⊗ Modbus RTU≒TCP									
OPC UA									
E Cloud									
- MQTT Client II									
Ali loT									

Note: Device attributes are set according to the selected protocol. For example, device brand is Modbus, set attributes as below table.

Device Information							
Item		Description	Default				
Device Name		Name the data collecting device					
	Slave ID	Data Collecting Device Modbus Communication Address					
Device	16 bit data type	Select from AB, BA	AB				
Properties	32 bit data type	Select from ABCD, DCBA, BADC, CDAB	ABCD				
	Write function code	Select from 05/06, 15/16	15/16				
OK		Confirm device configuration					
Cancel		Cancel device configuration					

4.2.3.3 Add COM Port Device Data Point

Click device name and then right click the box on the right, click Add to enter data point configuration box.

The outside of the mapping address on the configuration software represents the Modbus address, and M.XXX in the brackets represents the PLC Modbus address.



Right click "Add" to add the next data point. You can also right click to delete the data, or double click the data point to edit the data.

BLiiot BeiLai Industrial Gateway www.BLiiot.com	n V1.1.3.8		- 🗆 🗙
Search Clear Import Export Read Confi	a Write Config	Monitor Remote Log	中文 Help About
	(ariable Nema	Videore Tures Address Videore Units Data Ear	Varibala Karr Man Addama Patia
E m BLIU3Pro	anable Name	Address Type Address Value Onic Data typ	varibale key inap Address Ratio
4-⊕ M140T			
- Can LAN			
—"Å")4G			
- WN VPN			
- OpenVPN		Add	
一 竹: Alarms		Delete	
- Tasks		Import Excel File	
		Export Excel File	
Pass Through			
—			
- Modbus TCP Server			
OPC UA			
Cloud			
- I MQTT Client			
- @ MQTT Client II			
- MAli IoT			
BLijot Beil aj Industrial Gateway www.Bl ijot.com	n V1.1.3.8		– n x
	Ĩ		
Search Clear Import Export Read Confi	g. Write Config.	Monitor Remote Log	中文 Help About
白 _品 BL103Pro	/ariable Name	Address Type Address Value Unit Data typ	e Varibale Key Map Address Ratio
— (III) СОМ1			
-⊗M140T			
		Variable Properties	
WAN			
(18) 4G	Variable Name	AC001 Verifield Key BEC001	
	variable Name	AGUUT Varibale Key REGUUT	
	OCT/DEC/HEX	icimal Y	
G OpenVPN	Address Type 01 C	Status(0x) × Address	
- <u>m</u> Alarms	Data type	ool × Add Number 1	
	De danie D		
DataServices	Read/Write R	a/vvnte * Katio none	
—	Map Address	0 Variable Unit	
—			
		OK Can	cel
OPC UA			
E OCloud			
@MOTT Client !!			
	7	ariable Properties	

variable ribberties					
Item	Description				
Variable Name	Name the Added Data point				
Variable Key	The MQTT identifier of the data point, can be filled in arbitrarily.				
OCT/DEC/HEX	Select from "decimal", "octal", "hexadecimal" according to the				
	collection address				
Address Turne	Select the register type of the device, different protocols display				
Address Type	differently. For example: Modbus protocol, select from "01 Coil				



	Status", "02 Input Status", "03 Holding Registers", "04 Input								
Registers".									
Address Address of the collected data point									
	Select "Boolean" for Boolean, numeric type selected from "16-bit								
	unsigned integer", "16-bit signed integer", "32-bit unsigned								
Data Type	integer", "32-bit signed integer", "32-bit single-precision floating								
	point".								
Add Number	Quantity of collection								
Read/Write	Select from "Read Only", "Read and Write".								
	Only numeric type data can be set, enlarged or reduced how many								
Ratio	times to upload to the platform								
	Data point is stored in the address of the gateway device. Boolean								
Map address	0~2000. Numerical: 0~2000. A register address space is a word.								
Variable unit	The unit of the data point, fill in as needed, not required.								
OK	Confirm data point setting								
Cancel	Cancel data point setting								
BLiiot BeiLai Industrial Gateway www.E	Liiot.com V1.1.3.8 — 🗇 🗙								
Search Clear Import Export Rea	ad Config. Write Config. Monitor Remote Log 甲义 Help About								
E-mBL103Pro	variable ivame Address Value Unit Data type Varibale Key Map Address Ratio D01 01 Coil Status(0x) 0 bool D01 0(M.00001) none								
	DO2 01 Coil Status(0x) 1 bool DO2 1(M.000002) none								
₩140T	DO3 01 Coil Status(0x) 2 bool DO3 2(M.000003) none								
⊨ j LAN	DO4 01 Coil Status(0x) 3 bool DO4 3(M.000004) none								

Right click the data	point to delete the da	ata, and double-click to	modify the configuration.

01 Coil Status(0x)

01 Coil Status(0x)

01 Coil Status(0x)

01 Coil Status(0x)

02 Input Status(1x)

1

5

1

3

5

7

Add

Delete

Import Excel File

Export Excel File

bool

DO5

D06

DO7

DO8

DIN1

DIN2

DIN3

DIN4

DIN5

DIN6

DIN7

DIN8

4(M.000005)

5(M.000006)

6(M.000007)

7(M.000008)

8(M.000009)

9(M.000010)

10(M.000011)

11(M.000012)

12(M.000013)

13(M.000014)

14(M.000015)

15(M.000016)

none

4.2.4 LAN Port Introduction

DO5

D06

DO7

DO8

DIN1

DIN2

DIN3

DIN4

DIN5

DIN6

DIN7

DIN8

4.2.4.1 LAN Port Attribute Configuration

Double-click the LAN port to enter property box. LAN port default IP is 192.168.3.1, and the

WAN

Alarms

Tasks

___ OpenVPN

BACnet/IP

-⊕MQTT Client -⊕MQTT Client II -⊕Ali IoT

Modbus TCP Server

('A') 4G

E WWVPN



automatically assign IP addresses and routing functions are disabled by default. Note: If the LAN port is connected to the switch, the switch cannot be connected to the network cable of other network segments.

Search Clear Import Export Read Config. Write Config. Monitor Remote Log PX Help About PX Help About PX Help About PX Help About PX Help About PX Help About PX Help About PX Help About PX Help About PX Help About PX Help About PX Help About PX Help About PX Help About PX Help About PX Help About PX Help About PX Help Ratio PX Help About PX Help About PX Help About Help About Help About
Search Clear Import Export Read Config. Write Config. Monitor Remote Log 中文 Help About → the p About → the p About → the p About → the p About → the p About → the p About → the p About → the p About → the p About → the p About → the p About → the p About → the p About → the p About → the p About → the p About → the p About → the p About → the p About → the p About → the p About → the p Abdress → the p Abdress → the p Abdress → the p Abdress → the p Abdress → the p Abdress → the p Abdress
Variable Name Address Type Address Value Unit Data type Variable Key Map Address Ratio Image: Common Section
Image: Communication
Image: Second secon
Image: WAN Ethernet Settings Image: WAG DHCPORE Image: WVPN DHCPORE Image: W
Image: Construction Construction Image: Construction DHCPO Image: Construction DHCPO Image: Construction Image: Construction Image: Constret Image: Con
Image: Constraint of the second se
IP Address 192.168.3.1 IP Adarms 192.168.3.1 IP Tasks Subnet Mask IP DataServices MAC Address IP Opensum 08:00:27:50:16/ac IP Modbus RTU=TCP IP Modbus RTU=TCP IP Modbus TCP Server OK Cancel
Image: Construct of the second sec
Image: Construct of the second sec
Image: Construction of the second
-⊕Pass Through -⊕Modbus RTU=TCP -⊕Modbus TCP Server -⊕BACnet/IP
- ⊕ Modbus RTU=TCP - ⊕ Modbus TCP Server - ⊕ BACnet/IP
- ⊕ Modbus TCP Server - ⊕ BACnet/IP
- BACnet/IP
Gopc ua −
E-Scloud
−⊕ MQTT Client
−⊕ MQTT Client II
-⊕Ali loT

Ethernet Settings					
Item	Description				
DHCP	Green: Automatically assign IP addresses Enabled				
	Gray: Automatically assign IP addresses Disable				
Routing	Green: Routing function Enabled				
Enabled	Gray: Routing function Disable				
IP Address	LAN Port IP address				
Subnet mask	LAN Port subnet mask				
MAC Address	LAN Port MAC				
ОК	Confirm LAN port Setting				
Cancel	Cancel LAN port Setting				

4.2.4.2 Add LAN Port Device

Right-click LAN, click "Add", to enter configuration box. The LAN port can be connected to the device, or it can be connected to the switch to collect from devices on the switch. Note: 50 devices can be collected through LAN and WAN.



BLiiot Be	iLai Ind	ustrial Ga	teway w	ww.BLiiot.com	V1.1.3.8							24		5	ΟX
Ø	A				-	٢								?	(i)
Search	Clear	Import	Export	Read Config	Write Config.	Monitor	Remote	Log					中文	Help	About
Ġ _å в	103Pro			^ Va	riable Name	Address Ty	pe Ad	dress	Value	Unit	Data type	Varibale Key	Map Ado	ress	Ratio
œ.		1													
		Add													
	(A ')4G														
.	VPN														
	600	penVPN													
	Alarm	IS													
-(Tasks														
	BDataS	ervices													
	- @Pa	ass Throug	h												
	-ØM	odbus RTU	J≒TCP												
	-@M	lodbus TCF	Server												
	- @B	ACnet/IP													
	600	PC UA													
	ப் Cloud														
	-@M	QTT Client													
	-ØM	QTT Client	: 11												
	-ØA	li loT													
	−⊕н	UAWEI IoT													
	_ <u> </u>			~											

BLiiot BeiLai Industrial Gateway www.BLiiot.com V1.1.3.8		– 🗆 X
Search Clear Import Export Read Config. Write	Config. Monitor Remote Log	(1)中文 Help About
E - 55 BL103Pro	ne Address Type Address Value Unit Data type	Varibale Key Map Address Ratio
	Device Information	
	Device Name	
	Device IP	
	Device Port	
	Device Brand Modbus ~	
- 11-2 Alarms	Device Model MODBUS_TCP	
Dasks	Device Properties	
	16-bit Data Type AB ~	
— Modbus RTU≒TCP	32-bit Data Type ABCD ~	
	Write Function Code 15/16 ×	
OPC UA	OK Cancel	
Cloud		
- I MQTT Client		

Device Information					
Item	Description				
Device Name	Name LAN Port Device Name				
Device IP	Set IP address of LAN port device. Device IP address and gateway				
	set by the LAN should be in the same local area network. If they are				
	inconsistent, change the IP address of the device or change the				
	gateway setting of the LAN port, change the property configuration				
	of the LAN port. It will take effect after power off and restarting.				
Device Port	Set the port number of the device on the LAN port				
Device Brand	Select from "Modbus", "BACnet", (BL101 has no "BACnet"				



r	
	selection).
Device Model	Select model of selected device brand
Polling interval	Set command interval time and device return timeout time, click the
And Time out	button next to the device model to set it.
Device address	Only available when the device brand is "BACnet"
16-bit Data Type	Select from "AB", "BA", only available when the device brand is
	"Modbus".
32-bit Data Type	Select from "ABCD", "DCBA", "BADC", "CDAB", only when the
	device brand is "Modbus".
Write function code	Select from "05/06", "15/16"
OK	Confirm LAN port device setting
Cancel	Cancel LAN port device setting

4.2.4.3 Add LAN Port Device Data Point

Procedure to add LAN Port device data point is the same as that of adding COM port device data point. ID of the Modbus TCP device is configured in the data point configuration box.

```
Add COM Port Device Data Point
```

BLiiot Bei	Lai Indu	ustrial Ga	teway w	ww.BLiiot.co	m V1.1.3.8							1000					σx
) Search	Clear	Import	Export	Read Conf	ig. Write	Config.	() Monito	r Remo	ote Lo	g					● 中文	? Help	() About
⊡ _{கீ} вι	.103Pro			^	/ariable Name	Slav	re ID /	Address Typ	e i	Address	Value	Unit	Data type	Varibale Key	Map A	ddress	Ratio
Ð (⊡COM1																
	LAN									WAR 6			_				
	LOLA	N 1					V	ariable F	Propert	es			_				
-ć	₩AN																
	Å ")4G				Variable Nar	ne	TAG001		Vari	ale Key	R	EG001					
	VPN				OCT/DEC/H	x	Decimal	~	[Slave ID		1					
	-00	DenVPN			Address Tv	e 01 0	coil Status(0x	0 ¥	-	Address							
i –i	Alarm	s			0-4-4		(head	~	لالدم			ă.					
-6	Tasks				Data ty		booi		Add	vumber		1					
	DataS	ervices			Read/Wri	te F	lead/Write	*		Ratio		none					
	- 🏵 Pa	ss Throug	h		Map Addre	ss	16		Varia	ble Unit							
	-ØM	odbus RTU	J≒TCP														
	-ØM	odbus TCF	Server									OK	Cancel				
	-ØBA	Cnet/IP		_													
	-@0	PC UA															
	Cloud																
	-ØM	QTT Client															
	-⊕M	QTT Client	: 11														
	-@AI	i loT		~													



4.2.5 WAN Port Introduction

4.2.5.1 WAN Port Attribute Configuration

Double click WAN to enter WAN Port Attribute configuration box.



Ethernet Settings						
Item	Description					
Auto ID	Green: Auto retrieving IP					
Auto IP	Gray: Specified IP					
IP Address	WAN Port Current IP Address					
Subnet Mask	WAN Port Current Subnet Mask					
Gateway	WAN Port Current Gateway Address					
MAC Address	WAN Port MAC Address					
DNS	WAN Port Current DNS Server					
ОК	Confirm WAN port setting					
Cancel	Cancel WAN port setting					

4.2.5.2 Add WAN Port Devices

Right-click WAN, click "Add" to enter configuration box. Wan Port connected to the switch to collect from devices on the switch.

Note: 50 devices can be collected through LAN and WAN.



BLiiot Bei	Lai Indu	ustrial Ga	teway w	ww.BLiiot.com \	/1.1.3.8									-	σx
) Search	Clear	∲ Import	Export	Read Config.	Write Config.	() Monitor	() Remote	Log					中文	? Help	() About
🖻 ஆீ BL	.103Pro			Vari	able Name	Address Ty	pe Ad	Idress	Value	Unit	Data type	Varibale Key	Map Ado	lress	Ratio
Ð -0	⊡COM1														
Ð	LAN														
-6	WAN	ال ال													
	Å "4G	Add													
	VPN														
	-@0	penVPN													
-i	Alarm	s													
-6	Tasks														
D	DataS	ervices													
	- @Pa	iss Throug	h												
	-ØM	odbus RTU	J≒TCP												
	-ØM	odbus TCF	Server												
	—⊕ B4	ACnet/IP													
	-@0	PC UA													
	Cloud														
	-@M	QTT Client													
	-@M	QTT Client	:11												
	-ØAI	i loT													
	-@HI	JAWEI IoT		~											

BLiiot BeiLai Industrial Gateway www.BLiiot	t.com V1.1.3.8	– 🗆 X
Search Clear Import Export Read C	onfig. Write Config. Monitor Remote Log	① ① ① ② ① 中文 Help About
白品BL103Pro 由 COM1	Variable Name Address Type Address Value Unit Data type Varibale Key	Map Address Ratio
	Device Information Device Name Device Port Device Brad Modbus Device Model MODBUS_TCP Device Properties 16-bit Data Type AB 32-bit Data Type ABCD Write Function Code 15/16	
- SMQTT Client - SMQTT Client II - Ali IoT - HUAWEI IoT		

Device Information						
Item	Description					
Device Name	Name WAN Port Device					
Device IP	IP address of the device in the same local area network as the					
	WAN port					
Device Port	Set device WAN port number					
Device Brand	Select from "Modbus", "BACnet", (No "BACnet" for BL101).					
Device Model	Select model according to the selected device brand					
Polling interval	Set command interval time and device return timeout time, click					
Time out	the button next to the device model to set it.					


Device address	Only available when the device brand is "BACnet".
16-bit Data Type	Select from "AB", "BA", only available when the device brand is
	"Modbus".
32-bit Data Type	Select from "ABCD", "DCBA", "BADC", "CDAB", only when
	the device brand is "Modbus".
Write function code	Select from "05/06", "15/16"
OK	Confirm WAN port device setting
Cancel	Cancel WAN port device setting

4.2.5.3 Add WAN Port Device Data Point

Procedure is the same as that of adding COM port device data point. ID of the Modbus TCP device is configured in the data point configuration box.

Add COM Port Device Data Point

BLiiot Bei	Lai Indu	istrial Ga	teway w	ww.BLiiot.con	V1.1.3.8											_	ΟX
) Search	Clear	\$₽ Import	Export	Read Config	J. Write Co	nfig. Mo	Ditor	() Remote	Log						中文	? Help	(i) About
Ė_ÅBL ⊕-© ⊕-ſ	103Pro COM1				riable Name	Slave ID	Ad	dress Type	Address	Value	Unit	Data typ	pe	Varibale Key	y Map A	Address	Ratio
	⊒wan ∟ _{⊚w}	AN Device					Va	riable Pro	perties								
_0	4 °)4G				ariable Name	TAG	01		Varibale Key	R	EG001						
	PN VPN				DCT/DEC/HEX	Decim	al	~	Slave ID		1						
	—⊕Op ☆ Alarm	oenVPN			Address Type	01 Coil Stat	us(0x)	~	Address								
		5			Data type	bool		v	Add Number		1						
	DataS	ervices			Read/Write	Read/W	rite	~	Ratio		none						
	- @Pa	ss Throug	h		Map Address	16			Variable Unit								
	-OM	odbus RTU	J⇔TCP														
	-OM	odbus TCF	Server								ОК	Cancel					
	—⊕ BA	Cnet/IP									Lange and the second se						
	-Ø OF	PC UA															
Ð	Cloud																
	-@M	QTT Client															
	-ØM	QTT Client	: 11														
	- 🏵 Ali	IoT		~													

4.2.6 4G Introduction

Double click 4G to enter APN setting box. Note: It's not necessary to set APN for China mainland 4G network, or if there is no 4G module in the device.



Q					-							A	?	i
Search	Clear I	mport	Export	Read Config.	Write Config.	Monitor	Remote	Log				中文	Help	Abou
ᆸᅟᅟᅲᇥᢄ	.103Pro			^ Vari	able Name	Address Typ	e Ado	dress	Value Ur	it Data type	Varibale Key	Map Ad	dress	Ratio
Ð (⊡COM1													
=	LAN													
Ð (₩AN													
H	Å ⁽⁾ 4G						4G Settin	igs						
Ξų	VPN													
	@0pe	nVPN				Mainland (hina does no	t need to	be set.					
	Alarms					API	4							
H	Tasks					Use	r							
	JDataSer	vices				Passwor	a 📃							
	- @Pas	Throug	1											
	-Ø Mod	dbus RTU	ISTCP					Г	OK Cancel					
	-O Mo	dbus TCF	Server											
	- BAC	net/IP												
		. UA												
	Scioua	TT CP												
	- GIVIQ	TT Client												
	-OMU	aT	ш											
	-QH0	AVVELIOI												

	4G Setting									
Item	Description									
APN	Access Point Name of SIM card									
User	User Name of SIM card									
Password	Password of SIM card									

4.2.7 OpenVPN Introduction

Only BL101Pro and BL103Pro have the OpenVPN function, and the gateway device is the client. According to the IP assigned by the OpenVPN server to the gateway device client, you can directly enter the gateway client IP in the "Device IP" item of the configuration software login interface, and click Connect to log in to the gateway device.



BLiiot BeiLai Industrial Gateway www.BLiiot.	com V1.1.3.8	- 🗆 ×
	📥 💿 🕕 🖿	
Search Clear Import Export Read Co	nfig. OpenVPN	中文 Help About
E di BLI03Pro B ⊕COM1 B ⊕LAN B ⊕WAN	Variat Enable Client/Server Client	ta type Varibale Key Map Address Ratio
- "∦°4G ⊟- VPN	IP/Domain Port 1194 TCP/UDP UDP TUN/TAP TUN	v v
一道 Alarms 一記 Tasks 日日 日 DataServices	Authentication Mode Password Only User Name Password	<u> </u>
⊕ Pass Through ⊕ Modbus RTU=TCP ⊕ Modbus TCP Server ⊕ BACnet/IP ⊕ OPC UA	Encryption Algorithm AES-256-GCM CA File Client Certificate File Client Key File	• • • • • • •
□-③Cloud □-③MQTT Client □-③MQTT Client II	Compression Algorithm LZO	K Cancel

	OpenVPN
Item	Description
Client/Server	Gateway device as client "Client"
IP/domain name	The address of the server with which the client establishes an
	OpenVPN connection
Port	The TCP/UDP port provided by the server for establishing a
	connection, the default is 1194.
TCP/UDP	The protocol used in the communication between the client and the
	server, and the connection method is selected according to the server.
TUN/TAP	In TUN mode, 3 Layer tunnel is established to realize point-to-point
	transmission. In TAP mode, 2 Layer tunnel is established to implement
	transparent transmission of IP packets. Select the connection method
	according to the server.
Authentication	Select from "Password Only", "Certificate Only", "Password and
Mode	Certificate" as required
User name	Username of the client, not required for "certificate only" mode.
Password	Client user name password, not required for "certificate only" mode.
Encryption	Select the data encryption algorithm, and select the connection encryption
Algorithm	algorithm according to the server.
CA Eile	Select File Upload, the root certificate provided by the OpenVPN
CAFIle	server.
Client Certificate	Select File Upload, the client certificate generated by the user based
File	on the root certificate.



Client Key File	Select File Upload, the key corresponding to the client certificate.
Compression	Select from "LZO" and "LZ4" according to the OpenVPN server
Algorithm	selection.
ОК	Confirm OpenVPN configuration
Cancel	Cancel OpenVPN configuration

4.2.8 Alarm and Event Configuration

Click "Alarms", move the mouse to the right box, right click, click "Add", to enter "Alarm and Event" setting box. You can configure the data points, action and the action to be performed for alarm recovery.

4.2.8.1 Alarm Points Configuration

Image: Search Clear Import Export Read Config. Write Config. Monitor Remote Log Image: Search Clear Import Export Read Config. Write Config. Monitor Remote Log Image: Search Clear Import Export Read Config. Port Device Variable Name Alarm Name High Limit Low Limit Alarm Type Jitter Delay(s) Alarm Key Image: Search Clear Import Export Read Config. Port Device Variable Name Alarm Name High Limit Low Limit Alarm Type Jitter Delay(s) Alarm Key Image: Search Clear Import Export Read Config. Port Device Variable Name Alarm Name High Limit Low Limit Alarm Type Jitter Delay(s) Alarm Key Image: Search Clear Import Export Read Config. Port Device Variable Name Alarm Name High Limit Low Limit Alarm Type Jitter Delay(s) Alarm Key Image: Search Clear Import Export Read Config. Port Device Variable Name Alarm Name High Limit Low Limit Alarm Type Jitter Delay(s) Alarm Key Image: Search Clear Import Export Read Config. Port Device Variable Name Alarm Name High Limit Low Limit Alarm Type Jitter Delay(s) Alarm Key Image: Search Clear Import Export Read Config. Port Device Variable Name Alarm Name High Limit Low Limit Alarm Type Jitter Delay(s) Alarm Key Image: Search Clear Import Export Read Config. Port Device Variable Name Alarm Name High Limit Low Limit Alarm Type Jitter Delay(s) Alarm Key Image: Search Clear Import Read Config. Port Device Variable Name Alarm Name High Limit Low Limit Alarm Type Jitter Delay(s) Alarm Key Image: Search Clear Import Read Config. Port Device Variable Nam	BLiiot Be	iLai Indu	strial Ga	teway w	ww.BLii	ot.com V	/1.1.3.8								_	σ×
Search Clear Import Export Read Config. Write Config. Monitor Remote Log 中文 Help Abou 	P				1	•	1	۲							?	1
Port Device Variable Name Alarm Name High Limit Low Limit Alarm Type Jitter Delay(s) Alarm Key Image: COM1 Image: Comparison of the second	Search	Clear	Import	Export	Read	Config.	Write Conf	g. Monito	r Remote	Log				中文	Help	About
B @COM1 B @LAN B @WAN - %A ³ 4G D @VPN - @OpenVPN - @Tasks - @Tasks - @Tasks - @Tasks	🖻 🚓 Bl	103Pro			^	Port	: Dev	ce Varial	ole Name	Alarm Name	High Limit	Low Limit	Alarm Type	Jitter Delay(s)	Ala	m Key
B C AN B WAN - (A) ³ 4G - MVPN - OpenVPN - Co Tasks - C	Ð	IIICOM1 III														
B @ WAN - %A ³ 4G E @ VPN - @ OpenVPN - @ Tasks - E@ Tasks Delete	Ð	LAN														
- ^(A) ¹ 4G - ^(M) ¹ 4G -	Ð	WAN														
© ™VPN	-0	₩)4G														
CopenVPN - Contraction Add - Contraction Add Delete		VPN														
- 10 Alarms - Co Tasks Add Delete		-@op	enVPN													
- Co Tasks Delete	-1	Alarms														
	-0	Tasks								Add						
E DataServices		DataSe	ervices													
− ⊕ Pass Through		—⊕ Pa	ss Throug	h												
- ⊕ Modbus RTU=TCP		-@Me	odbus RTU	J≒TCP												
− 𝔅 Modbus TCP Server		-@Me	odbus TCF	Server												
− ⊕ BACnet/IP		−⊜ва	Cnet/IP													
		-OOF	C UA													
₽ OCloud		Cloud														
−⊗MQTT Client		-@M0	QTT Client													
−⊕MQTT Client II		-@M0	QTT Client	Ш												
- ⊕ Ali loT		—⊕ Ali	IoT													
		-@HU	IAWEI IoT													



BLiiot Be	iLai Indus	strial Ga	teway ww	w.BLiiot	.com V	1.1.3.8											÷	ΟX
) Search	Clear	∲ Import	Export	nead Co	onfig.	Write Config.	() Monite	or Rer)) note	Log						中文	? Help	(i) About
⊟ ஃுBI	_103Pro			^	Port	Device	Vari	able Nam	e Al	larm Na	me High	Limit L	ow Limit	Alarm T	/pe Jitter	Delay(s)	Ala	rm Key
Ð-0																		
Ð	⊟LAN									Alarr	ns							
Ð	₩AN						-		Alarm T	Friggere	d Execution Act	tion		Alarm Recov	ery Execution	Action		
	(A ')4G						-	Port	Devi	ce	Write Point	Write Value	Port	Device	Write Poi	nt Wr	te Valu	
Ð	VPN		AI	arm Name														
	-O Ope	enVPN		Alarm Key		ALARM001												
	Alarms		Varia	able Name			Add											
-(Tasks			High Limit														
	DataSe	rvices		Low Limit														
	- 🏵 Pas	s Throug	A	Alarm Type	Ala	rm when <mark>clos</mark> ed	~											
	- @ Mo	dbus RT	Jitt	er D <mark>ela</mark> y(s)		2												
	- @ Mo	dbus TC																
	- 🏵 BAG	Cnet/IP																
	-O OPO	C UA														ОК	Cancel	
	Cloud																	
	-ØMC	TT Client																
	-ØMC	TT Client	П															
	- 🖓 Ali	IoT																
	—⊕ни	AWEI IoT																
	<u> </u>			× .														

earch Cl	lear Im	port	Export	Read Co	onfig.	Write Config	() Monit	or Remote	Log					中文	? Help	(i Abor
_ ஆ BL103	3Pro			^	Port	t Device	Va		Add	Variable Poi	nt		m Ty	pe Jitter Delay(s	i) Ali	arm Key
		Ē		1000				Variable Type	Port	Device	Variable Name		-			1
H اللله ا	_AN						_	Collection Point	COM1	M140T	DO1	^	1			
⊕	WAN							Collection Point	COM1	M140T	DO2		ecove	ry Execution Action		
-"Å"4	4G							Collection Point	COM1	M140T	DO3		e	Write Point W	rite Valu	
- VPN V	/PN		A	darm Name				Collection Point	COM1	M140T	DO4					
TT	MOnen	VPN		Alarm Kev		ALARM001		Collection Point	COM1	M140T	DO5					
344 A	Coben		1/	intelle Ninner		F		Collection Point	COM1	M140T	DO6					
-TPA	Alarms		var	lable Warne			Add	Collection Point	COM1	M140T	DO7					
-Eo'T	Fasks			High Limit				Collection Point	COM1	M140T	DO8					
	DataServi	ces		Low Limit				Collection Point	COM1	M140T	DIN1					
	Pass 1	Throug		Alarm Type	A	larm when closed	v	Collection Point	COM1	M140T	DIN2					
	Mode	ous RT	Jit	ter Delay(s)		2		Collection Point	COM1	M140T	DIN3					
	Mode	TC						Collection Point	COM1	M140T	DIN4					
	() Mode	Jus TCI						Collection Point	COM1	M140T	DIN5					
	BAC	et/IP						Collection Point	COM1	M140T	DIN6					
	OPC U	JA						Collection Point	COM1	M140T	DIN7			OK	Cancel	
000	Cloud							Collection Point	COM1	M140T	DIN8					-
	@ MQT	Client										~				
	СММОТТ	Client	Ш								OK Canc	el				
	Q AIL IST	r														
	(U AII IO															

	Alarms
Item	Description
Alarm Name	Name of Alarm Point
Alarm Key	The MQTT identifier of the alarm point, can be filled in
	arbitrarily
Variable Name	Select the data point. Click "Add" to pop up the data point, click
variable maine	the data point to set the alarm, and click "OK".
High Limit	High Limit alarm value of numeric data points
Low Limit	Low limit alarm value of numeric data points
Alarm Type	Select from Alarmed when closed/opened



Jitter Delay	Within alarm acknowledge time, if data recovered, then no
	alarm will be triggered.
OK	Confirm alarms setting
Cancel	Cancel alarms setting

4.2.8.2 Alarm Event Configuration

Put mouse in "Alarm triggered execution action", right click the prompt box, click "Add" to enter event configuration box, and set the operation to be performed when the alarm is triggered. In the same way, put mouse on "Alarm recovery execution action", set operations when the alarm release.





BLiiot Bei	iLai Indu	istrial Ga	teway w	ww.BLiiot.com	V1.1.3.8									-	ΟX
Search	Clear	∲ Import	Export	Read Config	. Write Config.	() Monito	r Remote	Log					全 中文	? Help	(i) Abou
் ஃ கை	.103Pro IIICOM1	2		^ p,	ort Device	Varia	ble Name	Alarm Nam	ne High Limi	t Low Limit	Ado	d Variable Po	er Delav(s pint	Δla	rm Kev
Ð	⊒LAN							Alarm	ıs	Variable Type Collection Point	Port COM1	Device M140T	Va DO1	riable Nar	ne 🔥
œ (WAN						Alarm	Triggered	Execution Action	Collection Point	COM1	M140T	DO2		
_0	Å ⁾ 4G						Port Dev	vice	Write Point W	Collection Point	COM1	M140T	DO3		
			4	Jarm Name						Collection Point	COM1	M140T	DO4		- 11
				Alarm Kay	ALARM001		Execu	tion Eve	ent	Collection Point	COM1	M140T	DO5		
	-QOF	Delivein		' LL N	DOI					Collection Point	COM1	M140T	D06		
	16 Alarms	6	Val		DOT	Add V	Write Point Add		Add	Collection Point	COM1	M140T	DO7	DO7	
-6	Tasks			High Limit		w	rite Value			Collection Point	COM1	M140T	DO8		
	DataSe	ervices		Low Limit		_				Collection Point	COM1	M140T	DIN		
	—⊕ Pa	ss Throug		Alarm Type	Alarm when closed	~			OK Cancel	Collection Point	COM1	M140T	DIN		
	-OMO	odbus RT	Ji	ter Delay(s)	2					Collection Point	COM1	M140T	DIN		
	- @Mo	odbus TC								Collection Point	COM1	M140T	DIN		
		Cnet/IP								Collection Point	COM1	M140T	DINS		
	00									Collection Point	COM1	M140T	DINE	1	
1										Collection Point	COM1	M140T	DIN		
티스	Cloud									Collection Point	COM1	M140T	DIN		
	—Фм —Фм —Фаli —Фн	QTT Client QTT Client IoT JAWEI IoT	: 11							<u>, </u>				ок	Cancel

Alarms						
Item	Description					
	Generate the point name according to the selected data point, click					
Write Name	"Add" to select the data point to be operated. Click on the data point					
	and click OK					
Write Value	Write the value of the data point to be operated, write "1" or "0" for					
	Boolean, "0" means open, "1" means close.					

4.2.9 Task Schedule Configuration

Left click on "Task", move the mouse to the right box, click the right mouse, "Add" will pop up, click "Add", to enter task schedule setting box, put the mouse in the box, and right click to enter the operation box, click "Add", to enter Execution Event box.





BLiiot BeiLai Industrial Gateway www.BLiiot.co	m V1.1.3.8	– 🗆 X
	📥 💿 🛞 🖿	(i)
Search Clear Import Export Read Cont	fig. Write Config. Monitor Remote Log	中文 Help About
ப் நீBL103Pro	Task Name Week	Time
🕀 📾 LAN	lasks	
⊕ ∰WAN	Port Device Write Point	Write Value
-(Å),4G	Task Name	
D WW VPN	System Action NULL ~	
G OpenVPN	UTC Time : 00 Y Hour 00 Y Min	
— <u>朮</u> Alarms	Add	
	Delete	
DataServices	Wednesday	
	Thursday	
—	Friday	
— Modbus TCP Server	Saturday	
	Sunday	
OPC UA		
		Cancel
- MQTT Client		
-@Ali loT		



BLiiot Bei	Lai Indi	ustrial Ga	teway w	ww.BLiiot.com \	/1.1.3.8								-	ΟX
) Search	Clear	\$ Import	Export	Read Config.	Write Config.	() Monitor	Remote	Log					中文 Help	(i) About
⊟் ஃBL	103Pro			^	Task Name				Week		Add	Variable Poi	nt	
E (⊡COM1									Variable Type	Port	Device	Variable Na	me
Đ t	LAN							Tasks		Collection Point	COM1	M140T	DO1	~
Œ tá								Port	Device	Collection Point	COM1	M140T	DO2	
_(4))4G				Task Name					Collection Point	COM1	M140T	DO3	
					System Action	NULL	v			Collection Point	COM1	M140T	DO4	
					UTC Time : 00	~ на	Exec	ition Ev	ent	Collection Point	COM1	M140T	DO5	
	-00	penVPN			M	ndav	LACC		ene	Collection Point	COM1	M140T	DO6	
-i	Alarm	s				inday				Collection Point	COM1	M140T	DO7	
-6	Tasks					esday V	Vrite Point		Add	Collection Point	COM1	M140T	DO8	
Ѐ	DataS	ervices			U We	ednesd W	/rite Value			Collection Point	COM1	M140T	DIN1	
	-MPa	iss Throug	h		The	ursday		_		Collection Point	COM1	M140T	DIN2	
	QM	odbus DTI			🗌 Frie	day			OK Cancel	Collection Point	COM1	M140T	DIN3	
	-011		J ⇒ I CP		Sat	urday				Collection Point	COM1	M140T	DIN4	
	-ØW	odbus ICI	Server			ndav.				Collection Point	COM1	M140T	DIN5	
	-ØBA	ACnet/IP								Collection Point	COM1	M140T	DIN6	
	-00	PC UA								Collection Point	COM1	M140T	DIN7	
Ξđ	Cloud									Collection Point	COM1	M140T	DIN8	
2010000	- MM	OTT Client	ť							CH C DI	1.4.81		TACODA	
	-QM	OTT Client	- - 11										ОК	Cancel
	-ØAI	1 10 1												
	-OH	JAWEI IoT		~										

	Tasks						
Item	Description						
Task Name Name of Task Schedule							
System Action	Can set to restart the gateway device regularly. If it is to schedule other						
	actions, select "NULL" for this item.						
UTC Time	Set the time for task scheduling, this time is UTC time.						
Week	Set the week of the task schedule						
Write Point Name	Generate the point name according to the selected data point, click						
	"Add" to select the data point to be operated. Click on the data point						
	and click OK						
Write Point Value	Write the value of the data point to be operated, write "1" or "0" for						
	Boolean, "0" means open, "1" means close.						
ОК	Confirm Task Configuration						
Cancel	Cancel Task Configuration						

4.2.10 Data Services

4.2.10.1 Transparent Transmission

At first, set the COM mode to "Pass Through", then set the COM parameters, at last go to "Pass Through" of "Data Services" to configure it.



白 _____BL103Pro

BL103

- COM1		
	Serial Port Settings	
— ⁽ Å) ¹ 4G	Mode Selection Pass Through	
D WN VPN	Protocol Settings Collection	
└─ � OpenVPN	After setting parameters or senampor, unen go to me data	
— 岱 Alarms	service=>Transparent Transmission to set relevant parameters.	
Tasks		
Contraction	Serial Port Settings	
	Baud 9600 y Data Bitz 8 y	
—		
	Stop Bit 1 * Parity Bit None *	
BACnet/IP		
- OPC UA	OK Cancer	
E-OCloud		
- MQTT Client II		
Ali loT		
- OHUAWEI IOT		

	() ()							
	中文 Help About							
Unit Data type Varibale Key	Map Address Ratio							
The configuration on this page will take effect only if the serial port is set to the transparent transmission mode.								
u l								
~								
·]								
Port 5000								
Heartbeat Interval(s) 60								
OK Cancel								
	Ont Data type Varibale Key							

Pass Through								
Item	Description							
СОМ	COM1							
TCP Mode	Select gateway device as "TCP Server" or "TCP Client"							
Network Interface	It can only be configured when the gateway device is used as the server. Select from "WAN", "LAN".							
IP /Domain Name	Gateway device used as server, it cannot be configured, and the selected "WAN" or "LAN" IP will be displayed automatically. Gateway device used as client, fill in the IP/domain name that							



	is transparently transmitted to the server.					
	Gateway device used as server, it is shown as monitoring port,					
Devet	must be filled in.					
Port	Gateway device used as client, it is shown as server port, must					
	be filled in.					
Lesin Massage	Data package of register connecting server, which can only be					
Login Message	filled in when the gateway device acts as a client.					
Login ACK Massage	Data packet of server responds to the register, which can only					
Login ACK Message	be filled in when the gateway device acts as a client.					
II. a dha at Maanaa	The heartbeat data packet for maintaining the connection can					
Hearibeat Message	only be filled in when the gateway device acts as a client.					
Heartbeat ACK	The server responds to the heartbeat data packet, which can					
Message	only be filled in when the gateway device acts as a client.					
	Cycle time of sending heartbeat package. Default is 60s, which					
Heartbeat Interval	can only be filled in when the gateway device acts as a client.					
OK	Confirm Transparent Transmission Configuration					
Cancel	Cancel Transparent Transmission Configuration					

4.2.10.2 Modbus RTU to Modbus TCP

First set the COM mode to "Modbus RTU to TCP", and set the COM parameters, and then go to "Modbus RTU to TCP" in "Data Services" to configure.

BLiiot BeiLai Industrial Gateway www.BLiiot	.com V1.1.3.8	_	ο×
Search Clear Import Export Read Co	nfig. Write Config. Monitor Remote Log	中文 Help	(i) About
Search Clear Import Export Read CC	Variable Name Address Type Address Value Unit Data type Variable Key Serial Port Settings Protocol Settings Collection Pass Through After setting parameters or senar port, then go to the data service > Modbus RTU=TCP After setting parameters Serial Port Settings Serial Port Settings Other and the service > Serial Port Settings Serial Port Settings Data Bits 8 × Serial Port Settings Other and the service > Modbus RTU=TCP Other and the service > Serial Port Settings	Hap Address	Ratio



BLiiot Be	Lai Indu	strial Ga	teway w	ww.BLiiot.com \	/1.1.3.8										ΟX
Q	A			1		0		Þ					A	?	(i)
Search	Clear	Import	Export	Read Config.	Write Config.	Monitor	Remote	Log					中文	Help	About
ப் ஆீ	.103Pro			^ Vari	able Name	Address Typ	e Ad	dress	Value	Unit	Data type	Varibale Key	Map Ado	iress	Ratio
-0															
-6	LAN														
-6	WAN														
-9	Å ')4G					Modbu	is RTU≒M	odbus	ТСР						
¢ 🤅	VPN				The c	onfiguration o	on this page v	vill take et	fect only if	the					
	└─@Op	enVPN			serial	port is set to	the Modbus I	RTUSTCP	mode.						
-i	Alarms					сом		COM1		~					
-0	Tasks					TCP Mode	Т	CP Server		~					
	∃DataSe	rvices			Netwo	ork Interface		WAN		~					
	- @ Pas	s Throug	h			Port		5000							
	- 🕅 Mo	dbus RTU	I≒TCP												
	- @ Mo	dbus TCP	Server						ОК	Cancel					
	- @ BA	Cnet/IP													
	-OOP	C UA													
日															
	-ØMC	QTT Client	Ш												
	—⊕ Ali	loT													
	−⊕ни	AWEI IoT													
	<u> </u>														

Modbus RTU to Modbus TCP Configuration							
Item	Description						
СОМ	COM1						
TCP Mode	TCP Server, Gateway can only be TCP Server						
Network Interface	Select from "WAN" or "LAN"						
Port	Fill in the port that monitor the device. Must be filled in.						
OK	Confirm Modbus RTU to Modbus TCP configuration						
Cancel	Cancel Modbus RTU to Modbus TCP configuration						

4.2.10.3 Modbus TCP Server

BL103 gateway supports the Modbus TCP protocol and provides external data through the Modbus TCP server. Modbus TCP Server is always enabled, just configure the monitoring port of the device. The IP address of the Modbus TCP server can be selected according to the requirements of WAN or LAN. Click "WAN" and "LAN" to view the IP address of WAN and LAN.



BLiiot BeiLai Industrial Gateway www.BLiiot.com V1.1.3.8														-	σx
) Search	Clear	\$ Import	Export	Read Config.	Write Config.	() Monitor	Remote	Log					し 中文	? Help	(i) About
۵ _m B	L103Pro			^ Var	iable Name	Address Ty	pe Ac	ldress	Value	Unit	Data type	Varibale Key	Map Ado	dress	Ratio
-(I													
-(لھ∟AN														
-	₩AN														
-	'Å') 4G														
	VPN					M	odbus TCF	Server							
	-@o	penVPN													
	🖧 Alarm	S							-						
H	Tasks					P	ort 5	02							
	DataS	ervices													
	-ØPa	ass Throug	h				ſ	OK	Cancel						
	-ØM	odbus RTU	J≒TCP				l	OK	cancer						
	-@M	odbus TCF	Server												
	-ØB/	ACnet/IP													
	-00	PC UA													
	Scloud														
	-ØM	QTT Client													
		QIT Client													
	-WA	1 101													
	-ØH	UAWEI IOT		~											

Modbus TCP Server Configuration								
Item	Description							
Port	Fill in the monitoring port, the port must be filled in.							
ОК	Confirm Modbus TCP Server setting							
Cancel	Cancel Modbus TCP Server setting							

Modbus TCP host computer is used as the client, and the function codes supported are: Boolean value supports "01", "05", and numerical value supports "03", "06". The 16-bit byte sequence is AB and the 32-bit byte sequence is ABCD. Follow master computer to put Modbus address or the PLC Modbus address (the outside of the mapped address on the configuration software indicates the Modbus address, and M.XXX indicates the PLC Modbus address). For the specific address, see the data point page as shown below, and the host computer configuration You can refer to: <u>5.4.2 View and send command by KingView</u>



BLiiot Be	iLai Indi	ustrial Ga	teway w	ww.B	Liiot.com \	/1.1.3.8								5			-	ΟX
) Search	Clear	\$ Import	Export	Rea	d Config.	Write Config	g. Monitor	Remote	Log						Ę.	文	? Help	(i) About
ப் ஆ	L103Pro				^ Vari	able Name	Address Ty	rpe Ado	dress	Value	Unit	Data type		Varibale Key	Ma	p Addr	ess	Ratio
	COM1					0	1 Coil Status(0x)) 0				bool	DO1		0(N.0	00001)	no	one
L@M140T					DO2	0	1 Coil Status(0x)) 1				bool	DO2		1(N.0	00002)	no	one
					DO3	0	1 Coil Status(0x)) 2				bool	DO3		2(N.0	00003)	no	one
U					DO4	0	1 Coil Status(0x)) 3				bool	DO4		3(N.0	00004)	no	one
	WAN				DO5	0	1 Coil Status(0x)) 4				bool	DO5		4(N.0	00005)	no	one
-	(A)4G				DO6	0	1 Coil Status(0x)) 5				bool	DO6		5(N.0	00006)	no	one
	VPN				DO7	0	1 Coil Status(0x)) 6				bool	DO7		6(N.0	00007)	no	one
	-00	penVPN			DO8	0	1 Coil Status(0x)) 7				bool	DO8		7(N.0	(80000	no	one
	芯Alarm	s			DIN1	0	02 Input Status(1x)		0			bool	DIN1		8(N.0	00009)	no	one
	E Tacke				DIN2	0.	02 Input Status(1x)		1			bool	DIN2		9(N.0	00010)	no	one
					DIN3	0.	2 Input Status(1	x) 2				bool	DIN3		10(IM	000011)	no	one
	Datas	ervices			DIN4	0.	2 Input Status(1	x) 3				bool	DIN4		11(И	000012)	no	one
	- @Pa	ass Throug	h		DIN5	0.	2 Input Status(1	x) 4				bool	DIN5		12(M	000013)	no	one
	-ØM	odbus RTU	J≒TCP		DIN6	0.	2 Input Status(1	x) 5				bool	DIN6		13(M	000014)	no	one
	-ØM	odbus TCF	9 Server		DIN7	0.	2 Input Status(1	x) 6				bool	DIN7		14(M	000015)	no	one
	- CO BA	ACnet/IP			DIN8	0	2 Input Status(1	x) 7				bool	DIN8		15(M	000016)	no	one
	-00	PC UA																
	Cloud																	
— Ali loT																		
					~													

4.2.10.4 BACnet/IP

Note: BL101 does not support BACnet/IP.

BACnet standard is designed for heating, ventilation, air conditioning, and refrigeration control equipment, and also provides a basic principle for the integration of other building control systems (such as lighting, security, fire protection, etc.).

BL103 gateway acts as a BACnet/IP server to provide data. Because the data attributes of various protocols are different, the two object attributes of AV and BV are unified to provide data for the current value. The example is the Modbus address of the data point page map address item on the configuration software.



BLiiot Be	iLai Indust	rial Gat	teway w	ww.BLiiot	.com \	1.1.3.8									-	ΟX
) Search	Clear In	nport	Export	Read Co	onfig.	Write Co	onfig. Monitor	() Remote	Log					● 中文	? Help	() About
Search	Clear In 103Pro COM1 COM1 CM14C LAN WAN WAG VPN COPert Alarms Tasks DataServ - PASS - PModt - PASS - OPOC COPC COUCT	NPORT NVPN ices Througl ous RTU ous TCP iet/IP UA T Client T Client	n I=TCP Server	Read Co	Name Time Model Version 4G Moo IMEI Signal S operato SIM ICC SIM Sta	Write CC	Enable Enable Network Interfac Po Vendor Nam Vendor Identifi Device Nam Device I Object Descriptic Locatic	Remote BACnet/ BACnet/ Remote BACnet/	Log IP WAN 47808 BeiLai 555 Lai Gateway 555 Cnet Server CN OK	Cancel	Status	Port COM1	De M140T	中文 avice Name	Help	About Status
	Ali lo	T		~												

BACnet/IP configuration									
Item	Description								
Enchlo	Disabled by default, click the button to enable. Gray: Not enabled,								
Enable	Green: Enabled.								
Network Interface	Select from "WAN" and "LAN"								
Port	Fill in the server port, the port must be filled in. Default: 47808.								
Vendor name	Default "BeiLai", can be filled in arbitrarily.								
Vendor Identifier	Default "555", can be filled in arbitrarily.								
Device name	Default "BeiLai Gateway", can be filled in arbitrarily.								
Devrice ID	Default is "555", the device object instance, if there is also a								
Device ID	BACnet device in the downlink, be careful not to conflict.								
Object Description	Default "BACnet Server", can be filled in arbitrarily.								
Location	Default "CN", can be filled in arbitrarily.								
ОК	Confirm BACnet/IP configuration								
Cancel	Cancel BACnet/IP configuration								

Note: The choice of WAN or LAN not only stipulates that the network port of the BACnet/IP service port is provided for the uplink, but also downlink collection of BACnet/IP.

BACnet/IP host computer data acquisition configuration, please refer to: <u>5.4.4 View and send</u> Command by KEPServerEX 6

BACnet/IP data points can be extracted from the gateway and automatically generated, do not need to be filled in.



4.2.10.5 OPC UA

BL110 supports OPC UA and provides data as OPC UA server.

The IP address of the OPC UA server can be selected according to the requirements of WAN or LAN. Click "WAN" and "LAN" to view the IP address of WAN and LAN.

BLiiot BeiLai Industrial G	ilot BeiLai Industrial Gateway www.BLiiot.com V1.1.3.8 – 🗇 🗙												
Search Clear Import	Export	Read Config.	Write Config.	() Monitor	() Remote	Log					€ ● ●	? Help	(i) About
日 品 BL103Pro 日 感 COM1 一 の M140T 一 面 LAN	Transformer	Name	Name	Enable	OPC U/	A		Status	Port	Dev	ice Name		Status
- ^(M) ^(A) ^(M) ^{(M}	gh U≒TCP P Server	Time Model Versior 4G Mo IMEI Signal operat SIM St	t dule Strength Si or CID dule	Po Use Passwor certrificat PrivateKe	rt Anonymous er d d yy yy yy	4840 none OK	v m m Cancel						
☐- Cloud -	it It II	~					Refresh						

OPC UA Configuration								
Item	Description							
Enchlo	Disabled by default, click the button to enable. Gray: Disabled, Green:							
Lilaole	Enabled.							
Port	Fill in the server port, the port must be filled in. Default: 4840							
Anonymous	Disable by default. Gray: Enabled, Green: Disabled.							
User	Fill in the user name							
Password	User password							
Security strategy	Choose from "none", "basic256", "basic128rsa15", "basic256sha256".							
Certificate	OPC UA certificate, select File Upload.							
PrivateKey	OPC UA key, select File Upload.							
OK	Confirm OPC UA Configuration							
Cancel	Cancel OPC UA Configuration							

OPC UA Client data acquisition configuration, please refer to: <u>5.4.6 View and send Command</u> by UaExpert_____

OPC UA Client data points can be directly extracted from the gateway and automatically generated, and do not need to be filled in. The name of the data point is composed of the device name on the configuration software and the variable name, and the Node id is



composed of the device name on the configuration software and the data point label of the device.

4.2.11 Cloud Platform

BL103 gateway supports multiple platforms online at the same time

4.2.11.1 MQTT Client

MQTT Client can be connected to cloud with certificate or without certificate.

MQTT Client data format only supports JSON data format of "KingPigeon", "thingsboard", and "sparkplug b". MQTT data format can be customized. More JSON data format and customized JSON data format will be supported in the future.

Connect to the ThingsBoard platform, select JSON data format of

"thingsboard-telemetry-gateway". ThingsBoard platform domain name is thingsboard.cloud. Connect to a platform that supports Sparkplug B, such as the ignition, select the JSON data format of "sparkplug b", click the button next to the data template item, configure the group ID and edge node ID in the configuration box.

MQTT Client supports multiple publishing topics, click "Add" in the publishing topic item to fill in the publishing topic, and you can view the publishing topic name in the drop-down box of the publishing topic item. Select the release topic name and click "Delete" to delete the release topic to be deleted.

MQTT Client also supports the selection of different data points for each publishing topic to publish. Put the mouse cursor in the right box, click the right button, a prompt box will pop up, click "Add", a data point box will pop up, click the data point to be published, Click "OK". Double-click a data point to view the properties. As shown in the figure below: The publishing topic "topic" only publishes the data point "DO1" of the "M140T" device of "COM1", and other data points are not published.

The "KingPigeon" JSON data format of MQTT Client and MQTT Client II is the same as that of KingPigeon MQTT. Refer to: <u>5.4.19 King Pigeon MQTT Data Format.</u>

"thingsboard-telemetry-gateway" JSON data format, publish and subscribe topic format refer to the thingsboard official website documentation.

"sparkplug b" JSON data format, publish and subscribe topic format refer to Sparkplug specification

Note: The data point box is blank by default, if no data point is selected, all data points are published. If there are multiple publishing topics, only one publishing topic can be blank, and other topics must select the published data points, and cannot be left blank.



BLiiot Be	iLai Indi	ustrial Ga	teway w	ww.BLiiot.com V	1.1.3.8								-	ΟX
) Search	Clear	\$₽ Import	Export	Read Config.	Write Config.	() Monitor	() Remote	Log				。 中文	? Help	(i) About
Ġ _å в	L103Pro							MQT	T Client					
Ē.	©COM1) Enable										
	∟⊘м	140T							Variable Type	Port	Device	Vari	able Nam	
	لھ∟ LAN			IP/Don	nain				Collection Point	COM1	M140T	DO1		
	₩AN				Port	1883								
	"A" 4G			Clier	t ID									
D (User N	ame									
	Loo	oenVPN		Passw	ord									
	尚 Alarm	s		x	509									
	Tasks			CA	File									
00	DataS	ervices		Client Certificate	File									
	-@Pa	ss Throug	h	Client Key	File									
	−⊗м	odbus RTL	J≒TC	Data Temp	late	KingPigeon		-						
	-@M	odbus TCF	Serv	Subscribe T	opic									
	-@B/	ACnet/IP		Publish T	opic top	ic	~ Add	Delete						
	Loo	PC UA		Upload Cyc	e(s)	30								
	Cloud			Data Retransmis	sion									
	- @M	QTT Client												
	-ØM	QTT Client											OK Ca	incel
	-@AI	i loT										_		
				~										

MQTT Client Configuration									
Item	Description								
Enchlo	Green indicates MQTT Client is enabled								
Enable	Gray indicates MQTT Client is disabled								
IP/Domain Name	Fill in the IP/domain name to connect to the MQTT server								
Dont	Fill in the port to connect to the server, default is 1883, the port								
ron	must be filled in.								
Client ID	The client identifier used in the MQTT connection message, and								
Chem ID	the server uses the client identifier to identify the client.								
Laar Nama	The username used in the MQTT connection message, the server								
	can use it for authentication and authorization.								
Decayord	The password used by the MQTT connection message, the server								
rassworu	can use it for authentication and authorization.								
X.509	Click the button to enable. Gray: Disabled, Green: enabled.								
CA File	Select File Upload(Select Certificate Connection to fill in)								
Client certificate file	Select File Upload(Select Certificate Connection to fill in)								
Client Key file	Select File Upload(Select Certificate Connection to fill in)								
	Json data format selection, choose from "KingPigeon",								
	"thingsboard-telemetry-gateway", "sparkplug b", "yundee", "dl".								
Data template	Default: KingPigeon. Some data templates have special								
	configuration, click the button next to it to configure, such as the								
	group ID and edge node ID of the "sparkplug b" template.								
Subscribe Topic	Topic of MQTT subscription message. After subscription, the								
	server can send a publish message to the client for control.								



	Topic of MQTT publishing message. It's used for MQTT to
Publish Tonia	identify message channel of sending valid load data. Wildcard
r uonsii Topic	can't be included in publishing message topic name. Click Add to
	add more public topics. Click Delete to delete Public Topic
Uploading Cycle	Cycle time of MQTT data sending. Default is 30s
	Green indicates offline data will be transmitted once network
Data Patronamission	recovers; Gray indicates retransmission disable. Max 100,000 data
Data Ketransmission	points can be re-transmitted. The previous ones will be deleted if
	data point more than that.
Salastian of published	Default is blank, means all data uploaded. In the box on the right,
dete pointe	click the right mouse button, click "Add", the data point box will
data points	pop up, click the data point, and click OK.
OK	Confirm MQTT Client setting
Cancel	Cancel MQTT Client setting

4.2.11.2 MQTT Client II

MQTT Client II Configuration is the same as MQTT Client

MQTT Client II configuration refer to <u>4.2.11.1MQTT Client</u>

MQTT Client II subscribe topic will not be working. MQTT Client Two is used for view data but not control data from cloud.

MQTT Client II and MQTT Client" KingPigeon"JSON data format is the same as that of King Pigeon MQTT. Refer to 5.4.19 King Pigeon MQTT Data Format



4.2.11.3 Alibaba Cloud

BLiiot Bei	Lai Indu	ustrial Ga	teway w	ww.BLiiot.com \	/1.1.3.8								- 0
9 Search	Clear	s Import	Export	Read Config.	Write Config.	() Monitor	Remote	Log				中文 +	?
	Å ⁰⁾ 4G			^									
Þ	VPN							Ali	loT				
	600	penVPN		Enable									
i –i	Alarm	s							Variable Type	Port	Device	Variable N	Name u
-6	Tasks												
	BDataS	ervices		Authentication Mod	le C	evice Secret		~					
	- @Pa	iss Throug	h	Regio	n Ch	ina(Shanghai)		~					
	-ØM	odbus RTI	J⊑ ⁱ	1	P								
	-ØM	odbus TCF	P S€	ProductKe	ey								
	-ØBA	ACnet/IP		DeviceNam	ie								
	L-QOI	PC UA		DeviceSecr	et								
E d	Cloud			CA Fi	le								
	-ØM	QTT Client		Client Certificate Fi	le								
	-ØM	QTT Client	:11	Client Key Fi	le								
	- () Al	i loT		Upload Cycle(s)	30							
	- OH	JAWEI IoT	a										
	-ØAV	NS IoT							-			-	
	-ØKi	ngPigeon	ют									ОК	Cancel
	L_⊕ Ki	ngPigeon	Modbus I	от									
-{	Advan	iced Settin	gs	~									

Alibaba Cloud Configuration									
Item	Description								
Enchlo	Green indicates Ali Cloud is enabled								
Enable	Gray indicates Ali cloud is disabled								
Authentication	Default is key connection. Select the key or certificate according to								
Mode	your needs, and choose from "Device Secret" and "X.509".								
Region	Select Alibaba Cloud Region, default is China(Shanghai)								
IP	The IP address of Alibaba Cloud Enterprise Edition, not required for								
	the public edition.								
Draduat Vay	Set the same ProductKey as the one in Ali Cloud. See below image								
ProductKey	(Device-Click DeviceSecret to view it)								
DaviasNama	Set the same DeviceName as the one in Ali Cloud See below image								
Devicemanie	(Device-Click DeviceSecret to view it)								
DeriveCount	Set the same DeviceSecret as the one in Ali Cloud See below image								
DeviceSecret	(Device-Click DeviceSecret to view it)								
CA File	Select File Upload(Select Certificate Connection to fill in)								
Client certificate file	Select File Upload(Select Certificate Connection to fill in)								
Client key file	Select File Upload(Select Certificate Connection to fill in)								
Uploading cycle	Cycle time of data sending. Default is 30s								
	Default is blank, means all data uploaded. In the box on the right,								



Selection of	click the right mouse button, click "Add", the data point box will
published data	pop up, click the data point, and click OK.
points	
OK	Confirm Alibaba Cloud setting
Cancel	Cancel Alibaba Cloud setting



Alibaba Cloud platform model is under development, so data points need to be added one by one. Adding data points is as shown in the figure below: Only the identifier of the Alibaba Cloud platform needs to be consistent with the variable label on the configuration software. For example, if the S475 data point temp is collected, and the configured variable label is "temp", the identifier of the data point added on the Alibaba Cloud platform must be "temp", and the function name and the variable name on the configuration software can be different.



E C-) Alibaba Cloud	🛱 Workbench China (Shanghai) 🗸	Q Search		Expenses Tickets ICP E	interprise Support 🗗 🗈	Ų, Ä Ö	② EN
← Public Instance	IoT Platform / Devices / Proc	ducts / Product Details	/ Define Feature					
Devices ^	← Edit Draft							
Products	Product Name BL10x-密钥			ProductK	ey a1oVeEkKXWv Copy			
Devices	You are editing a draft. You	need to click Publish to ap	ply the TSL model.					
Groups	Import TSL Model	Version History $~ \checkmark ~$						1
Jobs	Enter a module nar Q +	Default Module						
CA Certificate	and the second second second	Add Standard Feature	Add Self-defined Feature					
Rules Engine 🗸 🗸	Default Module	Feature Type	Feature Name(all) 🕁	Identifier 1	Data Type	Data Definition	Actions	
Maintenance ~	+Add Module	Properties	power Custom	power	Int32	Value Range: -214748364 8 - 2147483647	Edit Delete	
Resource Allocation V		Properties	humidity Custom	humidity	Int32	Value Range: -214748364 8 - 2147483647	Edit Delete	
Link Visual \sim		Properties	temp Custom	temp	Int32	Value Range: -214748364 8 ~ 2147483647	Edit Delete	
Documentation and Tools		Properties	DIN8 Custom	DIN8	Boolean	Boolean value: 0 - 0 1 - 1	Edit Delete	
E Feedback	Release online Back							

BLiiot Be	iLai Indu	ustrial Ga	teway w	ww.BLii	ot.com \	/1.1.3.8										-	ΟX
© Search	Clear	\$₽ Import	Export	Read	Config.	Write Co	onfig.	() Monitor	Remote	Log					通 中文	? Help	(i) About
⊟் ஃ₿	103Pro			^	Varia	ble Name	Slave	ID A	ddress Type	Address	Value	Unit	Data type	Varibale Key	Map A	ddress	Ratio
Ė-0					temp		1	04 Inp	ut Registers(3x)	24			int16	temp	0(M.400	001)	1
	LAM	140T			humidity		1	04 Inp	ut Registers(3x)	25			int16	humidity	1(M.400	002)	1
					power		1	04 Inp	ut Registers(3x)	14			uint16	power	2(M.400	003)	r
		75															
		F/ D															
	₩4G																
- 무!	VPN																
	-00	penVPN															
	Alarm	s															
	Tasks																
0.0	B DataS	ervices															
	- @Pa	ass Throug	h														
	-ØM	odbus RTU	J≒TCP														
	- MM	odbus TCF	Server														
	-MB4	Cnet/IP															
	-00																
		C OA															
	Scioud																
	-ØM	Q11 Client															
	-ØM	QTT Client	: 11	~													

Note: Alibaba Cloud devices shadow is not supported, send command through online debugging.

4.2.11.4 HUAWEI Cloud

HUAWEI Cloud can be connected with or without Certificate.

It supports multiple service IDs. Click Add to set Service ID. ID can be viewed from the drop-down list. Click Delete to delete service ID. HUAWEI Cloud supports uploading certain datapoints of each Service ID. Right click the box and click Add to enter datapoint dialog box. Select the datapoint to upload and click OK to confirm it.



Note: 1. Datapoint box is blank by default which means all datapoints will be uploaded. If there' re multiple Service IDs, only one Service ID datapoint box can be blank. Datapoints for uploading must be selected for other Service IDs.

2, HUAWEI Cloud devices shadow is not supported, send command through synchronization command.

BLiiot Be	iLai Ind	lustrial Ga	teway w	ww.BLiiot.com V	1.1.3.8								_	ΟX
Q		D			+	۲						A	?	(
Search	Clear	Import	Export	Read Config.	Write Config.	Monitor	Remote	Log				中文	Help	About
	'A''4G		2/5	^										
	VPN		1					İ	HUAW	/EI IoT				
	L-@c	penVPN		🜔 Enable										
-1	🛱 Alarn	ns								Variable Type Port	Device	1	Variable N	ame
-(Tasks	i)		Authentication	Mode	Device Se	ecret							
Ð	Datas	Services	.	IP/C	Domain									
	-ØP	ass Throug	h		Port	188	13							
	-ØM	1odbus RTU	J≒TCP	De	evice ID									
	-@M	lodbus TCF	9 Server	Dev	ice Key									
	-ØB	ACnet/IP			CA File									
	-@c	OPC UA		Client Certific	ate File									
	ப் Cloud	d		Client I	Key File									
	-ØM	1QTT Client		Se	erver ID		~ Add	d Delet	e					
	-@M	1QTT Client	:11	Upload (Cycle(s)	30)							
	-ØA	li loT	, I	Data Retransi	mission									
	-ØH	IUAWEI IoT												
	-ØA	WS IoT											ОК	Cancel
	-ØK	ingPigeon	IoT L									_		
	₩	ingPigeon	Modbus le	T										
	©}Adva	nced Settin	gs	v										

	HUAWEI Cloud Configuration									
Item	Description									
Enable	Default is not enable, Green indicates HUAWEI Cloud is enabled Gray indicates HUAWEI cloud is not enabled									
Authentication mode	Default is key connection. Select the key or certificate according to your needs, and choose from "Device Secret" and "X.509".									
	Select connecting to HUAWEI Cloud via MQTT to enter console. Click Overview to get server IP address of device connection									
IP/Domain Name	Instruction Image: Second Control Default Devices Access Derails Devices Access Protocol (Port) Access Details Devices Reles Storage Management OKM Marce Spaces Int Data Device support Int Data Device support Access True Access True									
Port	Default is 1883, fill in 1883 for connecting with Secret Key, fill in 8883 for connecting with Certificate (Required)									

L



	Set the same ID as the one in HUAWEI Cloud(Device-Device
	ID)
	HUAWEI CLOUD Connole a tenjingd + Search Q More English
	Iot Platform All Devices / Device Details Overview Commands Device Shadow Message Trace Child Devices Tags
Device ID	Convolvence Description Desc
	Poducts Profes Resource Space BUXX Device ID
	Automication Type Server Server
	Image: Software/Filmware Registered Node Type Directly connected 0 Upgrades Filmware Version Software/Version
	Set the same Device Secret Key as the one in HUAWEI Cloud
	when creating device in HUAWEI Cloud. It can be reset in
Device Key	device authentication if forgot. (Not necessary if connecting with
	certificate is selected)
CA File	Select File Upload(Select Certificate Connection to fill in)
Client certificate	Select File Upload(Select Certificate Connection to fill in)
file	
Client key file	Select File Upload(Select Certificate Connection to fill in)
	Set the same Service ID as the one in HUAWEI Cloud. (IOT
	Platform-Products-Add Service-Service ID)
	HUAWEI CLOUD Console • Beijing4 • Search
	HUAWEI CLOUD Console Bisijingd Search
	HUAWEI CLOUD Console Eligingd Search Lot Platform Products / BL101 BL101 ID: Add Service X Overview
Server ID	HUAWEI CLOUD Console Reglingd Search IoT Platform Products / BL101 Ibsue collision Default BL101 Ibsue collision Default Service Overview Products Service Type ©
Server ID	HUAWEI CLOUD Console Regingd Search IoT Platform Products / BL101 Iot BL101 Iot Add Service X Overview Products Product Nam Service Type: © Devices Vanufacture Description 22
Server ID	HUAWEI CLOUD Console Religingd Search IoT Platform Products / BL101 ID Iot Platform BL101 ID Iot Platform BL101 ID Iot Platform Products / BL101 ID Iot Platform BL101 ID Iot Platform BL101 ID Iot Platform BL101 ID Iot Products Product Nam Devices Type Iot Devices Intervice Type Intervice Type Iot Rules Iot Product Nam Description Iot Storage Management Oritize Mortial Do
Server ID	HUAWEI CLOUD Console Relingd Search IoT Platform Products / BL101 ID IoT Platform BL101 ID Add Service Overview Products Products / BL101 Service ID Devices V Products / Type Device Type Devices V Manufacture Original Otata Type Description Original OAM Model De K Cancel
Server ID	HUAWEI CLOUD Console Religingd Search IoT Platform Products / BL101 Iot Iot Platform BL101 Iot Add Service Iot Products Products / BL101 Iot Iot Platform BL101 Iot Service ID Iot Products Product Nam Service ID Iot Iot Pervices Iot Description Iot Iot Resource Spaces Monufacturer OK Cancel Iot DA Instances Service ID Iot Product Nam Import mont courally Iot DA Instances Service ID Iot Product Nam Iot Product Nam Iot DA Instances Iot Product Nam Service ID Iot Product Nam Iot DA Instances Iot Product Nam Service ID Iot Product Nam Iot DA Instances Iot Product Nam Service ID Iot Product Nam
Server ID	HUAWEI CLOUD Console Regingst Search IoT Platform Products: / BL101 ////////////////////////////////////
Server ID Upload cycle	HUAWEI CLOUD Console Belingd Search I of Platform Products //Blin //Blin //Blin I of Platform Blin Device //Blin
Server ID Upload cycle	HUAWEI CLOUD Console Belingd Search IoT Platform Products / BL101 IoF Service 10 IoF Platform Products Device Type IoF Platform IoF Platform IoF Platform Products Device Type IoF Platform
Server ID Upload cycle Data	HUAWEI CLOUD Console Relinget Search Interference Interference Add Service Interference
Server ID Upload cycle Data Retransmission	HUAWEI CLOUD Console Reginget Search Iot Platform Products / BL101 Iot Platform Search Image: Non-Default Image: Non-Default Image: Non-Default Search Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default Image: Non-Default
Server ID Upload cycle Data Retransmission	WHAWEI CLOUD Console Regings Search Intel Teleform Product / Billot Image: Service / Billot Image: Service / Billot Image: Service Image: Service / Billot Image: Service / Billot Image: Service / Billot Image: Service Image: Service / Billot Image: Service / Billot Image: Service / Billot Image: Service Image: Service / Billot Image: Service / Billot Image: Service / Billot Image: Service Image: Service / Billot Image: Service / Billot Image: Service / Billot Image: Service Image: Service / Billot Image: Service / Billot Image: Service / Billot Image: Service Image: Service / Billot Image: Service / Billot Image: Service / Billot Image: Service Image: Service / Billot Image: Service / Billot Image: Service / Billot Image: Service Image: Service / Billot Image: Service / Billot Image: Service / Billot Image: Service Image: Service / Billot Image: Service / Billot Image: Service / Billot Image: Service Image: Service / Billot Image: Service / Billot Image: Service / Billot Image: Service Image: Service / Billot Image: Serv
Server ID Upload cycle Data Retransmission Selection of	HUAWEI CLOUD Control Religned Control Interform Products BLIDI Add Service Import the service to
Server ID Upload cycle Data Retransmission Selection of published data	WUAWEI CLOUD Control Bill Products / Bill Add Service Tope Image: Default Bill Image: Products / Bill Image: Products / Bill / B
Server ID Upload cycle Data Retransmission Selection of published data points	WUAWEI CLOUD Centre Iot Platform Products / BLIDI Image: Management Builded Bervice Image: Management Description Image: Management Image: None Edge Image: None Edge Image:
Server ID Upload cycle Data Retransmission Selection of published data points OK	HUAWEI CLOUD Cover @ Bigged Image: Cloud Image: Cloud Image: Cloud Image: Cloud <t< td=""></t<>



HUAWEI CLOUD platform data point settings are as follows: If multiple service IDs are set on the configuration software, and each service ID has different data points, the HUAWEI CLOUD platform needs to add attributes to the corresponding service IDs. The attribute name is filled with the variable label of the corresponding data point on the configuration software. For example, if the M140T data point DO1 is collected, and the variable label on the configuration software is "DO1", the attribute name of the attribute added on HUAWEI CLOUD should be "DO1".

HUAWEI CLOUD	sole 🔍 Beijing4 🔹						
IoT Device Access	Products / BL101						
۵	P1 404			×			
Basic Change	BL101 ID: 600a4292b86d/b02dbb14805 Hegis	Edit Property					Update product
M	Product Name BL101	* Property Name	D01	ce	BLYYY		
Overview		Description			BLAAA		
O Declara	Device Type modbus			0/128	MQTT	M.	
© Devices •	Manufacturer jinge	* Data Type	Integer	•	-	v	
C Stuces Measured	Description -	Access Demission	Based Welter				
		· Access Permission	Read mile				
D Resource Spaces	Model Definition Online Debugging	Topic M * Value Range	0 -	6553			
Co IoTDA Instances	Add Service Import from Library	Step	0			Learn About Product	Models Export
Documentation &	Service List	Unit					
API Explorer of	Id U	Servi				Modify Servic	e Delete Service
IoT Device Provisioning	M140T	Add	OK Cancel				
Forum for help of	S475	Property Name	Data Type	AccestMode	Description	Operation	
	FX3U	D01	Integer	Readable Writable		Copy Edit	Delete
	S/_2005MAR1	DO2	Integer	Readable, W table		Copy Edit	Delete
		D03	Integer	Readable, Writzele		Copy Edit	Delete
		004	Integer	Readable, Writable		Copy Edit	Delete
Search Clear Import	Export Read Config. Write	Config. Monitor	Remote Log			中文 H	? (i) Help About
白 鼎 BL103Pro	 Variable Nan 	ne Address Type	Address Valu	ue Unit Data type	Varibale Key	Map Addre	ss Ratio
E COM1	DOT	01 Coil Status(0x)	1	bool	001	1(M.000001)	none
-⊕M140T	D02	01 Coil Status(0x)	2	bool	D03	2(M.000003)	none
	DO4	01 Coil Status(0x)	3	bool	DO4	3(M.000004)	none
⊗\$475	DO5	01 Coil Status(0x)	4	bool	DO5	4(M.000005)	none
- @WAN	DO6	01 Coil Status(0x)	5	bool	DO6	5(M.000006)	none
—('Å') 4G	DO7	01 Coil Status(0x)	6	bool	DO7	6(M.000007)	none
E VPN VPN	DO8	01 Coil Status(0x)	7	bool	DO8	7(M.000008)	none
└ OpenVPN	DIN1	02 Input Status(1x)	0	bool	DIN1	8(M.000009)	none
— 岱 Alarms	DIN2	02 Input Status(1x)	1	bool	DIN2	9(M.000010)	none
Tasks	DINA	02 Input Status(1x)	2	bool	DINA	10(M.000011)	none
	DINS	02 Input Status(1x)	4	bool	DIN4	12(M 000012)	none
	h DIN6	02 Input Status(1x)	5	bool	DIN6	13(M.000014)	none
Modbus RTI	IETCP DIN7	02 Input Status(1x)	6	bool	DIN7	14(M.000015)	none
@Modbus TCE	DIN8	02 Input Status(1x)	7	bool	DIN8	15(M.000016)	none
	Server						
C BAChet/IP							
- I - I - A BY LOUID							

4.2.11.5 AWS(Amazon Web Service)

Note: 1. Data point box is blank in default which means all data points will be published. Ifmultiple topics are published, only one topic data point box can be blank. For other topics,data points for publishing must be selected. 2. AWS Cloud shadow function is not supported.61Shenzhen Beilai Technology Co., Ltd.V1.0



Ali loT HUAWEI IOT

- 🕀 KingPigeon IoT - KingPigeon Modbus IoT -{ô}Advanced Settings

BLiiot

Bliiot Bei	il ai Indu	strial Ga	teway w	ww.Blijot.com\	/1138										
Search	Clear	striar ea Import	Export	Read Config.	Write Config.	() Monitor	() Remote	Log					● 中文	? Help	(i) About
	A)4G			Vari	able Name	Address Typ	be Ad	dress AW	Value Un S IOT	nit E	Data type	Varibale Key	Map Ad	dress	Ratio
	Cloud	enVPN ervices ss Throug odbus RTU odbus TCF Cnet/IP C UA QTT Client	h J≒T 2 Se	IP/Dom P Th Client Client Certificate I Client Key I Publish To Upload Cycle	sin ort ID IC	8883	j bbA ~	· · · · · · · · · · · · · · · · · · ·	Variable 1	Гуре	Port	Device	Varia	ible Name	

	AWS Configuration
Item	Description
Enable	Default is disable. Green indicates AWS is enabled Grav indicates AWS is disabled
IP/Domain Name	Fill in the terminal node, enter the console, and click "Things" - "Interact". Will services Services </td
Port	8883(Required)
Thing	Fill in the ARN

OK Cancel



	aws, Services ▼ Q Search for se	rvices, features, marketplace	e products, and doc: [Alt+S] D 🗘 V Oregon V
	AWS IoT X	AWS IoT > Things >	BL101
	Monitor Activity		
	Onboard	BLIUT	
	Manage Things	Details	Thing APN
	Types	Security	A thing Amazon Resource Name uniquely identifies this thing.
	Thing groups Billing groups	Thing groups	Protection and a second statements and particular
	Jobs Job templates	Shadows	Type
	Tunnels	Interact	- ypc
	Fill in AWS account	ID	
	aws Services ▼ Q Search for	r services, features, marketp	place products, and docs [Alt+S] D &
	AWS IoT ×	AWS IoT > Things	> BL101 My Account
Client ID	Monitor	THING	My Organization
	Activity Onboard	BL101 BLXXX	My Billing Dashboard
	▼ Manage		My Security Credentials
	Things Types	Details	Thing ARN Sign Out
	Thing groups	Thing groups	A thing Amazon Resource Name uniquely identifies this thing.
CA File	Select File Upload		
Client certificate	Select File Upload		
file			
Client key file	Select File Upload		
	Topic created when c	reating a rul	e, topic name used by MQTT to
	publish messages, cli	ck "Add" to	fill in the published topic
	name. Click Add to c	reate more F	Publish Topics. Select Publish
	Topic and click Delet	te to delete it	t.
	aws Services ▼ Q Search	h for services, features, m	arketplace products, and docs [Alt+S] 🛛 🗘 🗸
Publish Topic	Fleet Hub Greengrass		
	► Secure	a and a second sec	Description
	Defend Act	Tags	No description
	Rules Destinations		Rule query statement
	Test Device Advisor MOTT test client		SRIECT * FROM interference
			Using SQL version 2016-03-23
Uploading cycle	Cycle time of data up	oloading. De	fault is 30s
Selection of	Default is blank, mea	ns all data is	s uploaded. In the box on the
published data	right, click the right r	nouse buttor	n, click "Add", the data point
points	box will pop up, click	k the data po	int, and click OK.
ОК	Confirm AWS setting		
Cancel	Cancel AWS setting		



4.2.11.6 King Pigeon Cloud via MQTT

King Pigeon MQTT Data Format refer to: <u>5.4.19 King Pigeon MQTT Data Format</u> Configure it as below

BLiiot Bei	Lai Industrial Gat	eway w	ww.BLiiot.com V	1.1.3.8									-	ΟX
) Search	Clear Import	Export	Read Config.	Write Config.	() Monitor	() Remote	Log					● 中文	? Help	(i) About
_(4 ⁰ 4G						Kin	gPig	geon loT					_
	PN VPN		C Enable						1					
	└ [©] OpenVPN								Variable Type	Port	Device	V	ariable Na	ne
−i	Alarms													
-6	Tasks		IP/Do	main	1883.dtuip	o.com								
	DataServices			Port	1883									-
	- Pass Through	(Clie	ent ID										
	- 🖓 Modbus RTU	≒TCP	User N	Name	MQT	r								
	—⊕ Modbus TCP	Server	Pass	word	MQTTP	W								
	—		Subscribe	Topic										
	GOPC UA		Publish	Topic										
8	Cloud		Upload Cy	cle(s)	30									
	- MQTT Client		Data Retransmi	ssion										
	- MQTT Client	11												
	—⊕Ali loT													
	- HUAWEI IOT	1											ОК	Cancel
	- @ AWS IoT													
	🕀 KingPigeon Io	T												
	└── ⓒ KingPigeon N	Aodbus le	To											
{	Advanced Setting	ļs	~											

King Pigeon IoT Configuration								
Item	Description							
Enchlo	Green indicates King Pigeon cloud via MQTT is enabled, Gray							
Enable	indicates disabled							
IP/Domain Name	1883.dtuip.com							
Port	Default 1883, must be filled in							
	Fill in device serial number issued by King Pigeon (Contact							
Client ID	King Pigeon sales to get the serial number if required to connect							
	to King Pigeon cloud)							
User Name	MQTT							
Password	MQTTPW							
Subscribe Topic	King Pigeon Device Serial Number/+							
Publish Topic	King Pigeon Device Serial Number							
Uploading Cycle	Cycle time of MQTT data uploading. Default is 30s							
	Green indicates offline data will be transmitted once network							
Data	recovers; Gray indicates retransmission disable. Max 100,000							
Retransmission	data points can be re-transmitted. The previous data will be							
	deleted if more than that.							



Selection of	Default is blank, means all data is uploaded. In the box on the
published data	right, click the right mouse button, click "Add", the data point
points	box will pop up, click the data point, and click OK.
OK	Confirm King Pigeon MQTT setting
Cancel	Cancel King Pigeon MQTT setting

King Pigeon MQTT data points configuration. First, add data points, and then go to the setting link protocol item to configure the data point identifier. The identifier of the data point is the same as the variable label on the configuration software. For example: collecting M140T data point DO1, the variable label on the configuration software is "DO1", then the read and write identification on the King Pigeon Cloud should be "DO1". The names of the sensors on the platform can be configured inconsistently in the software.





3Lilot BeiLai Industrial Gateway www.B Search Clear Import Export Rea	Liiot.com V1.1.3.8	nfig. Monitor Re	emote Log				Pi) (1 中文 He	- 🗇 X
白 品 BL103Pro	Variable Name	Address Type	Address	Value	Unit Data type	Varibale Kev	Map Address	Ratio
E-@COM1	DO1	01 Coil Status(0x)	0		bool	DO1	0(M.000001)	none
L_10140T	DO2	01 Coil Status(0x)	1		bool	DO2	1(M.000002)	none
	DO3	01 Coil Status(0x)	2		bool	DO3	2(M.000003)	none
	DO4	01 Coil Status(0x)	3		bool	DO4	3(M.000004)	none
└─ \$ \$475	DO5	01 Coil Status(0x)	4		bool	DO5	4(M.000005)	none
—@WAN	DO6	01 Coil Status(0x)	5		bool	DO6	5(M.000006)	none
—" 太 "4G	DO7	01 Coil Status(0x)	6		bool	D07	6(M.000007)	none
UPN VPN	DO8	01 Coil Status(0x)	7		bool	DO8	7(M.000008)	none
	DIN1	02 Input Status(1x)	0		bool	DIN1	8(M.000009)	none
W Alarma	DIN2	02 Input Status(1x)	1		bool	DIN2	9(M.000010)	none
	DIN3	02 Input Status(1x)	2		bool	DIN3	10(M.000011)	none
	DIN4	02 Input Status(1x)	3		bool	DIN4	11(M.000012)	none
DataServices	DIN5	02 Input Status(1x)	4		bool	DIN5	12(M.000013)	none
- 🖓 Pass Through	DIN6	02 Input Status(1x)	5		bool	DIN6	13(M.000014)	none
	DIN7	02 Input Status(1x)	6		bool	DIN7	14(M.000015)	none
- Modbus TCP Server	DIN8	02 Input Status(1x)	7		bool	DIN8	15(M.000016)	none
- QRACpat/IP								
() DACIEUTE								
- 🕀 MQTT Client								
- MQTT Client II	~							

4.2.11.7 King Pigeon Cloud via Modbus

Both King Pigeon Cloud and custom Modbus cloud can be connected via Modbus RTU protocol. BL103 supports function code 01, 05 of Boolean data and function codes 03, 06 of numerical data. 16-bit byte sequence is AB and 32-bit byte sequence is ABCD.

BLiiot Bei	Lai Industrial Gateway ww	w.BLiiot.com V1.1	.3.8						-	·ΟΧ
) Search	Clear Import Export I	Read Config. Wi	rite Config. Monitor	Remote Log				小) ? Help	() About
 	₩ ⁴ G ■VPN — & OpenVPN		KingPig	geon Modbus IoT						
-ŕ	Alarms	Nam				Status	Port	Device Nam	e	Status
-6	Tasks	Time	You can change the server a	address to log in <mark>t</mark> o other cloud pla	tforms.		LAN	M1401		-
	DataServices	Model	IP/Domain	modbus.dtuip.com			LAIN	3473		
	—	Version	Port	6651						
	—	4G Module	Modbus Station	1						
	- Modbus TCP Server	IMEI	Login Message							
	—⊕BACnet/IP	Signal Stren	Login ACK Message			•				
	-OPC UA	operator	Heartheat Marsage	0						
E-A	Scloud	SIM ICCID		4						
		SIM Status	Heartbeat ACK Message	A						
	QMOTT Client II		Heartbeat Interval(s)	60						
	- MAILIOI			OK	Cancel					
	- HUAWEI IoT			Refr	esh					
	- @ AWS IoT									
	⊗KingPigeon IoT									
	GingPigeon Modbus Io									
-{	Advanced Settings	v								

King Pigeon Modbus IoT					
Item	Description				
Enable	Green indicates King Pigeon Cloud via Modbus is enabled				



	Gray indicates disable
IP/Domain Name	modbus.dtuip.com
Port	Default is 6651, must be filled in
Modbus Station	Set Modbus communication address of this Gateway device
Login Massaga	Data package of register connect server. Contact King Pigeon
Login Message	sales for serial number if you need.
Login ACK	Not required for King Pigeon Cloud, data packet of the server
Message	responds to the registered.
Heartbeat message	Q, Heartbeat packets to maintain the connection.
Heartbeat ACK	A The server responds with heartheat packets
	ri, The server responds with neuroeut puckets.
message	ri, The server responds with neuroout puckets.
message Heartbeat Interval	Cycle time of sending Heartbeat messages, default is 60s
message Heartbeat Interval OK	Cycle time of sending Heartbeat messages, default is 60s Confirm King Pigeon Cloud via Modbus setting

Configure datapoint in King Pigeon Cloud as below picture. First create datapoint, then configure Modbus ID, function code, address, data format, byte sequence and data collection cycle. Modbus address in King Pigeon cloud and configuration software is deviated by 1. For example: to collect M140T data point DO1, the Modbus mapping address on the configuration software is "0", then fill in "1" for the King Pigeon cloud bias. The names of the sensors on the platform can be configured inconsistently in the software.





Monitoring Center										Console 💭	Ch English
O Link Protocol	➡ Device List	Read write instruct	ion settings							- 2	×
TCP Protocol	Di Louite de D'El										
HTTP Protocol		Serial Number	Sensor	Slave Address	Function Code	Bias	Data Format	Data Bits	Byte Order	Acquisition Cycle	
MB RTU	<u>.</u>	1	DO1	1	01Read and write -	1.1	DI.			10	
MB TCP	Serial Number										
MQTT Protocol	All Sensors	2	DO2	1	01Read and write 👻	2	DE			10	
UDP Protocol		3	DO3	1	01Read and write 🛛 👻	3	DR			10	
CTCoAR Protocol		4	DO4	1	01Read and write	4	1			10	
NB-IoT Protocol		5	005	1	01Read and write	4	NF.			10	
CoAP Protocol		-				-					
		6	DO6	1	01Read and write 👻	6	bit			10	
	Read write instruction settings	7	D07	1	01Read and write 👘	7	bit			10	
		8	DOS	1	01Read and write 🔍	8	bt			10	
	<u>n</u>		DINI	4	AlBand and urite					10	
			Divi	-	United and this	-		_		10	
	•	10	DIN2	1	01Read and write 🔍	10	bit			10	
	505	11	DIN3	1	01Read and write 👘 👻	11	ы			10	
	Can only be a number Write In	12	DIN4	1	01Read and write 🔍	12	bit			10	
								· \ '			*
v2.0	l l							-+		Ganoci	we l
Search Clear Import	Export Read Config. Write	Config. Mo	nitor I	Remote	Log				ļ	やしてい ゆうして の の の の の の の の の の の の の の の の の の の	p About
白 品 BL103Pro	^ Variable Name	e Add	ress Type	Ac	ldress Value	Unit	Data type	Varibale	Key M	ap Address	Ratio
E-@COM1	DO1	01 Coil Sta	tus(0x)	0			bool [001	0(NL)	000001)	none
L _{☉M140T}	DO2	01 Coil Sta	tus(0x)	1			bool [002	100	000002)	none
	003	01 Coil Sta	tus(0x)	2			bool I	003	2(0)	000003)	none
└_ ③ \$475	DOS	01 Coil Sta	tus(0x)	4			bool [005	4(NL)	000005)	none
- @WAN	DO6	01 Coil Sta	tus(0x)	5			bool [006	5(NL	000006)	none
_('Å)'4G	D07	01 Coil Sta	tus(0x)	6			bool	007	6(NL)	00007)	none
E WWVPN	DO8	01 Coil Sta	tus(0x)	7			bool [800	7(NL	(80000	none
└_ ۞ OpenVPN	DIN1	02 Input St	tatus(1x)	0			bool [DIN1	8(NL)	000009)	none
— 岱 Alarms	DIN2	02 Input St	tatus(1x)	1			bool [9(NJ	000010)	none
Tasks	DIN4	02 Input St	tatus(1x)	3			bool	DIN4	111	.000012)	none
DataServices	DIN5	02 Input St	tatus(1x)	4			bool [DIN5	12 V	.000013)	none
- Pass Through	DIN6	02 Input Si	tatus(1x)	5			bool	DIN6	13 V	.000014)	none
- Modbus RTU	⇒TCP DIN7	02 Input St	tatus(1x)	6			bool	DIN7	14 V	.000015)	none
- Modbus TCP	Server DIN8	02 Input St	tatus(1x)	7			bool (DIN8	15 V	.000016)	none
- @BACnet/IP											
OPC UA											
E-OCloud											
and the second sec											
- MOTT Client											

5 BL103 Gateway Application Example

5.1 Modbus Protocol Devices Data Acquisition

Take the COM port to collect the DI and DO data of the remote I/O module M140T, and the LAN port to collect the data of the RTU S475 as an example. The COM port is collected through the Modbus RTU protocol, and the LAN port is collected through the Modbus TCP protocol. The WAN port of the BL103 is connected to the LAN port of the R40 router, and the R40 router provides the network to the BL103 gateway.



5.1.1 M140T and S475 Connect to BL103



The LAN port of the BL103 gateway is connected to the switch, the S475 is connected to the switch, and the LAN port is used to collect the S475 data through the Modbus TCP protocol. When the LAN port is connected to a switch, the LAN port cannot be connected to network cables from other network segments. Use the COM port to collect the data of the M140T through the Modbus RTU protocol, connect the collected data to the 4G router R40 through the WAN port, and use the routing function of the R40 to upload the data to cloud platform. Note: Both the WAN port and the LAN port can collect data from equipment. The example is to introduce the LAN port collection. The configuration of the WAN collection equipment is the same as the configuration of the LAN.



5.1.2 COM Port Configuration for Data Acquisition

5.1.2.1 COM Port Configuration

COM collects M140T data through Modbus RTU. The COM port configuration is as follows:

Search Clear Import Export Read Config. Wite Config. Monitor Remote Log Import Export Read Config. Wite Config. Monitor Remote Log Import Export Read Config. Wite Config. Monitor Remote Log Import Export Read Config. Wariable Name Address Value Unit Data type Variable Name Step Bit Import Variable Name Step Bit Import Context Parity Bit None OK Cancel	BLiiot BeiLai Industrial Gateway www.BLiiot	com V1.1.3.8	-	
Image: Second	Search Clear Import Export Read Co	onfig. Write Config. Monitor Remote	中文 Help	(i) About
G ⊕ OPC UA G ⊕ MQTT Client	Search Clear Import Export Read Co	Infig. Write Config. Monitor Remote Log Variable Name Address Type Address Value Unit Data type Varibale Key Serial Port Settings Verice Brand Modbus v Device Model MODBUS_RTU v Serial Port Settings Baud 9600 v Data Bits 8 v Stop Bit 1 v Parity Bit None v OK Cancel	中文 Help Map Address	About Ratio

(1) Double-click "COM1" (2) Mode selection: Collection. (3) Because the M140T device is collected through the RS485 COM port, use Modbus RTU protocol, the device brand: Modbus, and the device model: Modbus RTU. The polling interval and timeout are set by default and set according to requirements. (4) The baud rate, stop bit, data bit, and parity bit are configured according to the parameters of the M140T RS485 port, which are consistent with them. (5) Click "OK".

Note: Click "Write Configuration", the gateway device will restart automatically, and the configuration of the COM port will take effect after restarting.



5.1.2.2 Add COM Port Device M140T

BLiiot Bei	Lai Indu	ustrial Ga	teway w	ww.BLiiot.com \	/1.1.3.8											ΟX
) Search	Clear	\$ Import	Export	Read Config.	Write Config.	() Monitor	() Remote	Log						。 中文	? Help	() About
С "" ви	103Pro COM1	IOT		Vari	able Name	Address Typ	be Ad	dress	Value	Unit	Data type	Varil	oale Key	Map Ado	Iress	Ratio
-6	WAN					De	evice Infor	mation		_						
_6	Å ")4G					Device Nam	•	140T								
	VPN				Device	Properties —										
	-@0	penVPN				Slave I	D	1								
-i	Alarm	s			1	5-bit Data Typ	e	AB	v							
	Tasks				3	2-bit Data Typ	e	ABCD	~							
	DataS	ervices			Write	Function Cod	e	15/16	~							
	- @Pa	iss Throug	h													
	-ØM	odbus RTI	J≒TCP		· · · · ·				OK Ca	ncel						
	-ØM	odbus TCF	Server													
	- @BA	ACnet/IP														
	60	PC UA														
60	Cloud															
	-OM	QTT Client														
	-ØM	QTT Client	.11													
	-@AI	i loT		~												

Click "COM1", right-click, and click "Add" to enter the configuration box. (2) Fill in the device name, such as: M140T. (3) The slave ID is filled in according to the Modbus ID of the acquisition device. For example, the Modbus ID of the M140T is "1", therefore, fill in "1". (4) Select the data type according to the data to be collected. The example is to collect the DI and DO of the M140T, both of which are Boolean type, not numeric type register, select as default.
 (5) Write function code: As default, M140T supports writing multiple registers. (6) Click "OK" to add the M140T device.

Note: After clicking OK, the added devices will be displayed under COM1, as shown in the figure above. If you want to add multiple devices, repeat steps (1)-(6).

Note: Click "Write Configuration" to restart the gateway device automatically. After restarting, the M140T device with the COM port added will be added successfully.



5.1.2.3 Add M140T Data Point

P 싎 🔊 4 earch Clear Import Exp	port Rea	d Config.	Write Config.	Monitor Re	mote Log	l a				全 前 中文	? Help	() Abou
🗗 🖧 BL103Pro		^ Vari	able Name	Address Type	Address	Value	Unit Data ty	pe V	aribale Key	Map Add	lress	Ratio
E COM1		DOT	01	Coll Status(Ux)	0		bool	001		0(M.000001)) n	one
- 1 M140T		DO2	01	Coil Status(0x)	1		bool	DO2		1(M.000002) n	.one
- Can		DO3		Va	ariable Prop	erties				2(M.000003) n	.one
		004								3(M.000004) n	one
((1)) 40		DOS								4(141.000005) n	one
A'40		000	Variable Name	DO1		Varibale Key	DO1			S(M.000006) n	one
		007	OCT/DEC/HEX	Decimal	v					5(IVI.000007) n	one
- OpenVPN		DU8		01.0 101.1 (0.)			0			7(101.000008) n	one
—党 Alarms		DINT	Address Type	UT COILStatus(UX)	*	Address	U			8(11.000009) n	one
		DINZ	Data type	bool	· /	dd Number	1			9(WI.000010) n	one
F DataServices		DINS	Read/Write	Read/Write	v	Ratio	none		2	11(04.00001	1) n	one
		DINS	Mara Addama	0		(astable that				12(M 00001	2) 11	one
Q Modbus BTU - T	- D	DING	Map Address	0		variable Unit				12(M.00001	4) 10	one
	-F	DINZ						_		14(M 00001	5) 0	one
- Modbus TCP Ser	ver	DINB					ОК	Cancel		15(M 00001	6) 0	one
—										15(11.00001	0) 11	one
-OPC UA												
Cloud												
- MQTT Client												
- MOTT Client II												
Ali IoT												

(1) Click "M140T", right click the box on the right, and click "Add" to enter data point setting box. (2) Variable name: Name the data point, such as: DO1. (3) Variable key, which can be filled in arbitrarily. The identifier cannot be repeated, for example, the MQTT identifier of the DO1 data point is filled in as DO1. (4) Select the acquisition address and choose data format according to the requirements, OCT/DEC/HEX are octal/decimal/hexadecimal respectively. The collected Modbus protocol address is input in decimal, so the example selects decimal. (5) Address type: Select according to the function codes supported by the collected data points. For example, the DO of the collected M140T supports the "01" function code, so select "01 Coil Status", and DI supports the "02" function code, so select "02 Input Status" (6) Address: the register address of the data point, such as: data point DO1 is "0" register address in the M140T, so fill in "0". (7) Data type: Select according to the data point, such as: DI and DO of M140T are both coil types, so select "bool". (8) Add number: If it is collecting continuous addresses, the same function code can be collected multiple times. (9) Read/Write: select automatic identification according to the option of "Address Type". (10) Map address: fill in the address where the collected data points are stored to the BL103 gateway device, which can be filled in at will. Mapped addresses cannot be duplicated. Range: 0-2000. For example, the data collected from DO1 is stored in the "0" register address of the BL103 gateway. The outside of the mapping address on the configuration software represents the Modbus address, and M.XXX represents the PLC Modbus address. (11) Variable unit: fill in as required. (12) Click "OK".

Note: After clicking "OK", the data points will be displayed as shown in the figure above. Ifyou want to continue adding data points, right-click on the box and click "Add" to enter data72Shenzhen Beilai Technology Co., Ltd.V1.0


point configuration box, repeat (2)--(12) Steps.

Note: Clicking "Write Configuration" will restart the gateway automatically, and the data points added by the M140T will take effect only after the restart.

5.1.3 Ethernet Port Configuration for Data Acquisition

Both the WAN port and the LAN port can collect data from devices, and the configuration principles are the same.

5.1.3.1 LAN Port Configuration

BLiiot Be	iLai Indu	strial Ga	teway w	ww.BLiiot.com	V1.1.3.8								-	ΟX
) Search	Clear	∲ Import	Export	Read Config.	Write Config.	() Monitor	() Remote	Log				。 中文	? Help	(i) About
Б _ф ві	_103Pro			^ Var	iable Name	Address Type	Ad	dress Value	Unit	Data type	Varibale Key	Map Ad	dress	Ratio
Ē	COM1													
	-@M1	40T												
						Eth	nernet Se	ttings						
	₩AN							5						
	₩4G					DHCP	Routin	ng Enabled						
	VPN					IP Address	19	2.168.3.1						
	—⊕Op	envPN				Subnet Mask	255	5.255.255.0						
	Alarms													
						MAC Address	s 08:00	0:27:50:16:ac						
	BDatase	rvices												
	- OPas	ss Inrougi	1											
	-ØMC	dbus RTU	ISTCP					OK Car	icel					
	-ØMC	abus ICP	Server											
	-ØBA	Cnet/IP												
		CUA												
		TT OU												
	-ØMC	211 Client												
	-ØMC	211 Client	п											
	- WAII	101		~										

Below is the example of configuring LAN port to connect S475.

(1) Double-click "LAN" to enter LAN port configuration box. (2) DHCP: It is disabled by default, set according to the needs, such as: S475 is set to automatically obtain IP, so the LAN port DHCP should be enabled. (3) Routing enable: It is turned off by default and can be set according to requirements, such as: only collecting data from the S475 device, so the S475 does not need connect to Internet, so don't need routing function. (4) IP address: Default is 192.168.3.1, and the IP address assigned to the LAN device can only be the address of this network segment. It can be modified. For example: S475 is set to automatically obtain IP, which does not specify network segment of the IP, so no need to modified. (5) Subnet mask, the subnet mask of the LAN port gateway. (6) MAC address: the MAC address of the LAN port. (7) Click "OK".

Note: Clicking "Write Configuration" will restart the gateway automatically, and theconfiguration of the LAN port will not be changed until the power is turned off and restarted.73Shenzhen Beilai Technology Co., Ltd.V1.0



Note: The IP address of the LAN port is the IP address that specifies which network segment the LAN port device is. If the IP address of the LAN port device is not the network segment IP set by the LAN, the LAN port cannot collect. It is necessary to change the LAN port IP or change the LAN port device IP. After changing the IP address of the gateway, it must be written into the configuration, and it will take effect after power off and restart.

5.1.3.2 Add LAN Port Device S475



(1) Click "LAN", click the right mouse, click "Add" to enter device configuration box. (2) Device name: Name the device, for example: S475. (3) Device IP: S475 obtains the IP automatically, open the configuration software of the S475 and check the IP of the S475. Because the IP of S475 is: 192.168.3.125, therefore, fill in 192.168.3.125. Note: If the IP of the LAN port is changed, and the LAN device also obtains the IP automatically, click "Write Configuration", after power off and restart, IP of the LAN port device will become the IP address of the changed network segment . (4) Device Port: fill in the port number of the LAN port device, such as: the Modbus TCP port number of S475 is: 502, therefore, fill in "502". (5) The BL103 gateway collects S475 devices through the LAN port, which is a Modbus TCP protocol. Therefore, the device brand: Modbus, and the device model: Modbus TCP. (6) The polling interval and timeout in the button can be defaulted and filled in according to requirements. (7) Select the type of data point. For example, the power supply, temperature and humidity of the S475 are all 16-bit AB-arranged data types, and 32-bit data are not collected. Therefore, the 16-bit data type is AB, and the 32-bit data type is the default. (8) Write function code: choose 15/16, and choose according to the function code supported by the device. (9) Click "OK"



Note: After clicking OK, the added LAN port devices S475 will be displayed, as shown in the figure above. If you want to add multiple devices, repeat steps (1)-(9).

Note: Click "Write Configuration" and the gateway will restart automatically. After restarting, the S475 device added by the LAN port will be added successfully.

5.1.3.3 Add S475 Data Point

BLiiot Be	iLai Ind	ustrial Ga	teway w	ww.BLiid	ot.com \	/1.1.3.8										-	ΟX
Q				1		-									A	?	i
Search	Clear	Import	Export	Read	Config.	Write Co	onfig.	Monito	r Remote	Log					中文	Help	About
Ġ _Å в	_103Pro			^	Varia	ble Name	Slave	e ID A	ddress Type	Address	Value	Unit	Data type	Varibale Key	Map Ao	dress	Ratio
Ė-0		1			temp		1	04 Inp	ut Registers(3x	24			int16	temp	16(M.400	017) 1	
	LOM	1140T			humidity		1	04 Inp	ut Registers(3x) 25			int16	humidity	17(M.400	018)	
					F			V	ariable Pro	perties				power	18(M.400	019)	
		475															
	₩AN				Var	iable Name		temp		Varibale Key	t	emp					
-	(A) 4G				00	T/DEC/HEX	(Decimal	v	Slave ID		1					
	VPN				Ac	dress Type	04 Inpu	it Registers(3x) ~	Address		24					
	-@o	penVPN				Data tuna		int16		Add Number		1					
-1	Alarm	IS				Data type		intro		Add Number							
-(Tasks				IR IR	Read/Write	Re	ead/Write	~	Ratio		1					
	DataS	Services			м	ap Address		16		Variable Unit							
	-OP	ass Throug	h														
	-ØM	lodbus RTU	J≒TCP									ОК	Cancel				
	-ØM	lodbus TCF	Server														
	- @B	ACnet/IP															
	600	PC UA															
	Cloud	i															
	-ØM	IQTT Client	t														
	-ØM	IQTT Client	t II														
		··· –		~													af.

(1) Click "S475", right-click the box on the right, and click "Add" to enter data point setting box. (2) Variable name: Name of the data point, such as: temp. (3) Variable key, which can be filled in arbitrarily. The identifier cannot be repeated. For example, the MQTT identifier of the temperature data point is filled in as temp. (4) Select the acquisition address and choose data format according to the requirements. OCT/DEC/HEX are octal/decimal/hexadecimal respectively. The collected Modbus protocol address is input in decimal, so the example selects decimal. (5) Slave ID: The Modbus ID of the S475 device is "1", so fill in "1". (6) Address type: Select according to the function codes supported by the collected data points. For example, the temperature of the collected S475 supports the "04" function code, so select "04 Input Registers". (7) Address: The register address of the data point, such as: the temperature of the data point is the "24" register address in S475, so fill in "24". (8) Data type: according to the data point selection, such as: the temperature and humidity of S475 is a 16-bit signed value type, so select "int16". (9) Add Number: If it is to collect continuous addresses, the same function code can be collected multiple times. (10) Read/Write: support read and write selection according to the collected data. (11) Ratio: Enlarge or shrink how many times to upload to the platform, fill in according to the needs. (12) Map address: fill in the address where the collected data points are stored to the BL103 gateway device, which



can be filled in at will. Mapped addresses cannot be duplicated. Range: 0-2000. For example, the data collected from the temperature of S475 is stored in the "16" register address of the BL103 gateway. The outside of the mapping address on the configuration software represents the Modbus address, and M.XXX in the brackets represents the PLC Modbus address. (13) Variable unit: fill in according to requirements, or not fill in. (14) Click "OK".

Note: After clicking "OK", the data points will be displayed as shown in the figure above. If you want to continue adding data points, right-click on the box and click "Add" to enter data point configuration box, repeat (2)--(14) Steps.

Note: Clicking "Write Configuration" will restart the gateway automatically, and the data points collected from S475 will take effect only after restarting.

5.1.4 Data Upload to Various Platform

No matter what protocol data is collected by the BL103 gateway, the configuration for transmitting the data to each platform is the same. Therefore, this chapter takes the configuration of collecting Modbus protocol data and transferring it to each platform as an example. Refer to <u>5.4 Data Upload to Various Platform</u>

5.2 Electricity Meter Data Acquisition

5.2.1 COM Configuration for Electricity Meter Data

Acquisition

The COM port only supports the collection of DL/T645-2007 protocol electricity meters.

5.2.1.1 COM Port Configuration

Take the COM collects the DL/T645-2007 protocol electricity meter as an example. Note: DL/T645-2007 only used in China



BLiiot 钡铼工业网关配置软件 www.BLiiot.cn V1.1.3		- @ ×
	 ⑤ 监视 日志 	●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●<
 □ 品 BL103Pro ● 金 型 名称 ● ① COM ● ① COM ● ① COM ● @ WAN ● (½) 4G ● @ WPN ● ② OpenVPN ● ② COM ● ② DemVPN ● ③ 近後 100 ● ③ Modbus RTU=TCP ● ③ Modbus RTU=TCP ● ③ Modbus TCP Server ● ③ BACnet/IP ● ③ POPC UA □ ④ S 云平台 ● ○ MQTT Client II ● ○ 阿里IoT ● ③ #为IoT 	地址 値 単位 数编映型 交量标签(Key) 申口设置 - - - - ·物以设置 · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·	快到地址 系数

5.2.1.2 Add COM Port Electricity Meter

BLiiot 钡铼工业网关配置软件 www.BLiiot.cn \	/1.1.3							-	σ×
○ □ □ □ □ □ □ □ □ □ □ □ □ □ □	▲ ◎ 写入配置 监社	▶ □ 処 日志) English	? 帮助	① 关于
白 鼎 BL103Pro	变量名称	地址类型	地址值	単位	数据类型	变量标签(Key)	映射地均	Ł	系数
⊟- @) СОМ1 └ <mark>⊖</mark> DL/T645									
Can LAN			友信白	-					
- 🖾 WAN			用口心						
—"Å"4G		设备名称	DL/T645						
- WN VPN	L.	设备属性							
- OpenVPN									
一賞报警与事件									
一日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日		设备地址	1						
日日数据服务									
一〇透传									
—			Line (RINGUE					
	L		WEAL	*K/H					
OPC UA									
- @ MQTT Client									
————————————————————————————————————									



5.2.1.3 Add Electricity Meter Data Point

の 留理素 清空 号入 号出 读明	▲ ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●	1 志				() English	? 帮助	() 关于
🖨 ஆீBL103Pro	△ 変量名称	地址类型 地	址 值	单位 数据类型	变量标签(Key)	映射地址		系数
E-@COM1	A相电压 A相电	UE 0		float32	REG001	10(M.400011)	1	
L_@DL/T645	組合有功总电能 组合	与功总电能 0		float32	REG002	12(M.400013)	1	
- Can lan		变	量属性					
—" A ")4G	变量名称	A相电压	变量标签(Key)	REG001				
C W VPN	OCT/DEC/HEX	十进制 、						
₩ tree === th	地址英型	A相电压 v	地址	0				
一同任务计划	数据类型	float32 v	添加数量	1				
	读写类型	读写 >	系数	1				
──────────────────────────────────────	映射地址	10	变量单位					
- Hodbus TCP Server				确定	取満			
OPC UA								
日の元平台								
- HQTT Client								
- HQTT Client II								
—								

5.2.2 Ethernet Port Configuration for Electricity Meter Data Acquisition

Under development (electric meter IEC101, IEC104 protocol)

5.2.3 Data Upload to Various Platform

No matter what protocol data is collected by the BL103 gateway, the configuration for transmitting the data to each platform is the same. Therefore, this chapter takes the configuration of collecting Modbus protocol data and transferring it to each platform as an example. Refer to 5.4 Data Upload to Various Platform

5.3 BACnet Devices Data Acquisition

BL101 does not support BACnet, only BL103 BACnet IoT gateway supports it. The BL103 gateway supports the collection of nine objects: AI, AO, AV, BI, BO, BV, MSI, MSO, and MSV. The collected value is the current value attribute of these nine objects.



5.3.1 COM Configuration for BACnet MS/TP Devices Data

Acquisition

5.3.1.1 COM Configuration

Take the BACnet MS/TP device collected by the COM port as an example, the COM port 485 ports A+ and B- correspond to the A+ and B- ports of the 485 port of the BACnet MS/TP device respectively.

BLiiot BeiLai Industrial Gateway www.BLiiot.com V1.1.3.8	– 🗆 X
	Pe ? ()
Search Clear Import Export Read Config. Write Config. Monitor Remote Log	中文 Help About
E BL103Pro	Key Map Address Ratio
- COM1	
Carial Port Settings	
- WAN Made Solution Collection	
-(A) 4G	
D WVPN	
OpenVPN Device Brand BACnet *	
一党 Alarms Device Model BACnet/MSTP *	
- Tasks	
Serial Port Settings	
- Pass Through Baud 38400 V Data Bits 8 V	
- © Modbus TCP Server	
- BACnet/IP OK Cancel	
© OPC UA	
日	
- O MQTT Client	

(1) Double-click "COM1" to enter COM property configuration box. (2) Mode selection: Collection. (3) Since it is a BACnet MS/TP device, device brand: select "BACnet", device model: BACnet MS/TP. The polling interval and timeout are set according to requirements. (4) The baud rate, stop bit, data bit, and parity bit are configured according to the parameters of the serial port of the BACnet MS/TP device, and are consistent with them. (5) Click "OK". Note: Click "Write Configuration" and the gateway device will restart automatically, and the configuration of the COM port will take effect after restarting.



5.3.1.2 Add COM Port BACnet MS/TP Device

BLiiot BeiLai Industrial Gateway ww	w.BLiiot.com V1.1.	3.8				_	σx
Search Clear Import Export	Read Config. Wr	ite Config. Monitor Rer) E note Log			中文 Help	(i) About
白 品BL103Pro	^ Variable N	Name Address Type	Address Value	Unit Data type	Varibale Key	Map Address	Ratio
G G G G G BACnet MS/TP G G AN		Davica	Information				
—@WAN		Device	mormation				
—('Å') 4G		Device Name	BACnet MS/TP				
		- Device Properties					
└── ⓒ OpenVPN							
— 岱 Alarms		Local MAC	127				
		Device MAC	1				
De DataServices		Device Address	3001				
—		L	OK	Cancel			
- Modbus TCP Server			OR	current			
—⊗ BACnet/IP							
└──� OPC UA							
Cloud							
- MQTT Client							
- MQTT Client II							
—⊕Ali loT							
	×						

(1) Click "COM1", right-click, and click "Add" to enter device configuration box. (2) Fill in the device name arbitrarily, such as: BACnet MS/TP. (3) Local MAC: Fill in as required, default is 127. (4) Device MAC: MAC of BACnet MS/TP device, fill in according to the device. (5) Device address: fill in the instance of the BACnet MS/TP device. (6) Click "OK" Note: After clicking OK, the added devices(BACnet MS/TP) will be displayed under COM1, as shown in the figure above. If you want to add multiple devices, repeat steps (1)-(6). Note: Click "Write Configuration" to restart the gateway device automatically. After restarting, the BACnet MS/TP device with COM1 port is added successfully.

5.3.1.3 Add BACnet MS/TP Device Data Points

Collection of analog input objects as an example and the configuration refer to:



BLiiot Be	iLai Indi	ustrial Ga	teway wi	ww.BLii	ot.com V	/1.1.3.8							- 🛛 🗙
) Search	Clear	st Import	Export	Read	Config.	Write Config.	Monitor	Remote	Log			中文 He	lp About
⊟ ஃ₿	103Pro			~	Vari	able Name	Address Type	e Ad	dress Value	Unit Data typ	e Varibale Key	Map Address	Ratio
	⊡COM1				analoginp	ut ana	log-input	1		float32	REG001	20(M.400021)	1
		ACnet MS/	TP		binaryinp	ut bin	ary-input	1		bool	REG002	10(M.000011)	none
					_								
								Variable	Properties				
	A'40					Variable Name	analoging		Varibalo Kay	PEG001			
	VPN					variable (varie	analoginpo	Jr.	varibale key	REGOUT			
	-@0	penVPN				OCT/DEC/HEX	Decimal	*					
נ	Alarm	s				Address Type	analog-inpu	t ¥	Address	1			
-(Tasks					Data type	float32	*	Add Number	1			
	@DataS	ervices				D 1044 1	D law's		D. ri				
	- @Pa	iss Throug	h			Ready write	Read/ write		Ratio	<u>,</u>	_		
	-ØM	odbus RTU	J⇔TCP			Map Address	20		Variable Unit				
	-@M	odbus TCP	Server										
	-MB/	ACnet/IP								OK	Cancel		
	-MO												
		e on											
		OTT											
	-@M	QTT Client											
	-ØM	Q11 Client	п										
	-@AI	i loT		~									

(1) Click "BACnet MS/TP", right-click the box on the right, and click "Add" to enter data point setting box. (2) Variable name: Name the data point, such as: collecting data of "analog input 1", it can be filled in as: analog input. (3) Variable key, which can be filled in arbitrarily. The identifier cannot be repeated, for example, the identifier of the collected "analog input 1" data point is filled in as "REG001". (4) Select the acquisition address and choose data format according to the requirements. OCT/DEC/HEX are octal/decimal/hexadecimal respectively. BACnet MS/TP data points choose Decimal. (5) Address type: Select according to the BACnet MS/TP objects type. For example, to collect the data of "analog input 1", select "analog input". (6) Address: the object instance number, such as: collecting the data of "analog input 1", the object instance number is: 1.

(7) Data type: Select according to the attribute selection of the current value for BACnet MS/TP device object. (8) Add Number: If it is to collect continuous addresses, the same register can be collected multiple times. (9) Read/Write type: choose from "read only", "read and write". (10) Ratio: how many times to enlarge or shrink to upload to the platform, fill in according to the needs. (11) Map address: fill in the address where the collected data points are stored to the BL103 gateway device, which can be filled in at will. Mapped addresses cannot be duplicated. Range: 0-2000. For example, the mapping address for collecting "analog input 1" is "20". The outside of the mapping address on the configuration software represents the Modbus address, and M.XXX in the brackets represents the PLC Modbus address. (12) Variable unit: Fill in arbitrarily according to requirements, you can leave it blank. (13) Click "OK".

Note: After clicking "OK", the data points will be displayed in the box as shown in the figure above. If you want to continue adding data points, right-click on the box and click "Add" to enter data point configuration box, repeat (2)--(13) Steps.



Note: Clicking "Write Configuration" will restart the gateway automatically, and the data points collected from BACnet MS/TP will take effect only after restarting.

5.3.2 Ethernet Configuration for BACnet MS/TP Devices

Data Acquisition

Both the WAN port and the LAN port can collect BACnet/IP devices, which can be directly connected to BACnet/IP devices or collected through switches.

It is the network port selection setting of the data service "BACnet/IP" item to specify whether it is WAN port collection or LAN port collection.

BLiiot Be	iLai Indi	ustrial Ga	teway w	ww.BLiiot.com \	/1.1.3.8										-	ΟX
Q	Ê			1										(A)	?	(i)
Search	Clear	Import	Export	Read Config.	Write Config.	Monitor	Remote	Log						中文	Help	About
ப் ஆீ	.103Pro			^ Vari	able Name	Address Typ	e Ad	dress	Value	Unit	Data type	Varibale	Key	Map Ado	lress	Ratio
¢.	⊡COM1															
	└_@ B/	ACnet MS/	TP				BACnet/	'IP								
	LAN					Enable										
	A')4G				Ne	twork Interfac	e	WAN	v							
	VPN					Po	rt	47808								
	60	benVPN				Vendor Nam	e	BeiLai								
	🖧 Alarm	s			Ve	ndor Identifie	er	555								
-(Tasks					Device Nam	e Beil	Lai Gatew	ay							
	DataS	ervices				Device I	D	555								
	—⊕ Pa	iss Throug	h		Obj	ect Descriptio	n BA	Cnet Serv	er							
	−⊕м	odbus RTL	J≒TCP			Locatio	n	CN								
	-@M	odbus TCP	Server													
	- 💮 B/	ACnet/IP			~				OK Ca	ncel						
	-00	PC UA														
	Cloud															
	-@M	QTT Client														
	−⊕м	QTT Client	Ш													
	-⊗AI	i loT														
<u> </u>	·															-al

5.3.2.1 WAN Port Configuration

This example is WAN port collects BACnet/IP through the switch, and the switch is connected to the external network. The configuration is as follows:



BLiiot BeiLai Industrial Gateway www.BLiiot.co	om V1.1.3.8	- 0 X
Search Clear Import Export Read Con	fig. Write Config. Monitor Remote Log	① (1) 中文 Help About
白品BL103Pro	Variable Name Address Type Address Value Unit Data type Variable	e Key Map Address Ratio
E-@COM1		
BACnet MS/TP		
	Ethernet Settings	
-('A')4G	Auto IP	
□- m VPN	IP Address 192.168.1.196	
	Subnet Mask 255.255.2	
— 苎Ğ Alarms	Gateway 192.168.1.1	
Tasks	MAC Address 08:00:27:ac:4f:1e	
DataServices	DNS 114.114.114	
— Modbus RTU≒TCP	OK Cancel	
- Modbus ICP Server		

(1) Double-click "WAN" to enter WAN port configuration box. (2) Obtain IP automatically: It is enabled by default, and can be set as required. In this example, in this example, it is connected to a router, and the route is enabled to automatically assign IP, so keep it enabled. (3) IP address: The gateway obtains the IP address from the router. If it is designated IP, set it according to the requirements, the PLC and the gateway should be in the same local area network.(4) Subnet mask, the subnet mask of the WAN port gateway, if it is a designated IP, set it according to the requirements. (5) Gateway: The gateway address obtained from the router. If it is designated IP, set it according to your needs. (6) MAC address: the MAC address of the gateway. (7) DNS: The DNS obtained by the gateway from the router, if it is designated IP, set it according to the requirements. (7) Click "OK".

Note: Click "Write Configuration" to restart the gateway automatically, and the configuration of the WAN port will not be changed until it restart.

Note: The IP address of the WAN port is the IP address that specifies which network segment the WAN port device is. If the IP address of the WAN port device is not the IP of the network segment set by the WAN, the WAN port cannot collect. It is necessary to change the WAN port IP or change the WAN port device's IP according to the needs. After changing the IP address of the gateway, it must be written into the configuration, and it will take effect after power off and restart.



5.3.2.2 Add WAN Port BACnet/IP Devices

BLiiot Be	iLai Indi	ustrial Ga	teway w	ww.BLiiot.com	/1.1.3.8										-	ΟX
) Search	Clear	\$ Import	Export	Read Config.	Write Config.	() Monitor	() Remote	Log						● 中文	? Help	(i) About
Ġ _å в	L103Pro			^ Var	able Name	Address Typ	be Ad	dress	Value	Un	it Data type	e Va	ibale Key	Map Ad	lress	Ratio
	COM1										• 0					
	GBA	ACnet MS/	TP			De	evice Infor	mation								
-(LAN ال					Device Nam	e	BACnet								
	₩AN					Device I	P 1	92.168.1.16	58							
	G B/	ACnet				Device Por	t	47808								
	'A'' 4G					Device Bran	d	BACnet	Ŷ							
						Device Mode	B	BACnet/IP	Ŷ							
	-⊕0 ₩ Alarm	penvPN			Device	Properties -										
	Tacks	5														
		ervices				Device Addres		132								
	– ⊕ Pa	ass Throug	h					102								
	-@м	odbus RTL	J≒TCP													
	-@M	odbus TCF	Server						OK C	ancel						
	-@B/	ACnet/IP														
	-00	PC UA														
	ிCloud															
	-⊕M	QTT Client														
	-⊕M	QTT Client	Ш													

(1) Click "WAN", right click, click "Add" to enter device configuration box. (2) Device name: Name the device, such as: BACnet (3) Device IP: Fill in the BACnet/IP device IP. Note that the IP of the BACnet/IP device must be in the same network segment as the IP of the WAN port. (4) Device port: UDP port, default 47808. (5) Because it is collection of BACnet/IP equipment, device brand: select BACnet, and the device model: BACnet/IP. The polling interval and timeout can be defaulted or filled in according to requirements. (6) Device address: Fill in as required. (7) Click "OK"

Note: After clicking OK, the added devices(BACnet) will be displayed under the WAN port, as shown in the figure above. If you want to add multiple devices, repeat steps (1)-(7). Note: Clicking "Write Configuration" will restart the gateway automatically, and the BACnet device added by the WAN port will be added successfully after the restart.

5.3.2.3 Add BACnet/IP Devices Data Points

Collection of binary input objects as an example, and the configuration is as follows:



BLiiot Be	iLai Indi	ustrial Ga	teway w	ww.BLiid	ot.com \	1.1.3.8											_	σx
) Search	Clear	Import	Export	Read (Config.	Write Cor	nfig.	() Monitor	Remote	Log						● ● 中文	? Help	() About
с С С	.103Pro () СОМ1 СФВ/	ACnet MS/	ТР	^	Vari binaryinp analogou	able Name ut :put	bina <u>n</u> analo	Address Tyr y-input yg-output	ре Асн 3 1	lress	Value	Unit	Data typ bool float32	REG003 REG004	ribale Key	Map Adv 11(M.00001 22(M.40002	1ress 2) ne 3) 1	Ratio
	⊟lan ⊒wan								Varia	ble Pro	operties							
	-⊕B/ A ⁽⁾ 4G ™VPN	ACnet				Variable OCT/DI	Name	bin De	aryinput cimal	•	Varibale K	ey	REG003					
	G Alarm Tasks	penVPN s				Addre Da	ss Type ta type	binar	y-input ool	v	Addre Add Numb	er	3					
		ervices	h			Read	d/Write	Read	l/Write	*	Rat	io	none					
	- (9 M - (9 M - (9 B) - (9 O	odbus RTU odbus TCF ACnet/IP PC UA	J≒TCP ? Server			wap #		·			vanable of		0	K Cance				
Ē	SCloud −ØM −ØM	QTT Client QTT Client	: 11	v														

(1) Click "BACnet", right-click the box on the right, and click "Add" to enter data point setting box. (2) Variable name: Name the data point, such as: collecting the data of "binaryinput 3", it can be filled in as: binaryinput. (3) Variable key can be filled in arbitrarily. The identifier cannot be repeated, for example, the identifier of the "binaryinput 3" data point is filled in as "REG003". (4) Select the acquisition address and choose data format fill in the input gateway according to the requirements. OCT/DEC/HEX are octal/decimal/hexadecimal respectively. Choose Decimal for BACnet/IP data points. (5) Address type: Select according to the collected BACnet/IP object type. For example, to collect the data of "binaryinput 3", select "binaryinput". (6) Address: the object instance number, such as: collecting the data of "binaryinput 3", the object instance number is: 3. (7) Data type: Select according to the attribute selection to collect the current value of the BACnet/IP device object. (8) Add Number: If it is to collect continuous addresses, the same register can be collected multiple times. (9) Read/Write: Choose from "read only", "read and write". (10) Map address: fill in the address where the collected data points are stored to the BL103 gateway device, which can be filled in at will. Mapping addresses cannot be duplicated. Range: 0-2000. For example, the mapping address for collecting "binaryinput 3" is "11". The outside of the mapping address on the configuration software represents the Modbus address, and M.XXX in the brackets represents the PLC Modbus address. (11) Variable unit: fill in arbitrarily according to requirements, or not fill in. (12) Click "OK".

Note: After clicking "OK", the data points will be displayed in the box as shown in the figure above. If you want to continue adding data points, right-click on the box and click "Add" to enter data point configuration box, repeat (2)--(12) Steps.

Note: Clicking "Write Configuration" will restart the gateway automatically, and the data points collected from BACnet will take effect only after restarting.



5.3.3 Data Upload to Various Platform

No matter what protocol data is collected by the BL103 gateway, the configuration for transmitting the data to each platform is the same. Therefore, this chapter takes the configuration of collecting Modbus protocol data and transferring it to each platform as an example. Refer to: 5.4 Data Upload to Various Platform

5.4 Data Upload to Various Platform

This example introduces the configuration of the data collected by the BL103 gateway device from the M140T and S475 and uploaded to each platform at the same time.

5.4.1 Modbus TCP Server Configuration

BLiiot Bei	Lai Indu	strial Ga	teway w	ww.BLiiot	.com \	1.1.3.8										_	σ×
) Search	Clear	∲ Import	Export	Read Co	onfig.	Write C	Config.	() Monitor	Remot	e Log					中文	? Help	(i) About
С ф ф ф ф	103Pro COM1 CM1 CM1 CM1	40T							1	1			10				
		15				Name		Value		LIGTT OF	Cloud	Status	Port	1 44 40T	Device Name		Status
		5			Name		BeiLai	Gateway		MQ11 Client	_		COMI	M1401			•
	WAN				Time		10:38:	M	odbus T	CP Server			LAN	5475			•
	4 "4G				Model		BLIUS						-				
	₽NVPN				Version		V1.1.3										
	-OOp	enVPN			4G M00	luie	EC200	1	Port	502							
1 - i	Alarms				IMEI		86861	8		i h			-				
	Tasks				Signals	trength	18 (No				bus lol	•					
	Douteco				operato	or	NULL			OK Cance	1						
	Juatase	rvices			SIM ICC	ID	NULL										
	-@Pas	s Throug	n		SIM Sta	tus	Failed										
	-O Mo	dbus RTU	J⇔TCP														
	- Mo	dbus TCF	Server														
	- @BAG	Cnet/IP	1														
	MOP	CUA									Refresh						
	Scloud																
		TT Cline															
	- O MC	an client															
	-OMC	1 f Client	11	~													

Operation steps: (1) Double-click "Modbus TCP Server" to enter configuration box. (2) Port: This gateway device is used as the listening port of Modbus TCP Server, fill in arbitrarily, range: 1-65535, for example: fill in "502". (3) Click "OK" to confirm the configuration of Modbus TCP Server. (4) Click "Write Configuration", the configuration modified by Modbus TCP Server will take effect after the gateway device restarts.

Note: Modbus TCP Server enabled port "502" by default, which can be directly connected to the host computer acquire from gateway through WAN or LAN. If the parameters of the port are not modified, no operation is required. 86

Shenzhen Beilai Technology Co., Ltd.



5.4.2 View and Send Command by KingView

Modbus TCP Server is a Modbus TCP server that provides data to external. Collect BL103 gateway data through Modbus TCP host computer, such as SCADA, MES and other host computers. The function codes supported by the gateway: Boolean supports "01", "05", and numerical supports "03" and "06". In this example, KingView is used to simulate the host computer to access the BL103 gateway data, as shown in the figure below: IP of WAN port: 192.168.1.196, port of Modbus TCP Server: 502.



The value and mapping address of the M140T data point, Kingview uses the PLC Modbus address.



) Search	Clear	♪ Import	Export	Read	1 Config.	Write Cor	nfig.	() Monitor	() Remote	Log						争 中文	? Help	() About
⊟ ஆீ BI	L103Pro			^	Vari	able Name		Address Typ	e Ado	dress	Value	Unit	Data type	Varibale Ke	у	Map Addr	ess	Ratio
	⊡COM1				DO1		01 Co	il Status(0x)	0		True		bool	DO1	0(1.000001)	n	one
	L _{SM1}	40T			DO2		01 Co	il Status(0x)	1	_	True		bool	DO2	1(1.000002)	n	one
L.					DO3		01 Co	il Status(0x)	2	_	False		bool	DO3	2(1.000003)	n	one
					DO4		01 Co	il Status(0x)	3		False		bool	DO4	3(1.000004)	n	one
	-@\$4/	/5			DO5		01 Co	il Status(0x)	4	_	False		bool	DO5	4(1.000005)	n	one
-0	₩AN				DO6		01 Co	il Status(0x)	5		False		bool	DO6	5(1.000006)	n	one
0	A'' 4G				DO7		01 Co	il Status(0x)	6	_	False		bool	DO7	6(1.000007)	n	one
ė 6	VPN				DO8		01 Co	il Status(0x)	7		False		bool	DO8	7(1.000008)	n	one
	 	enVPN			DIN1		02 Inp	out Status(1x) 0		True		bool	DIN1	8(1.000009)	n	one
	č Alarme				DIN2		02 Inp	out Status(1x) 1		True		bool	DIN2	9(1.000010)	n	one
					DIN3		02 Inp	out Status(1x) 2	_	True		bool	DIN3	10	M.000011) n	one
	O lasks				DIN4		02 Inp	out Status(1x) 3		True		bool	DIN4	11	M.000012) n	one
	DataSe	ervices			DIN5		02 Inp	out Status(1x) 4		True		bool	DIN5	12	M.000013) n	one
	- @ Pas	ss Throug	h		DIN6		02 Inp	out Status(1x) 5		True		bool	DIN6	13	M.000014) n	one
	-O Mo	dbus RTU	J≒TCP		DIN7		02 Inp	out Status(1x) 6		True		bool	DIN7	14	M.000015) n	one
	-MMa	odbus TCF	Server		DIN8		02 Inp	out Status(1x) 7		True		bool	DIN8	15	M.000016) n	one
	-⊕BA -⊕OP -⊕Cloud -⊕MC	Cnet/IP C UA QTT Client QTT Client	:															

S475 data point value and mapping address, Kingview uses PLC Modbus address.

	00
	(?) (i)
Search Clear Import Export Read Config. Write Config. Monitor Remote Log 中文	Help About
EL 103Pro Variable Name Slave ID Address Type Address Value Unit Data type Varibale Key Map Add	ress Ratio
temp 1 04 Input Registers(3x) 24 2870 int16 temp 16(M 4000	17) 1
humidity 1 04 Input Registers(3x) 25 6540 int16 humidity 17(M 4000	18) 1
power 1 04 Input Registers(3x) 14 1316 uint16 power 18(M4000	19) 1
- WAN	
- ⁽⁾ Å ¹ 4G	
曰 · · · · · · · · · · · · · · · · · · ·	
© OpenVPN	
-E Tasks	
□-⊖DataServices	
- ⊕ Pass Through	
→ Modbus TCP Server	
- ⊕ BACnet/IP	
- ⊕ OPC UA	
白-A Cloud	
MQTT Client	
→ ② MQTT Client II	

The value of the data point read by Kingview, the value of Boolean value on Kingview, "0" is closed, "1" is open.



Yoject Big Icon Small Icon Detail	 Maker Viewer / 	📥 🚱 🕕 Jarm History Netwo	ork User	MAKE	WIEW Abo	Dut		
File File	TCP New	w 📝 Edit 💽 Delete 🖡	Copy 😭 +	COM Device Tere Communication Register: Add Collection Lis 000000 000001 000011 000013 000014 000014 000014 000016 400017 400018 400018	Import Import	vice Test Data Data Tag Value Close Open Open Open Open Open Open Open Ope	Type: USHORT Add Tag 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29112 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111 2022-8-29111	× Add ALL uality Stem. ^ 22 22 22 22 22 22 22 22 22 2
							确定	》 取消

Kingview sends command, the value of Boolean on Kingview, "0" is closed, "1" is open. For example: the register 000002 is DO2, and the relay is disconnected by sending "0".





roject [F] Configure [S] View [V] Tools [T] He	lp [H]						
Project Big Icon Small Icon Detail	 Ø Maker Viewer Alarm 	History Networ	k User	MAKE	(I) VIEW	About	
File File	TCP New	Edit Register: COM Device Test Communication Pa Register: Register: Add Collection List Register Na 000001 000002 000003 000003 000003 000005 000003 000012 000013 00000000 0000000000	rameter: Devi 400019 Delete Data Type Bit Bit Bit Bit Bit Bit Bit Bit	ste Test Expo Tag Value Deta 1 Tag Value Open Close	tt ► Import	HORT Add All Add All	Find

5.4.3 BACnet/IP Configuration

Note: BL101 Modbus Gateway does not support BACnet/IP.



BLiiot BeiLai Industrial Gateway www.BLii	ot.com V1.1.3.8							- 0 X
Search Clear Import Export Read	Config. Write Co	onfig Monitor Rer	note Log				中文 H	? () lelp About
白 品BL103Pro ^ 白.COM1 □-灸M140T		ВА	Cnet/IP	_				
DetaServices → Pass Through → Pass Through → Modbus RTU=TCP	Name Name Time Model Version 4G Module IMEI Signal Strength operator SIM ICCID SIM Status	Enable Network Interface Port Vendor Name Vendor Identifier Device Name Device ID Object Description Location	WAN 47808 Beilai 555 Beilai Gateway 555 BACnet Server CN		Status	Port COM1 LAN	Device Name M140T \$475	Status
-			OK	Cancel				

Operation steps: (1) Double-click "BACnet/IP" to enter BACnet/IP configuration box. (2) Click the Enable button to enable BACnet/IP. Default: off. Gray: Disabled, Green: enabled. (3) Network Interface: select "WAN" port. Click "WAN" to check that the IP address of the WAN port is: 192.168.1.196. (4) Port: BACnet/IP UDP port, default: 47808. (5) Vendor name: can be filled in arbitrarily. (6) Vendor ID: can be filled in arbitrarily. (7) Device name: the name of the BACnet/IP server, which can be filled in arbitrarily. (8) Device ID: Can be filled in arbitrarily. (9) Device Description: Gateway description, which can be filled in arbitrarily. (10) Location: Gateway location, default "CN". (11) Click "OK" to confirm the BACnet/IP configuration. (12) Click "Write Configuration", BACnet/IP will be enabled only after the gateway device restarts.



5.4.4 View and Send Command by KEPServerEX 6

Fill in the UDP port and local instance according to the port and device ID on the configuration software. After it is built, you can add devices by searching devices, or you can add devices yourself. The tags can be automatically imported or created by yourself. The data is unified in AV and BV objects, properties provide external data for the current value. The object instance is the Modbus address of the data point page mapping address item on the configuration software.

Elle Edit Many Texts Puptiers Hale							
Li 📸 🗟 🛃 🍪 🛅 🚳 🖓 🗳 🖉							
Project	Device Name	/ Model		ID		Description	
BACnet/IP	ELICK	BAUNE		1.555			
Analog Value_16 Can Analog Value_17							
AnalogValue_18	Property Edite	or - BACnet/IP			×		
- CalinaryValue_1 - CalinaryValue_2	Property Groups	Advanced Setti COV Notifications	ings	Require NPDU			
- Can BinaryValue_3 - Can BinaryValue_4	Ethernet Communica	stions	gs	47808			
🔁 BinaryValue_5 🔁 BinaryValue_6	Write Optimizations Advanced	Local Network Nu	mber	1 555			
- 2 Binary Value_7 - 2 Binary Value_8	Protocol Settings	Foreign Device	r D	0.00			
Control BinaryValue_9 Control BinaryValue_10		IP Address of Rem	note BBMD	0.0.0.0			
BinaryValue_11		Hegistration Time t	to Live (s)	60			
DinaryValue_13 DinaryValue_14							
BinaryValue_15 Channel1							
Date Time Source		\searrow					^
29/08/2022 15:43:04 BACnet/IP							
29/08/2022 15:43:04 BACnet/IP 29/08/2022 15:43:04 BACnet/IP							
29/08/2022 15:43:04 BAChet/IP							
29/08/2022 15:43:04 BACnet/IP 29/08/2022 15:43:04 BACnet/IP		Defaults	ок	Cancel App	ly Help		
▲ 29/08/2022 15:43:04 BACnet/IP ▲ 29/08/2022 15:43:04 BACnet/IP	BACnet/IP.BL10x BACnet/IP.BL10x 1	Polling COV item on device. COV item Request rejected by device. Reason	n = 'Binary (alue.8.Present Value'. = 9, Reason sking = Unrecognized	d service			
29/08/2022 15:43:04 BACnet/IP	BACnet/IP.BL10x BACnet/IP.BL10x	Polling COV item on device. COV item Request rejected by device. Reason	n = 'BinaryValue.8.StatusRags'. = 9. Reason string = Unecognized	d service			
29/08/2022 15:43:04 BACnet/IP	BACnet/IP.BL10x F	Polling COV item on device. COV item	n = 'BinaryValue 9.PresentValue'.	d services			
15:43:04 BACnet/IP	BACnet/IP.BL10x I	Polling COV item on device. COV item	n = 'BinaryValue.9.StatusRags'.				
						Default User Clients: 0 Activ	e tags: 0 of 0
Ready							
Ready							
_{Ready} BLiiot BeiLai Industrial Gateway www	v.BLiiot.com V1.1.3.8						- 0 X
BLiiot BeiLai Industrial Gateway www	v.BLiiot.com V1.1.3.8						- ¤ ×
BLiiot BeiLai Industrial Gateway www	N.BLiiot.com V1.1.3.8	onfig. Monitor Re	emote Log			P文 He	- 🗆 X ? () elp About
BLiot BeiLai Industrial Gateway www Search Clear Import Export F D-rh BL103Pro	w.BLiiot.com V1.1.3.8	ionfig. Monitor Re	emote Log	e Unit Data ty	pe Varibale Key	中文 Ha	- 🗇 X
BLliot BeiLai Industrial Gateway www Search Clear Import Export F Gradie BL103Pro CIERT COM1	N.BLiiot.com V1.1.3.8 Read Config. Write C	Config. Monitor Re Address Type 01 Coil Status(0x)	emote Log Address Valur 0 True	e Unit Data ty bool	ppe Varibale Yey DO1	中文 Hetter Address 0(N_000001)	- 🗇 X
BLliot BeiLai Industrial Gateway www Search Clear Import Export F D 558 BL103Pro D 659 COM1	N.BLiiot.com V1.1.3.8 Read Config. Write C Variable Name DO1 DO2	Config. Monitor Re Address Type 01 Coil Status(0x) 01 Coil Status(0x)	Address Valur 0 True 1 True	e Unit Data ty bool bool	pe Varibale Key DO1 DO2	中文 Hu 4文 Hu (N.00001) 1(N.00002)	- 🗇 X P D About Ratio none none
BLliot BeiLai Industrial Gateway www Search Clear Import Export F This BL103Pro The COM1 COM1 COM1	N.BLiiot.com V1.1.3.8 Read Config. Write C Variable Name DO1 DO2 DO3	Config. Monitor Re Address Type 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x)	Address Valuu 0 True 2 True	e Unit Data ty bool bool bool	pe Varibale Key DO1 DO2 DO3	中文 Hu (10,00001) 1(N,00002) 2(N,00003)	- 🗇 X Pelp About Ratio none none none
BLliot BeiLai Industrial Gateway www Search Clear Import Export F G G G G G G G G G G G G G G G G G G G	N.BLiiot.com V1.1.3.8 Read Config. Write C Variable Name Do1 Do2 Do3 Do4	Image: Config. Monitor Re Address Type 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x)	Address Valuu 0 True 1 True 3 True	e Unit Data ty bool bool bool	rpe Varibale Key Do1 Do2 DO3 DO4	中文 Hu 4000001 10,000001 10,000002 2(N,000003) 3(N,000004)	- D X About Ratio none none none none
BLiot BeiLai Industrial Gateway www Search Clear Import Export F	N.BLiiot.com V1.1.3.8 Read Config. Write C Do1 Do2 Do3 Do4 Do5	Onfig. Monitor Re Address Type 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x)	Log Log 0 True 1 True 2 True 3 True 4 True	e Unit Data ty bool bool bool bool bool	pe Varibale Key Do1 Do2 DO3 DO4 DO5	中文 He 中文 He の(N.00001) 1(N.00002) 2(N.00003) 3(N.00004) 4(N.00005)	- 🗇 X P About Ratio none none none none none
BLiot BeiLai Industrial Gateway www Search Clear Import Export F	w.BLiiot.com V1.1.3.8 Read Config. Write C Variable Name DO1 DO2 DO3 DO3 DO4 DO5 DO6	Image: Config. Monitor Red Address Type 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x)	Address Value 0 True 2 True 3 True 4 True 5 True	e Unit Data ty bool bool bool bool bool bool	pe Varibale Key DO1 DO2 DO3 DO4 DO5 DO6	中文 He 4p文 He (000001) 10(000002) 2(0 000003) 3((000004) 4((000005) 5((000005)	- 🗇 X P About Ratio none none none none none none
BLiot BeiLai Industrial Gateway www Search Clear Import Export F Grand BL103Pro COM1 CM140T	W.BLiiot.com V1.1.3.8 Read Config. Write C Variable Name DO1 DO2 DO3 DO4 DO5 DO6 DO7 DO7 DO7	Image: Config. Monitor Red Address Type 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x)	Address Value 0 True 1 True 2 True 3 True 4 True 5 True 6 True	e Unit Date ty bool bool bool bool bool bool	pe Varibale Key DO1 DO2 DO3 DO4 DO5 DO6 DO7 DO6	中文 Hu 中文 Hu (1, 000001) 1(1, 000002) 2(1, 000003) 3(1, 000004) 4(1, 000005) 5(1, 000006) 6(1, 000007)	- C × About Ratio none none none none none none
BLiot BeiLai Industrial Gateway www Search Clear Import Export F GataBL103Pro COM1 CM140T CM1	W.BLiiot.com V1.1.3.8 Read Config. Write C Variable Name DO1 DO2 DO3 DO4 DO5 DO4 DO5 DO6 DO7 DO8 DO8	Image: Config: Monitor Registration Address Type 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x)	Address Value Address Value Address Value True 1 True 2 True 3 True 4 True 5 True 6 True 7 False 0 True	e Unit Data ty bool bool bool bool bool bool bool boo	ppe Varibale Key DO1 DO2 DO3 DO4 DO5 DO6 DO7 DO8 D04	中文 Hu 中文 Hu Map Address 0(N. 000002) 2(N. 000003) 3(N. 000004) 4(N. 000005) 5(N. 000006) 6(N. 00007) 7(N. 000006) 6(N. 00007) 7(N. 000006)	- 🔿 X P About Ratio none none none none none none none
Beliot BeiLai Industrial Gateway www Search Clear Import Export F Gata BLI03Pro GCOM1 GMI40T	w.BLiiot.com V1.1.3.8 Read Config. Write C Variable Name DO1 DO2 DO3 DO4 DO5 DO6 DO7 DO8 DIN1 DIN12	Image: Config: Monitor Registration Address Type 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 02 Icoust Status(1x) 02 Icoust Status(1x)	Address Value Address Value 1 True 2 True 3 True 4 True 5 True 6 True 7 False 0 True 1 True	e Unit Data ty bool bool bool bool bool bool bool boo	ppe Varibale Key DO1 DO2 DO3 DO4 DO5 DO6 DO7 DO8 DIN1 DIN2	Image Image Image 14ap Address 0(N. 000003) 0(N. 000003) 2(N. 000003) 3(N. 000004) 0(N. 000005) 3(N. 000006) 5(N. 000006) 6(N. 000007) 7(N. 000008) 8(N. 000007) 7(N. 00008) 8(N. 000007) 9(N. 000008) 8(N. 000007)	- D × P (i) About Ratio none none none none none none none no
BLiot BeiLai Industrial Gateway www Search Clear Import Export F GE GE COM1 GE COM	w.BLiiot.com V1.1.3.8 Read Config. Write C Variable Name DO1 DO2 DO3 DO4 DO5 DO6 DO7 DO8 DIN1 DIN2 DIN2 DIN3	Image: Config: Image: Config:	Address Value Address Value 1 True 2 True 3 True 4 True 5 True 6 True 7 False 0 True 1 True 2 True	e Unit Data ty bool bool bool bool bool bool bool boo	ppe Varibale Key DO1 DO2 DO3 DO4 DO5 DO6 DO7 DO8 DIN1 DIN2 DIN3	Image: Constraint of the	- D × P D About Ratio none none none none none none none no
BLiot BeiLai Industrial Gateway www Search Clear Import Export F ⊕ 555 BL103Pro ⊕ M140T ⊕ M140T ⊕ M140T ⊕ M140T ⊕ WAN ⊕ S475 ⊕ WAN ⊕ OpenVPN ⊕ OpenVPN ⊕ OpenVPN ⊕ Tasks	w.BLiiot.com V1.1.3.8 Read Config. Write C Variable Name DO1 DO2 DO3 DO4 DO5 DO6 DO7 DO8 DIN1 DIN2 DIN3 DIN4	Image: Config: Image: Config:	Address Valur Address Valur 0 True 1 True 2 True 3 True 4 True 5 True 6 True 6 True 1 True 1 True 2 Jrue 3 True 3 True 3 True 4 True 5 True 6 True 1 True 7 False 0 True 1 True	e Unit Data ty bool bool bool bool bool bool bool boo	PPe Varibale Key D01 D02 D03 D04 D05 D06 D07 D08 DIN1 DIN2 DIN3 DIN4	Image: Provide state Image: Pr	- D × P D About Ratio none none none none none none none no
BLiot BeiLai Industrial Gateway www Search Clear Import Export F Clear Import Export F Clear Import Export F Composition Clear Import Composition Clear Import Clear Import Export F Clear Import Expo	w.BLiiot.com V1.1.3.8 Read Config. Write C Variable Name DO1 DO2 DO3 DO4 DO5 DO6 DO7 DO8 DIN1 DIN2 DIN3 DIN4 DIN5	Image: Config. Image: Config:	Address Valur Address Valur 0 True 1 True 2 True 3 True 4 True 5 True 6 True 7 False 0 True 1 True 2 True 3 True 4 True	e Unit Data by bool bool bool bool bool bool bool bo	Pe Varibale Key D01 D02 D03 D04 D05 D06 D07 D08 D1N1 D1N2 D1N3 D1N4 D1N5	中文 Hu 中文 Hu 4ap Address 0(A, 000001) 1(K, 000002) 2(K, 000003) 3(A, 000004) 4(K, 000005) 5(K, 000005) 5(K, 000005) 5(K, 000005) 5(K, 000005) 9(K, 000005) 9(K, 000010) 10(4,000012) 112(4,000013)	- 🗇 X P bout Ratio none
BLliot BeiLai Industrial Gateway www Search Clear Import Export F ⊕ ∰ COM1 - ⊕ M140T ⊕ G475 - ∰ VPN - ∯ 4G ⊕ OpenVPN - ∯ Alarms - ⊕ Tasks ⊕ DataServices - @ Pass Through	w.BLiiot.com V1.1.3.8 Read Config. Write C Variable Name DO1 DO2 DO3 DO4 DO5 DO6 DO7 DO8 DIN1 DIN2 DIN3 DIN4 DIN5 DIN6	Image: Config: Image: Config: Image: Config: Response Address Type 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 02 Coil Status(0x) 02 Coil Status(0x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x)	Log Log Address Valuu 0 True 1 True 2 True 3 True 4 True 5 True 7 False 0 True 1 True 2 True 3 True 4 True 5 True 5 True 5 True	e Unit Data by bool bool bool bool bool bool bool bo	Pe Varibale Key Do1 DO2 DO3 DO4 DO5 DO5 DO6 D07 D08 DIN1 DIN2 DIN3 DIN4 DIN5 DIN6	中文 Hu 中文 Hu 中文 Hu 小 のののの1) 1(N .000001) 1(N .000001) 1(N .000003) 3(N .000004) 4(N .000007) 7(N .000008) 8(N .000007) 7(N .000008) 8(N .000007) 9(N .000010) 100 4.000011) 110 4.000013) 13(4.000014)	- D X P D D D D D D D D D D D D D D D D D D D
BLliot BeiLai Industrial Gateway www Search Clear Import Export F ⊕ 558 BL103Pro ⊕ 5675 ⊕ 5675 ⊕ 6001 ↓ ⊕ 0000 ⊕ 5475 ⊕ 1000 ⊕ 0000 ↓ ⊕ 00000 ↓ ⊕ 000000 ↓ ⊕ 00000 ↓ ⊕ 000000 ↓ ⊕ 000000 ↓ ⊕ 00000 ↓ ⊕ 00000000 ↓ ⊕ 00000000000000000000000000000000000	w.BLiiot.com V1.1.3.8 Read Config. Write C Do1 Do2 Do3 Do4 Do5 Do6 Do7 Do8 DIN1 DIN2 DIN3 DIN4 DIN5 DIN6 DIN7	Image: Configure Image: Configure Reserve 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 02 Coil Status(0x) 02 Coil Status(0x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x)	Log Log Address Valuu 0 True 1 True 2 True 3 True 3 True 4 True 5 True 7 False 0 True 1 True 2 True 3 True 5 True 3 True 5 True 6 True 6 True 6 True 9 True	e Unit Data by bool bool bool bool bool bool bool bo	rpe Varibale Key Do1 Do2 Do3 Do4 Do5 Do6 D07 D08 DIN1 DIN2 DIN3 DIN4 DIN5 DIN6 DIN7	Image: Weight of the second	Control C
BLliot BeiLai Industrial Gateway www Search Clear Import Export F Grant Search Clear Import Export F	w.BLiiot.com V1.1.3.8 Read Config. Write C Do1 Do2 Do3 Do4 Do5 Do6 Do7 Do6 Do7 Do8 DiN1 DiN2 DiN3 DiN4 DiN5 DiN6 DiN7 DiN8	Image: Config: Monitor Restrict the set of	Log Log Address Valuu 0 True 2 True 3 True 3 True 4 True 4 True 7 False 0 True 1 True 1 True 2 True 5 True 3 True 4 True 5 True 6 True 5 True	e Unit Data ty bool bool bool bool bool bool bool boo	rpe Varibale Key Do1 Do2 Do3 Do4 Do5 Do6 D07 D08 DIN1 DIN2 DIN3 DIN4 DIN5 DIN6 DIN7 DIN8	Image: Weight of the second	Control of the second sec
Buliot BeiLai Industrial Gateway www Search Clear Import Export F Grand BL103Pro Grand BL103Pro Grand BL103Pro Grand COM1 Grand COM1 Grand Composition Grand	W.BLiiot.com V1.1.3.8 Read Config. Write C Variable Name DO1 DO2 DO3 DO4 DO5 DO6 DO7 DO8 DO8 DO7 DO7 DO8 DO7 DO8 DO7 DO7 DO7 DO7 DO7 DO7 DO7 DO7 DO7 DO7	Image: Config. Monitor R Address Type 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 02 Coll Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x)	Address Value Address Value Address Value 1 True 2 True 3 True 4 True 4 True 5 True 6 True 1 True 1 True 6 True 1 True 1 True 6 True 7 False 0 True 1 True	e Unit Data ty bool bool bool bool bool bool bool boo	Pe Varibale Key D01 D02 D03 D04 D05 D06 D07 D08 DIN1 DIN2 DIN3 DIN4 DIN5 DIN5 DIN7 DIN8	中文 Ha 中文 Ha の(A, 000001) 1(A, 000002) 2(A, 000003) 3(A, 000004) 4(A, 000005) 5(A, 000006) 6(A, 000007) 7(A, 000008) 8(A, 000007) 10(A,000010) 10(A,000011) 11(4,000012) 12(2,4,000013) 13(4,000015) 15(4,000016)	Control of the second sec
Buliot BeiLai Industrial Gateway www Search Clear Import Export F Gata BL103Pro GCOM1 GM140T GM14	w.BLiiot.com V1.1.3.8 Read Config. Write C Variable Name DO1 DO2 DO3 DO4 DO5 DO6 DO7 DO8 DO8 DO7 DO8 DO7 DO8 DO8 DO7 DO8 DO7 DO8 DO8 DO7 DO8 DO7 DO8 DO8 DO7 DO8 DO7 DO8 DO8 DO7 DO8 DO7 DO8 DO8 DO7 DO8 DO8 DO7 DO8 DO7 DO8 DO8 DO7 DO8 DO8 DO7 DO8 DO8 DO8 DO8 DO7 DO8 DO8 DO8 DO8 DO8 DO8 DO8 DO8 DO8 DO8	Config. Monitor R Address Type Of Coil Status(0x) Of Coil Status(0x) 01 Coil Status(0x) Of Coil Status(0x) Of Coil Status(0x) 01 Coil Status(0x) Of Coil Status(0x) Of Coil Status(0x) 01 Coil Status(0x) Of Coil Status(0x) Of Coil Status(0x) 01 Coil Status(0x) Of Coil Status(0x) Of Coil Status(0x) 01 Coil Status(0x) Of Coil Status(0x) Of Coil Status(0x) 02 Input Status(1x) O2 Input Status(1x) O2 Input Status(1x) 02 Input Status(1x) O2 Input Status(1x) O2 Input Status(1x) 02 Input Status(1x) O2 Input Status(1x) O2 Input Status(1x)	Address Value O Address Value O I I True 2 True 3 True 4 True 5 True 6 True 7 False 0 True 1 True 2 True 6 True 7 T False 0 True 1 True 5 True 6 True 7 True	e Unit Data 1 bool bool bool bool bool bool bool boo	Pe Varibale Key Do1 Do2 Do3 Do4 Do5 Do6 Do7 Do8 DIN1 DIN2 DIN3 DIN4 DIN5 DIN6 DIN8	Image Image Image 140 Address 0(N. 000001) 1(N. 000002) 2(N. 000003) 3(N. 000005) 3(N. 000005) 5(N. 000005) 5(N. 000005) 5(N. 000005) 6(N. 000005) 5(N. 000005) 6(N. 000005) 6(N. 000005) 5(N. 000005) 6(N. 000005) 6(N. 000005) 10(N. 000015) 110(N. 000012) 12(N. 000013) 134(N. 000015) 135(N. 000016)	Control Contro Control Control Control Control Control Control Control Control Co
Builot BeiLai Industrial Gateway www Search Clear Import Export F Gata BLI03Pro Gata BLI03Pr	w.BLiiot.com V1.1.3.8 Read Config. Write C Variable Name DO1 DO2 DO3 DO4 DO5 DO6 DO7 DO8 DIN1 DIN2 DIN3 DIN4 DIN5 DIN6 DIN7 DIN8	Config. Monitor Re 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x)	Address Value O Address Value O I I I I I I I I I I I I I I I I I I	e Unit Data ty bool bool bool bool bool bool bool boo	Pe Varibale Key D01 D02 D03 D04 D05 D06 D07 D08 DIN1 DIN2 DIN3 DIN4 DIN5 DIN6 DIN7 DIN8	Image Image Image 0(N. 000003) 2(N. 000003) 2(N. 000003) 3(N. 000004) 4(N. 000005) 5(N. 000005) 5(N. 000006) 6(N. 000005) 5(N. 000006) 6(N. 000005) 6(N. 000007) 7(N. 000008) 8(N. 000006) 10(N. 000011) 10(N. 000011) 110(N. 0000112) 12(N. 000013) 13(N. 000014) 14(A. 000015) 15(N. 000016)	Control Contro Control Control Control Control Control Control Control Control Co
Builot BeiLai Industrial Gateway www Search Clear Import Export F Grand Builds and the search Clear Import Export F Grand COM1 Grand COM1 Grand COM1 Grand Composition	w.BLiiot.com V1.1.3.8 Read Config. Write C Do1 Do2 Do3 Do4 Do5 Do6 D07 D08 DIN1 DIN2 DIN3 DIN4 DIN5 DIN6 DIN7 DIN8	Image: Config. Monitor Ref Address Type 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x)	Address Valur 0 True 1 True 2 True 3 True 4 True 5 True 1 True 6 True 1 True 2 True 6 True 1 True 2 True 6 True 1 True 2 True 1 True 2 True 3 True 6 True 6 True 7 True	e Unit Data by bool bool bool bool bool bool bool bo	Pe Varibale Key D01 D02 D03 D04 D05 D06 D07 D08 DIN1 DIN2 DIN3 DIN4 DIN5 DIN6 DIN7 DIN8	Image Image Image 14p Address 0(N. 000003) 2(N. 00003) 2(N. 000003) 3(N. 000004) 4(N. 000005) 5(N. 000006) 5(N. 000006) 5(N. 000006) 6(N. 000007) 7(N. 000008) 8(N. 000009) 9(N. 0000011) 10(0.00011) 11(4.0000112) 122(4.000113) 13(4.000014) 14(4.000015) 155(4.000016) 155(4.000016) 155(4.000016)	Control Contro Control Control Control Control Control Control Control Control Co
BLiiot BeiLai Industrial Gateway www Search Clear Import Export F Import Expor	w.BLiiot.com V1.1.3.8 Read Config. Write C DO1 DO2 DO3 DO3 DO4 DO5 DO6 DO7 DO8 DIN1 DIN2 DIN3 DIN4 DIN5 DIN6 DIN7 DIN8	Image: Config. Image: Config. Monitor Re Address Type 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 01 Coil Status(0x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x) 02 Input Status(1x)	Address Value 0 True 1 True 2 True 3 True 4 True 5 True 6 True 7 False 0 True 1 True 1 True 2 True 5 True 3 True 6 True 7 False 7 False 7 True 6 True 7 True	e Unit Data by bool bool bool bool bool bool bool bo	pe Varibale Key D01 D02 D03 D04 D05 D06 D07 D08 DIN1 DIN2 DIN3 DIN4 DIN5 DIN5 DIN6 DIN6 DIN8	Image Image Image 0(A 000001) He 0(A 000002) 2(A 2(A 000003) 3(A 3(A 000004) 4(A 4(A 000005) 5(A 5(A 0000010) 7(A 7(A 0000011) 10(A 10(A 000011) 10(A 10(A 000011) 11(A 112(A 0.000113) 13(A 13(A 0.000115) 15(A 15(A 0.00016) 15(A	Control Contro Control Control Control Control Control Control Control Control Co



Taking the data point of M140T DO6 as an example, the collected data is "1" when viewed on the configuration software, and the address of the data point of DO6 on BACnet/IP is: BinaryValue.5.PresentValue

[Connected to Runtime] - KEPServerEX 6 Config Sile Edita View Teels Runtime Hele	uration							-		×
B-B Project	Tag Name	/ Add	ress	Data Type	Scan Rate	Scaling		Description	_	
BACnet/IP	GPC Quick Clier	nt - 无标题 * Tools Help			400			-		×
AnalogValue_17		a a la	×							
Arabig Value, 1 Bray Value, 2 Bray Value, 1 Bray Value, 1 Bray Value, 2 Bray Value, 3 Bray Value, 4 Bray Value, 5 Bray Value, 7 Bray Value, 7 Bray Value, 7 Bray Value, 1 Bray Value, 11 Bray Value, 11 Bray Value, 11 Bray Value, 13 Bray Value, 13 Bray Value, 15	Channel D Channel D	31.10.8.InavyValue_12 31.10.8.InavyValue_12 31.10.8.InavyValue_13 31.10.8.InavyValue_13 31.10.8.InavyValue_15 31.10.8.InavyValue_33 31.10.8.InavyValue_3 31.10.8.InavyValue_5 31.10.8.InavyValue_7 31.10.8.InavyValue_9 31.10.8.InavyValue_9 31.10.8.InavyValue_9 31.10.8.InavyValue_9 Statistics system		m ID B&Charl/P BL10x Binay/Value_5 EvertSate B&Charl/P BL10x Binay/Value_5 Object/arentife B&Charl/P BL10x Binay/Value_5 ObjectTape B&Charl/P BL10x Binay/Value_5 ObjectTape B&Charl/P BL10x Binay/Value_5 Status Flags B&Charl/P BL10x Binay/Value_5 Status Flags	/ Data Type DWord DWord String DWord Boolean Boolean Word	Value 0 20971525 D06 5 0 1 0	Tmestamp 15.54 (0.003) 15.54 (0.003) 15.54 (0.003) 15.54 (0.003) 15.54 (0.003) 15.54 (0.003) 15.54 (0.003) 15.54 (0.003)	Quality Good Good Good Good Good Good		Ug 3 3 3 3 4 4 4
B-St Channel	Date 29/08/2022	Time 15:53:55	Event Added on up 'Data 1	T.						_^L
Date Time Source	1 29/08/2022	15:53:55	Added 5 items to gro	land haa						~
29/08/2022 15:54:00 BACnet/IP	0 29/08/2022	15:53:55	Added group 'Data 1	L						
1 29/08/2022 15:54:00 BACnet/IP	0 29/08/2022	15:53:55	Added 54 items to gr							
25/08/2022 15:54:00 BACREUP	0 29/08/2022	15.53.55	Added group Lata 1							
23/06/2022 15:54:00 BAChet/IP	0 29/08/2022	15-53-55	Added group 'Data 1							
129/08/2022 15:54:00 BACnet //P	29/08/2022	15:53:55	Added 5 items to an							
1 29/08/2022 15:54:00 BACnet /IP	0 29/08/2022	15:53:55	Added group 'Data 1							
A 29/08/2022 15:54:07 BACnet/IP	29/08/2022	15:53:55	Added 11 items to gr							
1 29/08/2022 15:54:26 BACnet/IP	29/08/2022	15:53:55	Added group 'Data 1							
1 29/08/2022 15:55:17 BACnet /IP	0 29/08/2022	15:53:55	Added 12 items to gr							
1 29/08/2022 15:55:27 BACreat /IP	0 29/08/2022	15:53:55	Added 4 items to an							
A 29/08/2022 15:55:53 BACnet/IP	1 29/08/2022	15:53:55	Added group 'Simula							~
A 29/08/2022 15:56:32 BACnet/IP	Ready							te	m Count:	558
129/08/2022 15:57:06 BACnet/IP	BACoe	t/IP.BL10x Device is not n	esponding, IID = '1.5	55'						
Ready							Default User Client	s: 1 Active tags:	558 of 55	8

Send Command:

Take the value "0" issued by DO6 as an example

File Edit View Tools Runtime Help	uration							17.1	
🗋 🧀 📾 🔛 🐯 🛅 🖾 🐿 🤤 🗐 🕾	・ ※ 語 ※ × ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・		Address	Data Tyne	Scan Rate	Scaing		Description	
自 (意) Connectivity		· · ·	~ ~ ~ ~ ~ ~ ~		100			o compression	
BACnet/IP	OPC Quick C	lient - 无标题 *							
AnalogValue 16	File Edit View	Tools Help							
AnalogValue_17	DOPEL	all and and Y Da	RY						
- AnalogValue_18				[h		1.44	1.	0.1	10
BinaryValue_0	BALnet/	IP.BL T0x.BinaryValue_1 IP.BI 10x BinaryValue_1	2	Tem ID	Data Type	Value	Timestamp	Quality	10
BinaryValue_1	BACnet/	IP.BL10x.BinaryValue 1	3	BACnet/IP.BL10x.BinaryValue_5.EventSta	te DWord	0	15:54:08.083	Good	3
BinaryValue 3	BACnet/	IP.BL10x.BinaryValue		Checkler / P. BC Tox. Briary Value_5:00ject to	maler Dword	203/1020	15.54.00.083	Good	3
BinaryValue_4	- BACnet/I	IP.BL10x.BinaryValue	Synchronous Write				× 183	Good	3
BinaryValue_5	BACnet/I	IP.BL10x.BinaryValue					183	Good	3
BinaryValue_6	BACnet/	IP.BL TUX.BinaryValue	Item ID	Current Value	write val	ue	UK 183	Good	4
BinaryValue_7	BACnet	/IP.BL10x Binary)	BACnet/IP.BL1	0x.BinaryValue_5.PresentValue 1	0		Apply 83	Good	4
BinaryValue 9	- BACnet/	IP.BL10x.BinaryValue					<u> </u>		
BinaryValue_11 BinaryValue_12 BinaryValue_13 BinaryValue_14		1P.BL10x.BinaryValue 1P.BL10x.BinaryValue 1Statistics 1System							
BinaryValue_15	Channel 1	1.Device1							,
E-Channel1	Date	Time							^
Data Tima Souma	29/08/2022	15:53:55							1
0 29/09/2022 15:54:00 BACout (P	29/08/2022	15:53:55							
A 29/08/2022 15:54:00 BACnet //P	0 29/08/2022	15:53:55							
1) 29/08/2022 15:54:00 BACnet/IP	1 29/08/2022	15:53:55							
1 29/08/2022 15:54:00 BACnet/IP	1 29/08/2022	15:53:55	<			>			
1 29/08/2022 15:54:00 BACnet/IP	1 29/08/2022	15:53:55							
1 29/08/2022 15:54:07 BACnet/IP	1 29/08/2022	15:53:55	Added 5 tems	to gro					
1 29/08/2022 15:54:26 BACnet/IP	0 29/08/2022	15:53:55	Added group '[Data T					
29/08/2022 15:55:17 BACnet/IP	1 29/08/2022	15:53:55	Added 11 items	s to gr					_
1 29/08/2022 15:55:27 BACnet/IP	0 29/08/2022	15:53:55	Added group '[Data T					
1 29/08/2022 15:55:53 BACnet/IP	29/08/2022	15:53:55	Added 12 item:	s to gr					
1 29/08/2022 15:56:32 BACnet/IP	29/08/2022	15:53:55	Added 4 items	to gro					
15/23/08/2022 15:57:06 BACnet/IP	Peadu	10:03:55	maded group 3	anua				la.	Count EEO
23/00/2022 10:30:21 BAChet/IP	neauy							EC.	m Cours. 558
1 29/09/2022 15:59-29 B&Cont/IP	PA(net/IP RI I// Device	in patronapana III	= 1,555					



Default User Clients: 1 Active tags: 558 of 558

Search Clear Import Export Read Config. Write Config. Monitor Remote Log	Varibale Key DO1 DO2 DO3 DO4 DO5 DO6 DO7 DO8 DI1 DI1	中文 He Map Address 0(M.000001) 1(M.000003) 2(M.000003) 3(M.000004) 4(M.000005) 5(M.000006) 6(M.000007)	Abou Ratio none none none none none none
→ ∰ BL103Pro Variable Name Address Type Address Value Unit Data type → ⊕ COM1 ○ 01 ○ 1 Coil Status(0x) 0 True bool ○ 01 ○ 1 Coil Status(0x) 1 True bool ○ 02 ○ 1 Coil Status(0x) 1 True bool ○ 03 ○ 1 Coil Status(0x) 2 True bool ○ 04 ○ 1 Coil Status(0x) 3 True bool ○ 05 ○ 1 Coil Status(0x) 3 True bool ○ 05 ○ 1 Coil Status(0x) 4 True bool ○ 05 ○ 1 Coil Status(0x) 5 False bool ○ 06 ○ 1 Coil Status(0x) 6 True bool ○ 07 ○ 1 Coil Status(0x) 6 True bool ○ 08 ○ 1 Coil Status(0x) 7 False bool ○ 111 ○ 2 Input Status(1x) 0 True bool ○ 111 ○ 2 Input Status(1x) 1 True	Varibale Key DO1 DO2 DO3 DO4 DO5 DO5 DO6 DO7 DO8 DI1 DI1 DI1	Map Address 0(M.000001) 1(M.000002) 2(M.000003) 3(M.000004) 4(M.000005) 5(M.000006) 6(M.000007)	Ratio none none none none none none
DO1 D1 Coll Status(0x) 0 Ture bool W140T D02 O1 Coll Status(0x) 1 True bool W140T D03 O1 Coll Status(0x) 2 True bool W140T D03 O1 Coll Status(0x) 2 True bool W140T D04 O1 Coll Status(0x) 2 True bool W140T D04 O1 Coll Status(0x) 3 True bool W140T D04 O1 Coll Status(0x) 4 True bool W140T D04 O1 Coll Status(0x) 5 False bool W140T D06 01 Coll Status(0x) 6 True bool W140T D06 01 Coll Status(0x) 6 True bool W140T D08 01 Coll Status(0x) 7 False bool W140T D101 02 Input Status(1x) 0 True bool W140T D101 02 Input Status(1x) 1 <	DO1 DO2 DO3 DO4 DO5 DO6 DO7 DO8 DIN1 DIN3	0(M.000001) 1(M.000002) 2(M.000003) 3(M.000004) 4(M.000005) 5(M.000006) 6(M.000007)	none none none none none none
□ ⊕ M140T □ D02 01 Coll Status(0x) 1 True bool □ ⊕ LAN 03 01 Coll Status(0x) 2 True bool □ ⊕ S475 005 01 Coll Status(0x) 3 True bool □ ⊕ WAN 006 01 Coll Status(0x) 4 True bool □ ⊕ VPN 006 01 Coll Status(0x) 6 True bool □ ⊕ OpenVPN 008 01 Coll Status(0x) 7 False bool □ ⊕ OpenVPN 01N1 02 input Status(1x) 0 True bool □ ⊕ OpenVPN 01N3 02 input Status(1x) 1 True bool □ ⊕ DataServices 01N5 02 input Status(1x) 3 True bool	DO2 DO3 DO4 DO5 DO6 DO7 DO8 DIN1 DIN2 DIN3	1(M.000002) 2(M.000003) 3(M.000004) 4(M.000005) 5(M.000006) 6(M.000007)	none none none none none
DO3 01 Coil Status(0x) 2 True bool D04 01 Coil Status(0x) 3 True bool D05 01 Coil Status(0x) 3 True bool D05 01 Coil Status(0x) 4 True bool D06 01 Coil Status(0x) 5 False bool D07 01 Coil Status(0x) 5 False bool D08 01 Coil Status(0x) 6 True bool D08 01 Coil Status(0x) 7 False bool D08 01 Coil Status(0x) 0 True bool D1N1 02 Input Status(1x) 0 True bool D1N2 02 Input Status(1x) 1 True bool D1N3 02 Input Status(1x) 2 True bool D1N4 02 Input Status(1x) 3 True bool	DO3 DO4 DO5 DO6 DO7 DO8 DIN1 DIN2 DIN3	2(M.000003) 3(M.000004) 4(M.000005) 5(M.000006) 6(M.000007)	none none none
Image: Construction DO4 O1 Coli Status(0x) 3 True bool Image: Construction OS O1 Coli Status(0x) 4 True bool Image: Construction DO5 O1 Coli Status(0x) 4 True bool Image: Construction DO6 O1 Coli Status(0x) 5 False bool Image: Construction DO7 O1 Coli Status(0x) 6 True bool Image: Construction DO7 O1 Coli Status(0x) 6 True bool Image: Construction DO8 O1 Coli Status(0x) 7 False bool Image: Construction DO8 O1 Coli Status(0x) 7 False bool Image: Construction DIN1 02 Input Status(1x) 0 True bool Image: Construction DIN3 02 Input Status(1x) 2 True bool Image: Construction DIN5 02 Input Status(1x) 4 True bool	D04 D05 D06 D07 D08 DIN1 DIN2 DIN3	3(M.000004) 4(M.000005) 5(M.000006) 6(M.000007)	none none
Construction DOS D1 Coll Status(0x) 4 True bool Image: WAN D06 01 Coll Status(0x) 5 False bool Image: WAN D06 01 Coll Status(0x) 5 False bool Image: WAN D07 01 Coll Status(0x) 6 True bool Image: WAN D07 01 Coll Status(0x) 7 False bool Image: WAN D08 01 Coll Status(0x) 7 False bool Image: WAN D08 01 Coll Status(0x) 7 False bool Image: WAN DIN1 02 Input Status(1x) 0 True bool Image: WAN DIN1 02 Input Status(1x) 1 True bool Image: WAN DIN3 02 Input Status(1x) 2 True bool Image: WAN DIN4 02 Input Status(1x) 3 True bool Image: WAN DIN5 02 Input Status(1x) 4 True bool	DO5 DO6 DO7 DO8 DIN1 DIN2 DIN3	4(M.000005) 5(M.000006) 6(M.000007)	none
Image: WAN DO6 O1 Coll Status(0x) 5 False bool -%0 4G D07 01 Coll Status(0x) 6 True bool Image: WPN D08 01 Coll Status(0x) 7 False bool Image: WPN D08 01 Coll Status(0x) 7 False bool Image: WPN DIN1 02 Input Status(1x) 0 True bool DIN2 02 Input Status(1x) 1 True bool DIN3 02 Input Status(1x) 2 True bool IN4 02 Input Status(1x) 3 True bool IN4 DIN5 02 Input Status(1x) 4 True bool	D06 D07 D08 DIN1 DIN2 DIN3	5(M.000006) 6(M.000007)	none
- (M) 4G D07 01 Coll Status(0x) 6 True bool - (m) VPN D08 01 Coll Status(0x) 7 False bool - (m) VPN DIN1 02 Input Status(1x) 0 True bool - (m) Aarms DIN3 02 Input Status(1x) 2 True bool - (m) Tasks DIN4 02 Input Status(1x) 3 True bool - (m) Tasks DIN5 02 Input Status(1x) 4 True bool	D07 D08 DIN1 DIN2 DIN3	6(M.000007)	
Image: WPN DO8 O1 Coll Status(0x) 7 False bool Image: WPN DIN1 02 Input Status(1x) 0 True bool DIN2 02 Input Status(1x) 0 True bool DIN3 02 Input Status(1x) 2 True bool DIN4 02 Input Status(1x) 3 True bool DIN4 02 Input Status(1x) 3 True bool	DO8 DIN1 DIN2 DIN3		none
OpenVPN DIN1 02 Input Status(1x) 0 True bool DIN2 02 Input Status(1x) 1 True bool DIN3 02 Input Status(1x) 1 True bool DIN3 02 Input Status(1x) 2 True bool DIN3 02 Input Status(1x) 3 True bool DIN4 02 Input Status(1x) 3 True bool DIN5 02 Input Status(1x) 4 True bool	DIN1 DIN2	7(M.000008)	none
DIN2 02 Input Status(1x) 1 True bool DIN3 02 Input Status(1x) 2 True bool Cartasks DIN4 02 Input Status(1x) 3 True bool DDDataServices DIN5 02 Input Status(1x) 4 True bool	DIN3	8(M.000009)	none
DIN3 02 Input Status(1x) 2 True bool Tasks DIN4 02 Input Status(1x) 3 True bool DDDataServices DIN5 02 Input Status(1x) 4 True bool	DINR	9(M.000010)	none
DIN4 02 Input Status(1x) 3 True bool DEDataServices DIN5 02 Input Status(1x) 4 True bool	Birts	10(M.000011)	none
Dillos 02 input status (1x) 4 irue bool	DIN4	11(M.000012)	none
	DINS	12(M.000013)	none
DING 02 Input Status(1x) 5 Irue bool	DING	13(M.000014)	none
- Modbus RTU TCP DIN7 02 Input Status(1x) 6 Irue Bool	DIN7	14(M.000015)	none
Modbus TCP Server DINB 02 Input status(1x) 7 True bool	DINB	15(M.000016)	none
Edit View Tools Runnime Help			
] 22 in 122 129 111 120 12 12 12 12 12 12 12 12 12 12 12 12 12	Scaling	Description	
□·① Conned/why □ @ BACnet/IP		-	X
BL10x GalagyValue_16 File Edit View Tools Help			
- 17 - 120 Value_17 - 120 20 20 20 20 20 20 20 20 20 20 20 20 2			
BinaryValue_0 BinaryValue_1 BinaryValue_1 BinaryValue_1 BinaryValue_1 BinaryValue_1 BinaryValue_1 BinaryValue_1 BinaryValue_1 BinaryValue_5 EventState DWord	Value Tim 0 15:	estamp Quality :54:08.083 Good	3
BrayValue_2 BACnet/IP.BL10x.BinayValue_13 BACnet/IP.BL10x.BinayValue_50bjectIdentifier DWord BrayValue_3 BACnet/IP.BL10x.BinayValue_14 BACnet/IP.BL10x.BinayValue_14	20971525 15: DOS 15-	54:08.083 Good	3
BranyValue_4 BranyValue_5	5 15	54:08.083 Good	3
DisaryValue_5 BanyValue_6 BanyValue_6 BanyValue_7 BanyValue_6 BanyValue_7 BanyVal	0 15:	59:59:735 Good	3
BACnet /IP BL 10x BinaryValue_5	0 15:	54:08.083 Good	4
-Lig Brary Value_9			
BraryValue_11 BACnet/IP.BL10k.BnaryValue_8 BaryValue_12 BACnet/IP.BL10k.BnaryValue_9			
- Cannel _Statistics - Cannel _ Statistics			
BinaryValue_15 Cannel1.Device1 < <			>
Channell Data Time Euset			
Dannel Date Time Event 29/08/2022 15:53:55 Added 11 items to gr			
Image: Source Date Time Event 2/20/02/2022 15/5/5/5 Added 11 terms to gr 2/20/02/2022 15/5/5/5 Added group: Data T 2/20/02/2022 15/5/5/5 Added group: Data T 2/20/02/2022 15/5/5/5 Added group: Data T			
⊕ ⊕ The Event 0 20 00 2022 155 355 Added 11 mm to gr. de ✓ Time Source 0 20 00 2022 155 355 20 00 2022 155 355 Added 12 mm to gr. 0 20 00 2022 155 355 20 00 2022 155 355 Added 22 mm to gr. 0 20 00 2022 155 355 20 00 2022 155 355 Added 24 mm to gr. 0 20 00 2022 155 355 20 00 2022 155 355 Added 24 mm to gr. 0 20 00 2022 155 355 20 00 2022 155 355 Added 4 mm to gr. 0 20 00 2022 155 355 30 00 2020 155 355 Added 4 mm to gr. 0 20 00 2022 155 355			
Image: Channell Date Time Event de Time Source 0 20 00 2022 15 53 55 Added 11 terms to gr. de Time Source 0 20 00 2022 15 53 55 Added jonce, Data T 22/00/2022 15 54 26 BACnet/P 0 25 00 2022 15 53 35 Added J Zemma to gr 22/00/2022 15 55 57 BACnet/P 0 25 00 2022 15 53 35 Added 4 Zemma to gro 22/00/2022 15 55 57 BACnet/P 0 25 00 2022 15 53 35 Added 4 group, Smula 2/2/00/2022 15 55 33 BACnet/P 0 25 00 2022 15 53 35 Added group, Smula			
Image: Channell Date Time Evert de Time Source 0 25 000 2022 155 3155 Added 11 Rems to gr de Time Source 0 25 000 2022 155 3155 Added 12 Rems to gr g2/00/2022 155 3155 Added 12 Rems to gr 0 25 000 2022 155 3155 g2/00/2022 155 3157 BACnet/IP 0 29 000 2022 155 3155 g2/00/2022 155 355 Added 2 rems to gr 0 29 000 2022 g2/00/2022 155 355 Added 4 rems to gr 0 29 000 2022 g2/00/2022 155 355 Added 9 rous 5 mula 0 29 000 2022 g2/00/2022 155 355 Added 9 rous 5 mula 0 29 000 2022 g2/00/2022 155 355 Added 9 rous 5 mula 0 29 000 2022 g2/00/2022 155 355 Added 9 rous 5 mula 0 29 000 2022 g2/00/2022 155 355 Added 9 rous 5 mula 0 29 000 2022 g2/00/2022 155 355 Added 9 rous 5 mula 0 29 000 2022 g2/00/2022 155 355 Added 9 rous 5 mu			
⊕ ⊕ Date Tme Event de Tme Surce Fig. 20 00:2022 Fig. 51:55 Added 11 tems to g 20:00:2022 Fig. 51:55 Added 12 tems to g Fig. 20 00:2022 Fig. 51:55 Added 12 tems to g 20:00:2022 Fig. 51:55 BACreat/P © 20:00:2022 Fig. 51:55 Added 12 tems to g 20:00:2022 Fig. 55:57 BACreat/P © 20:00:2022 Fig. 51:55 Added 4 tems to g 20:00:2022 Fig. 55:57 BACreat/P © 20:00:2022 Fig. 51:55 Added 4 tems to g 20:00:2022 Fig. 55:57 BACreat/P © 20:00:2022 Fig. 51:55 Added group SmuLa 20:00:2022 Fig. 51:55 BACreat/P © 20:00:2022 Fig. 51:55 Added group SmuLa 20:00:2022 Fig. 51:55 BACreat/P © 20:00:2022 Fig. 51:55 Added group SmuLa 20:00:2022 Fig. 51:55 BACreat/P © 20:00:2022 Fig. 51:55 Added group SmuLa 20:00:2022 Fig. 51:55:51 BACreat/P © 20:00:202			
Image: Converting Date Time Event 6			
Image: Spannell Date Time Event 6# V Time Source 0 20 002202 1553 55 Added 11 terms to gr. 28/08/2022 1554 56 BACrear/IP 0 25 00 02202 1553 55 Added 12 terms to gr. 28/08/2022 1555 51 BACrear/IP 0 25 00 02202 1553 55 Added 12 terms to gr. 28/08/2022 1555 53 BACrear/IP 0 25 00 02202 1553 55 Added 2 terms to gr. 28/08/2022 1555 53 BACrear/IP 0 25 00 02202 1553 55 Added 2 terms to gr. 28/08/2022 1553 55 BACrear/IP 0 25 00 02202 1553 55 Added 2 terms to gr. 28/08/2022 1553 55 BACrear/IP 0 25 00 02202 1553 55 Added 2 terms to gr. 28/08/2022 1553 55 Added 2 terms to gr. 0 25 00 02202 1553 55 Added 2 terms to gr. 28/08/2022 1553 55 Added 2 terms to gr. 0 25 00 02202 1553 55 Added 2 terms to gr. 28/08/2022 1553 55 Added 2 terms to gr. 0 25 00 02202 1553 55 <td></td> <td></td> <td>- 1</td>			- 1
Image: Spannell Date Time Event 6e Time Source 0 29 00 2022 155 155 Added 114 mms to gr. 25/00 2022 155 155 Added 174 mms to gr. 0 29 00 2022 155 155 Added 174 mms to gr. 25/00 2022 155 155 Added 174 mms to gr. 0 29 00 2022 155 155 Added 174 mms to gr. 25/00 2022 155 155 BACnet/IP 0 29 00 2022 155 355 Added 24 mms to gr. 26/00 2022 155 553 BACnet/IP 0 29 00 2022 155 355 Added grup, Smda. 26/00 2022 155 553 BACnet/IP 0 29 00 2022 155 355 Added grup, Smda. 26/00 2022 155 355 BACnet/IP 0 29 00 2022 155 355 Added grup, Smda. 26/00 2022 155 393 BACnet/IP 0 29 00 2022 155 355 Added grup, Smda. 20/00 2022 155 393 BACnet/IP 0 29 00 2022 155 355 Added grup, Smda. 20/00 2022 155 393 BACnet/IP 0 29 00 2022 155 355 Added grup, Smda.			

5.4.5 OPC UA Configuration

Ready



BLiiot BeiLai Industrial Gateway www.BL	iiot.com V1.1.3.8					– 🗆 X
Search Clear Import Export Read	d Config. Write C	onfig. Monitor Remote Log			中文	() Help About
白 品 BL103Pro						
СОМ1						
-⊕M140T		OPCIIA				
		Enclose Cont		18		
 	Name	Chable	Status	Port COM1	Device Name	Status
- AWAN	Time			LAN	\$475	
((x)) AG	Model	Port 4840		- Part	0415	
	Version	Anonymous				
	4G Module	User				
	IMEI	Password	•			
- <u>I</u> Alarms	Signal Strength	Security Strategy none ~	•			
	operator	Certificate				
DataServices	SIM ICCID					
- Pass Through	SIM Status	Privalekey				
—						
		OK Cancel				
- 🕀 BACnet/IP		· · · · · · · · · · · · · · · · · · ·][
MOPC UA		Refresh				
E-OCloud						
	/					

Operation steps: (1) Double-click "OPC UA" to enter OPC UA configuration box. (2) Click the Enable button to enable OPC UA. Default: off. Gray: Disabled, green: enabled. (3) Port: OPC UA port, default: 4840. (4) Anonymous: Enabled, indicating that the user name is not used to connect. (5) User, Password: user name and user password, because anonymous is enable, so do not need to fill in. (6) Security Strategy: Select whether encrypt OPC UA connection . This example selects an unencrypted connection. (7) Certificate, PrivateKey: OPC UA certificate and key, because the unencrypted connection is selected, there is no need to upload the certificate and key. (8) Click "OK" to confirm the OPC UA configuration. (9) Click "Write Configuration", and OPC UA will be enabled only after the gateway device restarts.

5.4.6 View and Send Command by UaExpert

BL103 gateway provides data externally through OPC UA server. The data collected by UaExpert (OPC UA Client) is shown in the figure below: UaExpert connects to the BL103 gateway OPC UA server to automatically generate data points. The name of the data point consists of the device name on the configuration software and the variable name of the device data point. Node id Consists of the device name on the configuration software and the device's data point label.



Unified Automation Ua	Expert - The OPC Unifie	d Architecture C	lient - NewProject								- 0 ×
File View Server Doc	ument Settings Help	s									
🗋 🖉 🗟 🙆 🧿	🚭 = 🗞 🗙	82 8									
Project	e	X Da A	dd Server			7 X	1			Attributes	8×
✓		-					atype ource Tim	nestam erver Timest	am Statuscode	<u>∽ ⊘ </u> §. ⊛	0
✓ ☐ Documents		Confi	guration Name							Attribute Value	
🗊 Data Access	View	Dis	covery Advanced								
		End	point Filter: opc.top			•					
			🔍 Local								
		~	Local Network Missoroft Tarminal	Camiras							
			> 💇 Microsoft Windows	Network							
			> 👳 Web Client Networ	1							
		×	Reverse Discovery	dd Reason Olanaad						References	đ×
Address Space	e	9 × _	Custom Discovery	to neverse biscovery *						😏 🥪 🚠 🏶 Forward 👻	0
			+ Couble click to A	dd Server >						Reference Target DisplayName	9
			Edit URL		? X						
			Enter the URL of a co	anuter with discovery servic	+ running						
			O ope. top://192.168.1	196:4840	v rooming.						
			L		Cancel	_					
			Authorston								
			Anonymous								
			-								
			O			Store	-				
Log			Fassword								e ×
	6	C	Certificate			and the second s	-				
Timestamp	Source	Server	Private Key			Sec. 1					
2022/06/02 13:57:14.418	UaExpert						-				
2022/06/02 13:57:14.418	UaExpert	R	nnect Antomatically								
2022/06/02 13:57:14.418	UaExpert				OK	Cancel	-				
2022/06/02 13:57:14.418	UaExpert		Loaded Data Logger Plur	in (Static Diumin)]				
2022/06/02 13:57:14.418	UaExpert		Loaded GDS Push Plugin	(Static Plugin)							
2022/06/02 13:57:14.418	UaExpert		Loaded File Transfer Plug	n (Static Plugin)							
2022/06/02 13:57:14.418	UaExpert		Loaded XML Nodeset Ex	vort Plugin (Static Plugin)							
2022/06/02 13:57:32.762	DiscoveryWidget		Discovery FindServersOn	Network on opc.tcp://localho	st:4840 failed (Ba	adTimeout), falli	ng back to FindServe	ers			
2022/06/02 13:57:33.273	DiscoveryWidget		Discovery FindServers or	opc.tcp://localhost:4840 faile	ed (BadTimeout)						
	DPC UA Server Applicat	Ø × Data kee Ø × Data kee 0 × 0 × 0 × 0 × 0 × 0 × 0 × 0 × 0 × 0 ×	Vier Vier	Display Name DINI M1402DINI DINI M1402DOINI DINI M1402DOINI DOIN M1402DOINI DION M1402DOINI DION M1402DOINI DION M1402DOINI DION M1402DOINI DION M1402DOINI DION M1402DOINI DOIN M1402DOINI DOIN M1402DOINI DOIN M1402DOINI DOIN M1402DOINI DION M1402DOINI DION M1402DOINI DION M1402DOINI DION M1402DOINI DION M1402DOINI DION M1402DOINININI	Value true true true true true true true tr	Datatyp Boolean Boolean Boolean Boolean Boolean Boolean Boolean Boolean Boolean Boolean Boolean Boolean Boolean Boolean Inti 6 Inti 6	e curve Timestan 1403/25,253 1403/25,253 1403/25,253 1403/25,253 1403/25,253 1403/25,253 1403/25,543 1403/25,543 1403/25,543 1403/25,543 1403/25,544 1403/25,544 1403/25,544 1403/25,546	n ever Timestani 1400225559 1400225559 1400225559 1400225559 1400225559 1400225559 1400225559 1400225559 1400225559 1400225559 1400225549 1400225559 1400225559 1400225559 1400225559 1400255559 1400255559 1400255559 1400255559 1400555559 1400555559 1400555559 1400555559 1400555559 1400555559 1400555559 1400555559 1400555559 14005555559 140055555555555555555555555555555555555	Saturcode ood ood ood ood ood ood ood ood ood	Attribute Model Mitte Model Mitte Model Mitte Model Model	6 × φ 1475 0 1475 φ φ φ φ φ φ φ φ φ φ φ φ φ
Lee ★ ■ Timestamp 2022/06/02 14:08:31:08 2022/06/02 14:08:31:38 2022/06/02 14:08:31:504 2022/06/02 14:08:31:504 2022/06/02 14:08:33:081 2022/06/02 14:08:30 2022/06/02 14:08 2022/06/02 14	Source DA Plugin Attribute Plugin AddressSpaceModel DA Plugin DA Plugin DA Plugin DA Plugin DA Plugin DA Plugin	Server kingPigeon O. kingPigeon O. kingPigeon O. kingPigeon O. kingPigeon O. kingPigeon O. kingPigeon O.	Message Item [NS1]String[M1401] Read attributes of node Brows succeeded. QascAddressSpaceMod QascDaModelsdropMir Found existing subscript Item [NS1]String[S475.ter Item [NS1]String[S475.ter	IOB] succeeded : RevisedSam NS[string]an.5475' succeede IsmineData eData on for ServerId 0 mid6ty: SamplingInterval=250, C JanplingInterval=250, C	, plingInterval=25 ed [ret = Good].), QueueSize=1, Dis QueueSize=1, Dis tueueSize=1, Disc	0, RevisedQueu DiscardOldest=1, ardOldest=1, C	eSize=1, Monitoredit 1, ClientHandle=79 ClientHandle=80 lientHandle=81	temid=16 [ret = God	Ĵ		đ x
2022/06/02 14:03:33.087	DA Plugin DA Plugin	kingPigeon O.	CreateMonitoreditems s	ucceeded [ret = Good] midity] succeeded : ReviredC	mplinglaterusi-	250. Revised	eueSize=1. Monitored	ditemid=17 iret = G	odl		
2022/06/02 14:03:33.087	DA Plugin	kingPigeon O.	Item [NS1]String[S475.pc	wer] succeeded : RevisedSar	nplingInterval=25	0, RevisedQueu	eSize=1, MonitoredIt	temid=18 [ret = God) d]		
2022/06/02 14:03:33.087	DA Plugin	kingPigeon O.	Item [NS1]String S475.ter	np] succeeded : RevisedSamp	lingInterval=250	RevisedQueue	Size=1, MonitoredIte	mid=19 (ret = Good	1		ý.



Send Command

Double-click the value of the data point directly to enter the value and press "Enter" to

confirm. 0 🖉 🖬 🖉 🔕 🔶 🗕 X true true true true faise 8800 1125 2 🖬 Do 🖉 🕞 🙆 💽 🗣 🗖 🖉 Data Access View true false true true true true false 8740 1124

5.4.7 MQTT Client Configuration

 The "KingPigeon" JSON data format of MQTT Client and MQTT Client II is the same as

 King Pigeon MQTT. Refer to: 5.4.19 King Pigeon MQTT Data Format

 Connect to the ThingsBoard platform, select the JSON data format in the

 "thingsboard-telemetry-gateway" format. The ThingsBoard platform domain name is

 thingsboard.cloud.

 Connect to a platform that supports Sparkplug B, such as the ignition platform, select the

 97
 Shenzhen Beilai Technology Co., Ltd.



JSON data format in the "sparkplug b" format, click the button next to the data template item, enter configuration box to configure the group ID and edge node ID.

The difference between MQTT Client and MQTT Client II is that the subscription topic of MQTT Client II does not work. The purpose of MQTT Client II is that the platform can view the data but cannot control the data. Therefore, MQTT Client II connection is not introduced. The configuration of MQTT Client is as follows: Connection without certificate and the JSON data format in KingPigeon format as an example.



(1) Double-click "MQTT Client" to enter configuration box. (2) Click the Enable button to enable MQTT Client. Default: off. Gray: Disabled, Green: enabled. (3) IP/domain: fill in the IP/domain name of the MQTT server. 4) Port: Fill in the MQTT server port, Default: 1883. (5) Client ID: The client identifier used in the MQTT connection message, and the server uses the client identifier to identify the client. (6) Username: The username used in the MQTT connection message, the server can use it for authentication and authorization. (7) Password: The password used in the MQTT connection message, which can be used by the server for authentication and authorization. (8) Data template: Select according to the JSON data format supported by the MQTT server, default is "KingPigeon". (9) Subscribe topic: The topic name used by the MQTT subscription message. After subscription, the server can send a publish message to the client for control. (10) Publish topic: The topic name used by MQTT to publish the message. The topic name is used to identify which information channel the payload data should be published to. (11) Upload cycle: The interval for regular data release, default is 30S. (12) Data retransmission: whether to enable data retransmission, Gray: disabled, Green: enabled. (13) Select data point upload: select the data point to be uploaded in the box on the right side of the configuration box, the default is blank means all upload. (14) Click "OK" to confirm the configuration of King Pigeon MQTT. (15) Click "Write



Configuration", the MQTT Client will not be enabled until the gateway device restarts. Re-open the configuration software to log in to the device, and you can see on the basic information page that the prompt light of "MQTT Client Online Status" is green, indicating that the MQTT Client is connected. The rightmost shows the online status of the slave device.

BLiiot BeiLai Industrial Gateway www.BLii	ot.com V1.1.3.8							– 🗇 🗙
Search Clear Import Export Read	Config. Write	Config. Monitor	() Remote	Log			中文	?IHelpAbout
்டBL103Pro ^^								
— ———————————————————————————————————								
└─ 愛 M140T								
	Nama	Value		Claud	Ctatus	Port	Davica Nama	Statur
L_⊗\$475	Name	BeiLai Gateway		MQTT Client	Status	COM1	M140T	Status
	Time	17:08:34 08/29/2022	2	MQTT Client II	•	LAN	S475	
('Å')4G	Model	BL103Pro		Ali IoT	•	-		
	Version	V1.1.3		HUAWEI IoT	•			
	4G Module	EC200SCNAAR01A0	9M16	AWS IoT	•			
Alarma	IMEI	868618052294261		KingPigeon IoT	•			
	Signal Strength	19 (Normal:14-31)		KingPigeon Modbus IoT	•			
	operator	NULL						
DataServices	SIM ICCID	NULL						
	SIM Status	Failed						
—								
OPC UA				Refresh				
E-&Cloud								
- MQTT Client								
-MMOTT Client II								
×								

5.4.8 View and Send Command by MQTT.fx

Edit Connection Profiles			– 🗆 X
	Profile Name	MQTT Server	
	Profile Type	MQTT Broker	
MQTT Server	MQTT Broker Profile Settings		
N	Broker Addres	test.mosquitto.org	
	Broker Por	1883	
	Client ID	MQTT_FX_Client_test	Generate
	General User Credentials	MQTT_FX_Client_test 55L/TLS Proxy LWT test	Generate
+ -	Revert		Cancel OK Apply



Note: The Client ID cannot be the same as the Client ID filled in the configuration software. Message received on MQTT.fx

The subscription topic on MQTT.fx is the publish topic configured on the MQTT Client

😔 MQTT.fx - 1.7.1				×
File Extras Help				
MQTT Server	Connect Disconnect			
Publish Subscribe Scripts Broker Status	Log			
BL10x_MQTT_data	Subscribe QoS1 QoS2	Autosc	roll	0°,•
BL10x_MQTT_data	BL10x_MQTT_data		- 22	1
Dump Messages Mute Unsubscribe	BI 10x MOTT data			2
				QoS 0
Topics Collector (0) Scan Stop OC*	<pre>BL10x_MQTT_data 02-06-2022 15:30:30:55830651 {"sensorDatas":[{"flag":"COS","lat":"0.0000000","lng":"0.0000000"},{{ rength","value":27},{"flag":"D01","switcher":1},{"flag":"D02","swit :"D06',"switcher":1},{"flag":"D112","switcher":1},{"flag":"D08","swi g":"D11N',"switcher":1},{"flag":"D1N2","switcher":1},{"flag":"D1N3", "flag":"D1N4","switcher":1},{"flag":"D1N5","switcher":1},{"flag":"D1N3", "flag":"D1N4","switcher":1},{"flag":"D1N5","switcher":1},{"flag":"D1N3", "flag":"D1N4","switcher":1},{"flag":"D1N5","switcher":1},{"flag":"D1N3", "switcher":1},{"flag":"D1N8","switcher":1},{"flag":"D1N3", "switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3", "switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3", "switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3", "switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3", "switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3","switcher":1},{"flag":"D1N3","switcher":1],{"flag":"D1N3","switcher":1},{"flag":"D1N3","switcher":1],{"flag":"D1N3","switcher":1],{"flag":"D1N3","switcher":1],{"flag":"D1N3","switcher":1],{"flag":"D1N3","switcher":1],{"flag":"D1N3","switcher":1],{"flag":"D1N3","switcher":1],{"flag":"D1N3","switcher":1],{"flag":"D1N3","switcher":1],{"flag":"D1N3","switcher":"</pre>	flag":"; cher":1 itcher": itcher"; y"syntcl IN6°,"syntcl IN6°,"syntcl syntcher syntc	<pre>signal_ },{"fl 1},{"fl i;0},{"fl her":1} witcher ","valu teway_i</pre>	2 Qos0 st Iag fla ; f : ; i ind
	Payload decoded by Plain Text	Decoder		

Publish with MQTT.fx

The publish topic is the subscribe topic on the MQTT Client



MQTT.fx - 1.7.1	-		×
File Extras Help			
MQTT Server Connect Disconnect			r 🔴
Publish Subscribe Scripts Broker Status Log	Retaine	d D	0;*
<pre>{ "sensorDatas": ["switcher":1, "Hag:"DO1"]</pre>			
WQTT.fx - 1.7.1	702		×
File Extras Help			
MQTT Server Connect Disconnect			^
Publish Subscribe Scripts Broker Status Log			
2022-06-02 15:42:30,603 INFO MqttFX ClientModel : messageArrived() with topic: BL10x_Mql1_data 2022-06-02 15:43:06,803 INFO MqttFX ClientModel : messageArrived() added: message #26 to topic 'B 2022-06-02 15:43:06,807 INFO MqttFX ClientModel : messageArrived() added: message #27 to topic 'B 2022-06-02 15:43:33:34 INFO PuqttFX ClientModel : messageArrived() added: message #27 to topic 'B 2022-06-02 15:43:23,335 INFO MqttFX ClientModel : attempt to add PublishTopic 2022-06-02 15:43:23,335 INFO MqttFX ClientModel : successfully published message { "sensorDatas": [{ switcher" : 0, "flag" : "D01"],	L10x_MQTT L10x_MQTT	_data'	
<pre>"down":'down" to topic BL10x_MQTT_down (QoS 0, Retained: false) 2022-06-02 15:43:31,013 INFO MqttFX ClientModel : messageArrived() with topic: BL10x_MQTT_data 2022-06-02 15:43:31,013 INFO MqttFX ClientModel : messageArrived() added: message #28 to topic 'Bl 2022-06-02 15:43:59,415 INFO MqttFX ClientModel : attempt to add PublishTopic 2022-06-02 15:43:59,416 INFO MqttFX ClientModel : successfully published message { sensurvatas : { fswitcher" : 1, "flag" : "D01" } , down"." </pre>	L10x_MQTT	_data'	
to topic BL10x_MQTT_down (QoS 0, Retained: false) 2022-06-02 15:44:00,604 INFO MqttFX ClientModel : messageArrived() with topic: BL10x_MQTT_data 2022-06-02 15:44:00,604 INFO MqttFX ClientModel : messageArrived() with topic: BL10x_MQTT_data 2022-06-02 15:44:00,804 INFO MqttFX ClientModel : messageArrived() with topic: BL10x_MQTT_data 2022-06-02 15:45:01,011 INFO MqttFX ClientModel : messageArrived() with topic: BL10x_MQTT_data 2022-06-02 15:45:01,011 INFO MqttFX ClientModel : messageArrived() with topic: BL10x_MQTT_data 2022-06-02 15:45:01,011 INFO MqttFX ClientModel : messageArrived() added: message #31 to topic 'B 2022-06-02 15:45:30,594 INFO MqttFX ClientModel : messageArrived() added: message #32 to topic 'B	L10x_MQTT L10x_MQTT L10x_MQTT L10x_MQTT	_data _data _data _data	



WQTT.fx - 1.7.1		<i>c</i> —		×
File Extras Help				
MQTT Server	Connect Disconnect		-	م
Publish Subscribe Scripts Broker Status	Log			
BL10x_MQTT_data	Subscribe QoS 0 QoS 1 QoS 2	Autoscr		0°*
BL10x_MQTT_data 64	BL10x_MQ11_data		Qo	27 05 0
Dump Messages Mute Unsubscribe	BL10x_MQTT_data		Qo	28 05 0
	BL10x_MQTT_data		Qo	29 05 0
	BL10x_MQTT_data			30
	BL10x_MQTT_data			20
	02-06-2022 15:43:31.56611013		C	ZoS 0
Topics Collector (0) Scan Stop C.	<pre>{"sensorDatas":[{"flag":"D01","switcher":0] {{"flag":"D02","switcher":0] {{"flag":"D13","switcher":0] {{"flag":"D13","switcher"</pre>	lag":"s her":1 cher":1 tcher": "switch N6","sw :"temp" ;],"gat	ignal_s ;{"flag }}{"fla 0},{"fl 0},{"fl old off vitcher" ;"value ceway_ir	st g" agg la ,{ ": e" nd
	Payload decoded by Plain Text D	ecoder		×

🐵 MQTT.fx - 1.7.1				×
File Extras Help				
MQTT Server	Connect Disconnect		•	D
Publish Subscribe Scripts Broker Status	Log			
BL10x_MQTT_data	Subscribe QoS0 QoS1 QoS2	Autoscro		
BL10x_MQTT_data (74)			QoS 0	5
Dump Messages Mute Unsubscribe	BL10x_MQTT_data		28 QoS 0	
	BL10x_MQTT_data		29 QoS 0	
	BL10x_MQTT_data		30	0
	BL10x_MQTT_data			20
	02-06-2022 15:44:00.56640604		QoS	0
Topics Collector (0) Scan Stop C	<pre>{"sensorDatas":[{"flag":"DOL","switcher":1] rength","value":27};["flag":"DOL","switcher":1] flag:"DOL","switcher":1], ["flag":"DOL","switcher":1], ["flag":"DOS","swit ":"DO6","switcher":1], ["flag":"DOT","switcher":1], ["flag":"DOS","swit ":"DIM","switcher":1], ["flag":"DIN2","switcher":1], ["flag":"DIN3", "flag":"DIN4","switcher":1], ["flag":"DIN5","switcher":1], ["flag":"DIN3", "flag":"DIN4","switcher":1], ["flag":"DIN5","switcher":1], ["flag":"DIN3", "flag":"DIN7","switcher":1], ["flag":"DIN5", "switcher":1], ["flag":"DIN3", "switcher":1], ["flag":"DIN5", "switcher":1], ["flag":"DIN5", "switcher":1], ["flag":"DIN5", "switcher":1], ["flag":"DIN5", "switcher":1], ["flag":"DIN5", "switcher":1], ["flag":"DIN5", "switcher":1], ["flag":"DIN5", "switcher":1], ["flag":"DIN5", "switcher":"DIN7", "switcher":1], ["flag":"DIN5", "switcher":1], ["flag":"DIN5", "switcher":"DIN7", "switcher":1], ["flag":"DIN5", "switcher":1], ["flag":"DIN5", "switcher":"DIN7", "switcher":1], ["flag":"DIN5", "switcher", "], ["flag":"DIN5", "switcher", "], ["flag":"DIN5", "switcher":1], ["flag":"DIN5", "switcher", "], ["flag</pre>	lag":"s: her":1} cher":1 tcher":1 "switch "switch N6","swi :"temp" }],"gat	ignal_st ,{"flag" },{"flag 0),{"flag 0),{"fla er":1},{ itcher": ,'value" eway_ind	
	Payload decoded by Plain Text De	ecoder		



AWS IoT
 SingPigeon IoT
 KingPigeon Modbus IoT
 GKingPigeon Modbus IoT

5.4.9 Alibaba Cloud Configuration

Ξ	C-) Alibaba C	loud	🛱 Workbench	China (Sha N	~	Q Search Exp	enses Tickets IC	P Enter
← I	Public Instance		IoT Platform / De	evices / Devices	/ Device Details			
Devi	ces	~	←	Offline				
Р	roducts		Products	View	_	DeviceSecret	******** View	
D	evices		ProductKey		Device Certificate		×	
G	roups		Device Inform	ation Topic	Device Certificate Copy		2	s Tas
J	obs		Device Informat	tion	ProductKey	Сору		
c	A Certificate		Product Name	BL10	DeviceName	Сору	le	egion
Rule	s	~]	Node Type	Devic	DeviceSecret	Сору	41	uthenticatic
Mair	ntenance	~ >	Alias 👩	Edit				rmware Ver
Reso	ource Allocation	~	Created At		Certificate Installation I	Modes		ast Online
Link	Analytics 🖾		created At		 Introduction to the unique 	-certificate-per-device and unique-certificate-per-product modes		evice local I
Link	Visual	\sim	Current Status	Offlir			Close	porting
Docu	umentation and Tool	s	More Device Inf	ormation				
			SDK Language			Version -	M	lodule Man
Blijot	Beil ai Industrial Ga	ateway	www.BLijot.com	V1138				п×
C							()	1
Sear	ch Clear Import	Expor	rt Read Config	Write Config.	Monitor Remote I	og	中文 Help	About
	—" A ")4G				Al	i loT		
6		C Ena	able			Variable Type Port Device	Variable Name	
	一觉 Alarms							Statur
	Tasks	Au	thentication Mode	Device	e Secret 🗸			•
Ē			Region	China(S	ihanghai) 🗸			•
`			IP					
	- Modbus R		ProductKey					
	- Modbus Tu		DeviceName	BL10	Dx-			
	-MBACnet/IP		DeviceSecret					
	MOPC UA		CA File					
6		CI	lient Certificate File					
`			Client Key File					
	- MQTT Clie		Upload Cycle(s)		30			
	Ali IoT							
	- 1 HUAWEI IC							

(1) Double-click "Alibaba Cloud IoT" to enter configuration box. (2) Click the Enable button to enable Alibaba Cloud. Default: off. Gray: Disabled, Green: enabled. (3) Authentication mode: Choose whether to use a key connection or a certificate connection. The default is key connection. (4) Region: Select the Alibaba Cloud region, default is China (Shanghai). (5) IP: The IP address of Alibaba Cloud for the enterprise version, don't need to filled in for the public version. (6) ProductKey: The same as the ProductKey in the Alibaba Cloud device. (7) DeviceName: The same as the DeviceName in the Alibaba Cloud device. (8) DeviceSecret: The same as the DeviceSecret in the Alibaba Cloud device. (9) CA file: When enabling
 ¹⁰³ Shenzhen Beilai Technology Co., Ltd. V1.0

OK Cancel



certificate connection, select the root certificate file to upload. (10) Client certificate file: When enabling certificate connection, select the client certificate file to upload. (11) Client key file: When enabling certificate connection, select the client key file to upload. (12) Upload cycle: The interval for regular data release, the default is 30S. (13) Select data point upload: select the data point to be uploaded in the box on the right side of the configuration box, the default is blank means all upload. (14) Click "OK" to confirm (15) Click "Write Configuration", and Alibaba Cloud will not be enabled until the gateway device restarts. Re-open the configuration software to log in to the device, and you can see that the "Alibaba Cloud Online Status" indicator light is green on the basic information page, indicating that Alibaba Cloud is connected. The rightmost shows the online status of the slave device.

0	Д													(Ala)	?	(f)
Search	Clear	Import	Export	Read Config.	Write Co	nfig.	Monitor	Remote	Log					中文	Help	About
	₩ ⁰ 4G ■VPN └─�0	penVPN														~
-1	Alarm	s			Name		Value		Clo	oud	Status	Port		Device Name		Status
-0	Tasks			Name		BeiLai (Sateway		MQTT Client		•	COM1	M140T			•
E	DataS	ervices		Time		17:30:3	3 08/29/2022	2	MQTT Client II		•	LAN	S475			•
T	LAP	ss Throug	h	Model		BL103F	ro		Ali IoT		•					
	QM	odbus PTI		Versio	n	V1.1.3			HUAWEI IoT		•	_				
			IS ICP	4G Mo	dule	EC2009	CNAAR01A0	9M16	AWS IoT							
	-ØM	odbus TCF	Server	IMEI		868618	052294261		KingPigeon IoT		•	-				
	-@B/	ACnet/IP		Signal	Strength	20 (No	rmal:14-31)		KingPigeon Mod	lbus IoT	٠					
	00-	PC UA		operat	or	NULL										
				SIM IC	CID	NULL										
	-OM	QTT Client		SIM St	atus	Failed										
	-⊗M	QTT Client	Ш													
	-ØAI	i loT														
	-@H	UAWEI IoT							Ĩ	Refresh						
	-OA	WS IoT							300							
	—⊕ Ki	ngPigeon	оТ													
	⊸⊗кі	ngPigeon	Modbus I	т												
	õ}Advar	nced Settin	as													

5.4.10 View and Send Command by Alibaba Cloud

Alibaba Cloud platform adds data points as shown in the figure below: Only the identifier of the Alibaba Cloud platform needs to be consistent with the variable label on the configuration software. For example, if the S475 data point temp is collected, and the configured variable label is "temp", the identifier of the data point added on the Alibaba Cloud platform must be "temp", and the function name and the variable name on the configuration software can be different.





The data received by Alibaba Cloud is as follows:



E C-J Alibaba Cloud	🛱 Workbench	China (Sha 🗸			Q Searc	h Expense	es Tickets ICP E	Enterprise Support App	⊑ 4 [°] 17 @ EN (
← Public Instance	IoT Platform / De	wices / Devices /	Device Details						
Devices ^	←	Online							
Products	Products	View			in the second	View View			
Devices	Davice Informa	tion Tonic Lie	TEL Data	ra Shadayu - Manago Sil	n Davica Log Opling	Dahua Groups Task			
Groups	Device informa	iopic Lis	1 ISE Data	e shadow Manage Fin	es Device Log Online	bedag Gloups lask			
Jobs	Status Eve	ents Invoke Se	rvice						
CA Certificate	Enter a module n	ame Q E	Enter a property name or ider	ntifier Q				Real-time F	Refres 💽 🏭 📃 ?
Rules 🗸	Default Modul	ہ اe	Property identifier	Property Name	Data Type	Update Time	Updated Value	Expected Value	Actions
Maintenance V		r	DIN1	DIN1	bool	Jun 15, 2021, 20:14:26.337	1 (1)	-	View Data
Resource Allocation V		c	DIN2	DIN2	bool	Jun 15, 2021, 20:14:26.337	1 (1)	÷	View Data
Link Analytics 🖸		E	DINB	DIN3	bool	Jun 15, 2021, 20:14:26.337	1 (1)		View Data
		c.	DIN4	DIN4	bool	Jun 15, 2021, 20:14:26.337	1 (1)	u .	View Data
Documentation and Tools		r	DINS	DIN5	bool	Jun 15, 2021, 20:14:26.337	1(1)		View Data
		1	DIN6	DIN6	bool	Jun 15, 2021, 20:14:26.337	1 (1)		View Data
		c	DIN7	DIN7	bool	Jun 15, 2021, 20:14:26:337	1 (1)		View Data
		c	DIN8	DIN8	bool	Jun 15, 2021, 20:14:26.337	1 (1)		View Data
E Feedback			201	DO1	bool	Jun 15, 2021, 20:14:26.337	1(冊)		View
😑 🕞 Alibaba Cloud	d 🛱 Workben	nch China (Sha Y		Q Search	Expenses Tickets	ICP Enterprise	Support App 💽	¢ ₩ @ E
C-) Alibaba Cloud Courter Alibaba Cloud Courter Alibaba Cloud	d 🍙 Workbern	nch China (S	Sha V DIN7	עווע	Q Search	Expenses Tickets 20:21:30.812	ICP Enterprise	Support App 🔄	û ₩ ③ E Data
C-J Alibaba Cloud Public Instance	d 🌣 Workbern	nch China (S	Sha V Diw/ DIN8	DIN7	Q Search Dool bool	Expenses Tickets 20:21:30.812 Jun 15, 2021, 20:21:30.812	ICP Enterprise	Support App D	Q ₩ 20 E Data View Data
C-) Alibaba Cloud Public Instance Devices	d 🄝 Workben	nch China (S	DIN DIN DO1	DIN/ DIN8 DO1	Q Search bool bool	Expenses Tickets 20:21:30.812 Jun 15, 2021, 20:21:30.812 Jun 15, 2021,	ICP Enterprise 1 (1) 1 (开)	Support App 🔄	Data View Data
C-) Alibaba Cloud C Public Instance Devices Products Products	d 🌣 Workben	china (S	DIN8	DIN7 DIN8 DO1	Q. Search Dool bool	Expenses Tickets 2022130.812 Jun 15.2021. 202130.812 Jun 15.2021. 202130.812 Jun 15.2021.	ICP Enterprise	Support App 🖂	C TR C E Data View Data View
E C-) Alibaba Cloud Public Instance Devices ^ Products Devices	d 🌣 Workben	China (S	Diny Diny Do1 Do2	DIN8 DO1 DO2	Q Search coor bool bool bool	Expenses Tickets 2022130.812 Jun 15, 2021, 202130.812 Jun 15, 2021, 202130.812 Jun 15, 2021, 202130.812	ICP Enterprise (1) 1 (1) 1 (7) 1 (7)	Support App D	La Data Data View Data View Data
E C-) Alibaba Cloud Public Instance Devices ^ Products Groups Inbr	d 🌣 Workben	nch China (3	Diny Diny DO1 DO2 DO3	DIN DIN DO1 DO2 DO3	Q Search Dool bool bool bool bool	Expenses Tickets 2021:30.812 Jun 15, 2021, 20	ICP Enterprise 1 (1) 1 (7) 1 (7) 1 (7) 1 (1)	Support App 🖸	Data Data View Data View Data Data
E C-) Alibaba Cloud Public Instance Devices ^ Products Groups Jobs CA Certificate	d 🗟 Workben	china (S	DIN/ DIN/ DO1 DO2 DO3 DO4	DIN DINB DO1 DO2 DO3 DO4	Q Search bool bool bool bool bool	Expenses Tickets 202:13.0812	ICP Enterprise 1.17 1.67 1.67 1.17 1.17 1.17	Suport App E	View View View View View View View View
E C-) Alibaba Cloud Public Instance Devices ^ Products Devices Groups Jobs CA Certificate	d 📾 Workben	China (:	DINS DINS DO1 DO2 DO3 DO4	DINI DINB DO1 DO2 DO3 DO4	Q Search bool bool bool bool bool	Expenses Tickets 202:13:0.812	ICP Enterprise 1 (1)	Support App E	Control Contro
E C-) Alibaba Cloud Public Instance Devices ^ Products Devices Groups Jobs CA Certificate Rules ~	d a Workber	nch China (b	Sha > UNY DIN8 DO1 DO2 DO3 DO4 DO5	DINI DINI DO1 DO2 DO3 DO4 DO5	Q Search bool bool bool bool bool bool	Expenses Tickets 202:130.812 202:130.812 2010 15, 2021, 202:130.812 202:130.812 202:130.812 202:130.812 202:130.812 202:130.812 202:130.812 202:130.812 202:130.812 202:130.812 202:130.812 202:130.812 202:130.812 202:130.812	ICP Enterprise 1.(3) 1.(3) 1.(7) 1.(7) 1.(7) 1.(7) 1.(7) 0.(0)	Support App E	Image: Constraint of the sector of the se
E C-) Alibaba Cloud Public Instance Devices ^ Products Devices Groups Jobs CA Certificate Rules ~ Maintenance ~ Resource Allocation ~	d a Workber	nch China (Sha > UNV DIN8 DO1 DO2 DO3 DO4 DO5 DO6	DIN8 DO1 DO2 DO3 DO4 DO5 DO6	Q Search Dool Dool Dool Dool Dool Dool Dool D	Expenses Tickets 2022130.812	ICP Enterprise 1 (1) 1 (7) 1 (7) 1 (1) 1 (1) 1 (1) 0 (0) 0 (0)	Support App E	Image: Constraint of the sector of the se
E C-) Alibaba Cloud Public Instance Devices ^ Products Devices Groups Jobs CA Certificate Rules ~ Maintenance ~ Resource Allocation ~ Link Analytics []	d & Workbern	nch China (Sha V UNV DIN8 DO1 DO2 DO3 DO4 DO5 DO6 DO7	DIN8 D01 D02 D03 D04 D05 D06 D07	Q Search Dool Dool Dool Dool Dool Dool Dool D	Expenses Tickets 2021:30.812	ICP Enterprise 1 (1)	Suport App E	LO LATA Data Data Data Data Data Data Data Dat
E C-) Alibaba Cloud Public Instance Devices ^ Products Devices Groups Jobs CA Certificate Rules ~ Maintenance ~ Resource Allocation ~ Link Analytics [3]	d & Workbern	nch China (Sha > UNV DIN8 DO1 DO2 DO3 DO4 DO5 DO6 DO6 DO7 DO6	DIN4 DIN8 DO1 DO2 DO3 DO4 DO5 D06 D07	Q Search Dool Dool Dool Dool Dool Dool Dool D	Expenses Tickets 2022130.812	ICP Enterprise 1 (7) 1 (7)	Suport App E	Le L
E C-) Alibaba Cloud Public Instance Devices ^ Products Devices Groups Jobs CA Certificate Rules ~ Maintenance ~ Resource Allocation ~ Link Analytics [2] Link Visual ~	d to Workbern	nch China (Sha V UNV DIN8 DO1 DO2 DO3 DO4 DO5 DO6 DO6 DO6 DO6	DINA DDNB DD1 DD2 DD3 DD4 DD5 DD5 DD5 DD5 DD5 DD5	Q Search bool bool bool bool bool bool bool b	Expenses Tickets 202130.812 202130.812 20115.2021.202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812 202130.812	ICP Enterprise 1 (7)	Suport App D	View View View
C-) Alibaba Cloud Public Instance Devices Products Devices Groups Jobs CA Certificate Rules CA Certificate Rules CA Certificate Rules Ch Certificate Ch Certificat	d 📾 Workbern	nch China (S	Sha > UNV DIN8 DO1 DO2 DO3 DO3 DO4 DO5 DO5 DO5 DO7 DO8 humidity	DIN/ DIN8 DO1 DO2 DO3 DO4 DO5 DO5 DO6 DO7 DO8 Numitity	Q Search bool bool bool bool bool bool bool b	Expenses Tickets 202:13:0.812 202:13:0.812 200:15.2021. 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812 202:13:0.812	LCP Enterprise 1 (1) 1 (7) 1 (7)	Support App Ex - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -	Image: Amage:
E C-) Alibaba Cloud Public Instance Devices ^ Products Devices / Groups Jobs CA Certificate Rules / Rules / Resource Allocation / Link Analytics D Link Visual /	d 🔊 Workberr	nch China (She V UNV DIN8 DO1 DO2 DO3 DO4 DO4 DO5 DO6 DO5 DO6 DO6 DO6 DO6 DO6 DO6 DO6 DO6 DO6 DO6	DIN8 DO1 DO2 DO3 DO4 DO5 DO5 DO5 DO5 DO5 DO5 DO5 DO5 DO5 DO5	Q Search Dool Dool Dool Dool Dool Dool Dool D	Expenses Tickets 2022130.812	ICP Enterprise 1 (1)	Support App Ex - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -	Image: Amage:

Alibaba Cloud Platform Send Command

Note: The shadow function of Alibaba Cloud devices is not supported, and the command must sent through online debugging.







5.4.11 HUAWEI Cloud Configuration

BeiLai Industrial Gate	nuj minoznoucom vi										
rch Clear Import E	xport Read Config.	Write Config.	Monitor	() Remote	Log				中文	? Help	Ab
(L))4G					HIIAWEL	IoT					-
	Enable				HUAWLI	101					
						Variable Type	Port	Device	Variable I	Vame	
- Openverv					Ca	ollection Point	COM1	M140T	DO1		^
	Authentication Mode	Dev	vice Secret		- Ca	ollection Point	COM1	M140T	DO2		
Tasks	IP/Domain	nq	tts.cn-north-4	.myhuaweicloi	id. Co	ollection Point	COM1	M140T	DO3		
DataServices	Port		1883		Ca	ollection Point	COM1	M140T	DO4		
—	Device ID			4	Co	ollection Point	COM1	M140T	DO5		
—	Device Key				Ca	ollection Point	COM1	M140T	DO6		
—⊕ Modbus TCP S	CA File				Ca	ollection Point	COM1	M140T	DO7		
- 🕀 BACnet/IP	Client Certificate File				Co	ollection Point	COM1	M140T	DO8		
- MOPC UA	Client Certificate File					ollection Point	COM1	M140T	DIN1		
	Client Key File				· Ca	ollection Point	COM1	M140T	DIN2		
	Server ID	M140T	~	Add Dele	te Co	ollection Point	COM1	M140T	DIN3		
	Upload Cycle(s)		30		Co	ollection Point	COM1	M140T	DIN4		
-@MQTT Client II	Data Retransmission(Co	ollection Point	COM1	M140T	DIN5		Т
—⊕ Ali IoT					Co	ollection Point	COM1	M140T	DIN6		
- HUAWEI IoT						Ilection Point	COM1	MIAOT	DINZ		Ť
⊕KingPigeon Mc @Advanced Settings BeiLai Industrial Gate	way www.BLiiot.com V	1.1.3.8									ć
OKingPigeon Mc OkingPig	way www.BLiiot.com V	1.1.3.8 Write Config.	(i) Monitor	Remote	Log				「」	(?) Help	Ē
Chear Import E	way www.BLiiot.com V xport Read Config.	1.1.3.8 Write Config	(i) Monitor	Remote	Log	IoT			中文	(?) Help	C (Al
Chear Import E Chear Import E Chear Clear Import E Chear Clear	way www.BLiiot.com V xport Read Config.	1.1.3.8 Write Config.	(i) Monitor	Remote	Log	loT Variable Ture	Pat	During	中文	(?) Help	At
Chear Import E Chear Import E Chear Clear Cle	way www.BLiiot.com V xport Read Config.	1.1.3.8 Write Config.	(i) Monitor	Remote	Log	IoT Variable Type Jection Point	Port	Device \$475	中文 Variable temp	(?) Help	Ał
Grand SettingPigeon Mc Grand Advanced Settings BeiLai Industrial Gater Clear Import E - '∰'4G - '∰VPN - `∰Alarms	way www.BLiiot.com V xport Read Config.	1.1.3.8 Write Config	(Interpretation of the second	Remote	Log HUAWEI	IoT Variable Type Jection Point	Port LAN LAN	Device \$475 \$475	Variable temp humidity	(?) Help	Ał
Grand Setting Grand Setting SetLai Industrial Gater Clear Import E (Å) 4G GopenVPN → ⓒ OpenVPN → ⓒ Alarms - ⓒ Tasks	way www.BLiiot.com V way www.BLiiot.com V way mean and a second	1.1.3.8 Write Config, De	Monitor	Remote	Log HUAWEI	IoT Variable Type ollection Point ollection Point	Port LAN LAN LAN	Device \$475 \$475 \$475	Variabl temp humidity power	(?) Help	Ał
→ ᡤ KingPigeon Mc → Advanced Settings BeiLai Industrial Gater Clear Import E - '{A'} ¹ 4G → ⁻ ⁽ A') ² 4G → ⁽ A	way www.BLiiot.com V xport Read Config. Enable Authentication Mode IP/Domain Port	1.1.3.8 Write Config, De	© Monitor vice Secret tts.cn-north-4 1883	Remote	Log HUAWEI	IoT Variable Type ollection Point Jlection Point Jlection Point	Port LAN LAN LAN	Device \$475 \$475 \$475	Variabl 中文 temp humidity power	(?) Help	Ał
KingPigeon Mc Advanced Settings BeiLai Industrial Gater Clear Import E KingYiag WVPN OpenVPN Xiams Gasks DataServices Opass Through	way www.BLiiot.com V xport Read Config. C Enable Authentication Mode IP/Domain Port Device ID	1.1.3.8 Write Config,	© Monitor vice Secret tts.cn.north-4 1883	Remote	Log HUAWEI	IoT Variable Type Illection Point ollection Point	Port LAN LAN LAN	Device \$475 \$475 \$475	Variabl 中文 temp humidity power	(?) Help	Ał
O KingPigeon Mc O	way www.BLiiot.com V way www.BLiiot.com V way of Read Config. C	1.1.3.8 Write Config.	© Monitor vice Secret tts.cn-north-4 1883	Remote	Log HUAWEI	IoT Variable Type Jllection Point ollection Point Jllection Point	Port LAN LAN LAN	Device \$475 \$475 \$475	Variabl 中文 temp humidity power	(?) Help	Ał
KingPigeon Mc Advanced Settings BeiLai Industrial Gater Clear Import E W4G WVPN OpenVPN CopenVPN Constants Openstrial	way www.BLiiot.com V xport Read Config. Enable Authentication Mode IP/Domain Port Device ID Device Key C & File	1.1.3.8 Write Config.	© Monitor vice Secret tts.cn-north-4 1883	Remote	Log HUAWEI	IoT Variable Type Jlection Point Jlection Point	Port LAN LAN LAN	Device \$475 \$475 \$475	Variabl 中文 temp humidity power	(?) Help	AŁ
KingPigeon Mc Advanced Settings BeiLai Industrial Gate Clear Import E W/4G OpenVPN OpenVPN Kalarms GopataServices OPass Through OModbus RTU= OModbus RTU= OModbus CP S OBACnet/IP	way www.BLiiot.com V xport Read Config. Enable Authentication Mode IP/Domain Port Device ID Device Key C Fine Confignent for State	1.1.3.8 Write Config.	vice Secret tts.cn-north-4 1883	Remote	HUAWEI	IoT Variable Type Ollection Point Jection Point	Port LAN LAN LAN	Device \$475 \$475 \$475	Variable 中文 temp humidity power	e Name	At
KingPigeon Mc Advanced Settings BeiLai Industrial Gate Clear Import E GopenVPN GopenVPN GopenVPN GopenVPN Gatases Gatases Gatases Gatases Gatases Gatasestrices Generation GopenVPN Gopen	way www.BLiiot.com V xport Read Config. Enable Authentication Mode IF/Domain Port Device ID Device Key CA File Client Certificate File	1.1.3.8 Write Config.	vice Secret tts.cn-north-4 1883	Remote	HUAWEI	IoT Variable Type Offection Point Offection Point	LAN LAN LAN	S475 S475 S475 S475	中文 中文 temp humidity power	e Name	Ał
KingPigeon Mc Advanced Settings BeiLai Industrial Gate Clear Import E Avi 4G Modes RTV= OpenVPN GopenVPN G	way www.BLiiot.com V xport Read Config. Enable Authentication Mode IP/Domain Port Device ID Device Key CA File Client Key File	1.1.3.8 Write Config.	© Monitor vice Secret tts.cn-north-4 1883	Remote	HUAWEI	IoT Variable Type ollection Point Ollection Point ollection Point	Port LAN LAN LAN	S475 S475 S475 S475	レ 中文 をmp humidity power	? Help	AŁ
KingPigeon Mc Arrow K	way www.BLiiot.com V xport Read Config. Enable Authentication Mode IP/Domain Port Device ID Device Key CA File Client Key File Server ID	I.1.3.8 Write Config, De At-mq	© Monitor vice Secret tts.cn-north-4 1883	Remote	HUAWEI	IoT Variable Type ollection Point ollection Point	Port LAN LAN	2 Device 5475 5475 5475	Variable 中文 temp humidity power	? Help	AŁ
KingPigeon Mc Advanced Settings BeiLai Industrial Gate Clear Import E Av AG Modbus RTU= OpenVPN OpenVPN OpenVPN OpenStrugh OModbus RTU= OModbus TCP S OBACnet/IP OPC UA OCIOUd OMQIT Client MOUT Client	way www.BLiiot.com V xport Read Config. Enable Authentication Mode IP/Domain Port Device ID Device Key CA File Client Key File Server ID Upload Cycle(s)	1.1.3.8 Write Config De 2t-mq	Monitor vice Secret tts.cn.north-4 1883	Remote smyhuaweiclos	Log HUAWEI	IoT Variable Type ollection Point Ollection Point	Port LAN LAN LAN	Device \$475 \$475 \$475 \$475	Variable 性文 temp humidity power	e Name	AŁ
KingPigeon Mc Advanced Settings BeiLai Industrial Gate Che Clear Import E AG AG AG OpenVPN OpenVPN OpenVPN OpenVPN OpenStruct OpataServices OPass Through OModbus RTU= OModbus TCP S OBACnet/IP OPC UA Cloud OMQTT Client OMQTT Client II OMUTT Client II	Authentication Mode IP/Domain Port Device ID Device Key CA File Client Certificate File Client Key File Server ID Upload Cycle(s) Data Retransmission	1.1.3.8 Write Config, De 2t-mg	Monitor vice Secret 1883	Remote	Log HUAWEI	IoT Variable Type Ollection Point Jlection Point	Port LAN LAN LAN	Device \$475 \$475 \$475	Variabl 中文 temp humidity power	(?) Help	AŁ
KingPigeon Mc Advanced Settings BeiLai Industrial Gate Clear Import E Import E Clear Import E GopenVPN Gopen	Authentication Mode IP/Domain Port Device ID Device Key CA File Client Certificate File Client Key File Server ID Upload Cycle(s) Data Retransmission	1.1.3.8 Write Config, De 3t-mq	Vice Secret tts.cn-north-4 1883	Remote	Log HUAWEI	IoT Variable Type Illection Point Ollection Point	Port LAN LAN LAN	S475 S475 S475 S475	Variabl 中文 temp humidity power	e Name	t
KingPigeon Mc Advanced Settings BeiLai Industrial Gate Clear Import E M4G Clear Import E M4G OpenVPN OpenVPN GopataServices OPass Through OModbus RTU= OModbus RTU= OModbus RTU= OModbus TCP S OBACnet/IP OPC UA OCloud OPC UA OCloud OMQTT Client II OAli IoT OHUAWEI IoT	Authentication Mode IP/Domain Port Device ID Device File Client Certificate File Client Key File Server ID Upload Cycle(s) Data Retransmission	1.1.3.8 Write Config,	Vice Secret tts.cn-north-4 1883	Remote	Log HUAWEI	IoT Variable Type Ollection Point Ollection Point	Port LAN LAN LAN	Device \$475 \$475 \$475	中文 中文 temp humidity power	(?) Help	
KingPigeon Mc Advanced Settings BeiLai Industrial Gate Clear Import E Advanced Settings Ch Clear Import E Advanced Setting Advanced Setting Advanced Settings Advanced Setting	way www.BLiiot.com V xport Read Config. Enable Authentication Mode IP/Domain Port Device ID Device ID Device Key CA File Client Certificate File Client Key File Server ID Upload Cycle(s) Data Retransmission(1.1.3.8 Write Config,	vice Secret tts.cn-north-4 1883	Remote	HUAWEI	IoT Variable Type Official Point Office Opint	Port LAN LAN LAN	S475 S475 S475 S475	中文 中文 temp humidity power	e Name	
KingPigeon Mc Advanced Settings BeiLai Industrial Gate Charler Import E All AG Modes Through OpenVPN GopenVPN GopenVP	way www.BLiiot.com V xport Read Config. Enable Authentication Mode IP/Domain Port Device Roy CA File Client Key File Server ID Upload Cycle(s) Data Retransmission(1.1.3.8 Write Config.	vice Secret tts.cn-north-4 1883	Remote	HUAWEI	IoT Variable Type Ollection Point Dilection Point	LAN LAN LAN	S475 S475 S475 S475	中文 中文 temp humidity power	e Name	AŁ
	way www.BLiiot.com V xport Read Config. Enable Authentication Mode IP/Domain Port Device ID Device Key CA File Client Key File Server ID Upload Cycle(s) Data Retransmission	1.1.3.8 Write Config, De Mt-mq	Vice Secret tts.cn-north-4 1883	Remote	HUAWEI	IoT Variable Type ollection Point ollection Point ollection Point	Port LAN LAN LAN	S475 S475 S475 S475	Variable temp humidity power	e Name	Ał

(1) Double-click "HUAWEI CLOUD IoT" to enter configuration box. (2) Click the Enable button to enable HUAWEI CLOUD. Default: off. Gray: Disabled, Green: Enabled. (3)
 Authentication mode: Choose whether to use a key connection or a certificate connection. Default is key connection. (4) IP/domain: Connect to the address of HUAWEI CLOUD, enter the console, click Overview, and the platform access address of the device access service console, you can view the server address. (5) Port: 1883 by default, 1883 for key connection, and 8883 for certificate connection. (6) Device ID: Set the same as the device ID on HUAWEI CLOUD. (7) Device key: Set the same key as the key on HUAWEI CLOUD, and Shenzhen Beilai Technology Co., Ltd. V1.0


enter the key when creating a device. (8) CA file: When enabling certificate connection, select the root certificate file to upload. (9) Client certificate file: When enabling certificate connection, select the client certificate file to upload. (10) Client key file: When enabling certificate connection, select the client key file upload. (11) Server ID: Set the same as the service ID on HUAWEI CLOUD, the service ID set when creating the product. One service ID or multiple service IDs can be set. This example introduces multiple service ID applications, adding "M140T" and "S475" service IDs. (12) Upload cycle: The interval for regular data release, the default is 30S. (13) Data retransmission: whether to enable data retransmission, click the button to enable. Gray: disabled, Green: enabled. (14) Select data point upload: select the data point to be uploaded in the box to the right of the configuration box, the default is blank means all upload. In this example, the service ID "M140T" selects the data point of M140T to upload, the service ID item selects "M140T", right-clicks the mouse in the right box, the data point box pops up, and selects the data point of "M140T", for example: click the data point of M140T DO1, click and hold the left mouse button, move the mouse down to the data point to be uploaded, click "OK", and the data point you selected will be displayed in the box. Select the service ID "S475", right-click in the box, the data point box will pop up, select the data point, and click "OK".

(15) Click "OK" to confirm the configuration of HUAWEI CLOUD. (16) Click "Write Configuration", HUAWEI CLOUD will be enabled after the gateway device restarts. Re-open the configuration software to log in to the device. On the basic information page, you can see that the "HUAWEI CLOUD online status" indicator light is green, indicating that HUAWEI CLOUD is connected. The rightmost shows the online status of the slave device.

BLiiot Be	iLai Indu	strial Ga	teway w	ww.BLiiot.cor	n V1.1.3.8										-	
) Search	Clear	\$ Import	Export	Read Confi	g. Write (Config.	() Monitor	Remote	Log					中文	? Help	() About
	X 4G VPN Opp Tasks DataSet Opas	enVPN s Throug dbus RTL dbus TCF Cnet/IP C UA 2TT Client IoT Client IoT S IoT S IoT	h J=TCP Server	Nar Tim Mo Ver 4G IME Sign SIM	Name ie kel kodule al Strength ator ICCID Status	BeiLai BeiLai BL103 EC200 86861 21 (Nc NULL NULL Failed	Value Gateway 12 06/29/2022 Pro SCNAAR01A0 8052294261 ormal:14-31)	2	MQTT C MQTT C Ali loT HUAWE KingPig KingPig	Cloud Lient Lient II I IoT r eon IoT eon Modbus IoT Refresh	Status	Port COM1 LAN	M140T \$475	Device Name		Status
	└─� Kin ②Advanc	gPigeon I ed Settin	Modbus I gs	т												



5.4.12 View and Send Command by HUAWEI Cloud

The property name is the variable label identifier on the configuration software

ж	HUAWEI CLOUD	ରି Cons	ole 오 Beijing4	*						More English		
Ξ	IoT Device Access		Model Definition	Online Debugging	Topic M	anagement						
0	Basic Chang	e	Add Service	Import from Library	Import from	m Local Import from Ex	cel			Learn About	Product Models	Export
MA	Overview		Service List	⊕ C	Servi	ce ID M140T Service Type I	A140T Description			Mod	lify Service Del	ete Service
0	Products		M140T		Add	Property Batch Delet	on					
0	Devices	*	S475			Property Name	Data Type	Access Mode	Description	Opera	stion	
	Rules					D01	Integer	Readable,Writable		Copy	Edit Delete	
\odot	Storane Management		т.			DO2	Integer	Readable,Writable		Copy	Edit Delete	
4						D03	Integer	Readable,Writable		Сору	Edit Delete	
0	OSM New	•				D04	Integer	Readable,Writable		Copy	Edit Delete	
C	Resource Spaces					DO5	Integer	Readable,Writable		Copy	Edit Delete	
8	IoTDA Instances					DO6	Integer	Readable, Writable		Copy	Edit Delete	
\oplus	Documentation	d ⁰				D07	Integer	Readable, Writable		Copy	Edit Delete	
	API Explorer	do.				DO8	Neger	Readable.Writable		Copy	Edit Delete	
	Int Daylor Development	0				DIN1	Integer	Readable Writable		Copy	Edit Delete	
	to E Device Provisioning					DIN2	Integer	Readable.Writable		Copy	Edit Delete	
	Forum for help	o"			10 ,	Total Records: 16 <	1 2 >					
					_							
					Add	Command						
					Comm	and Name	Command Parameters	Response Pa	rameters	Operation		
					M140T	大大	D01,D02,D03,D04,D04,D05,D	06,D07,D08		Copy Edit	Delete	
					10 •	Total Records: 1 < 1	>	\mathbf{N}				

BLiiot BeiLai Industrial Gateway www	w.BLiiot.com V1.1.3.8		~ =					- 🗆 X
Search Clear Import Export F	Read Config. Write Co	onfig. Monitor Re	mote Log		\setminus		日本 100 日本 10	lp About
白 品 BL103Pro	^ Variable Name	Address Type	Address	Value	Unit Data typ	e Varibale Key	Map Address	Ratio
E-mcom1	DO1	01 Coil Status(0x)	0		bool	DO1	0(M.000001)	none
CIN4140T	DO2	01 Coil Status(0x)	1		bool	DO2	1(M.000002)	none
	DO3	01 Coil Status(0x)	2		bool	DO3	2(M.000003)	none
	DO4	01 Coil Status(0x)	3		bool	DO4	3(M.000004)	none
└─ () \$475	DO5	01 Coil Status(0x)	4		bool	DO5	4(M.000005)	none
-@WAN	DO6	01 Coil Status(0x)	5		bool	DO6	5(M.000006)	none
—('爲')4G	DO7	01 Coil Status(0x)	6		bool	D07	6(M.000007)	none
-VPN VPN	DO8	01 Coil Status(0x)	7		bool	DO8	7(M.000008)	none
	DIN1	02 Input Status(1x)	0		bool	DIN1	8(M.000009)	none
W Alarma	DIN2	02 Input Status(1x)	1		bool	DIN2	9(M.000010)	none
	DIN3	02 Input Status(1x)	2		bool	DIN3	10(M.000011)	none
Colasks	DIN4	02 Input Status(1x)	3		bool	DIN4	11(M.000012)	none
DataServices	DIN5	02 Input Status(1x)	4		bool	DIN5	12(M.000013)	none
- 🕀 Pass Through	DIN6	02 Input Status(1x)	5		bool	DIN6	13(M.000014)	none
	DIN7	02 Input Status(1x)	6		bool	DIN7	14(M.000015)	none
- Modbus TCP Server	DINB	02 Input Status(1x)	7		bool	DIN8	15(M.000016)	none
RACnet/IP								
() ODECUM								
E-OCloud								
→ → MQTT Client								
	\sim							



Data received by the HUAWEI CLOUD IoT platform:

-	HUAWEI CLOUD			
Ξ	IoT Device Access	All Device Details		
6		Overview Commands Device Shadow Message Trace Maintenance Child Devices Tags		
۲	Basic Change Default	BL10x 2 Onime C Product		
Ω.	Overview Products	Resource BLXXX	Jevice ID	0
0	Devices	Node D A	uthentication Secret Reset Secret ype	
© 4	Groups Software/Firmware Upgrades	Registered Jan 22, 2021 12, 06 26 GMT+88 00 N Firmware V1.8.3 V	lode Type Directly connected Software v1.0	
8	Device CA Certificates	Description - L		
۲	Rules	* Latest Data Reported	Query Historical	Data 1 View All Properties
	Storage Management 0&M Now Resource Spaces	DO1 DO2 DO3 DO4 n0n n1n n1n n1n -KM4075 -KM4075 -KM4075 -KM4075 Am 29, 2022 1832.00 GMT+08 00 Aug 29, 2022 1832.00 GMT+08 00 Aug 29, 2022 1832.00 GMT+08 00 Aug 29, 2022 1832.00 GMT+08 00	DO5 "1" <m140t> Aug 29, 2022 18 32:00 GMT+08:00</m140t>	
	Documentation	8		_
	API Explorer IoT Device Provisioning	₽ ₽		
	Forum for help	Ø		

Click "View All Properties" or click "Device Shadow" to view all data as follows:

	HUAWEI CLOUD		ole 오 Beijing4					
Ξ	IoT Device Access		M140T	DO1	Read-only.Writable	0		
0				DO2	Read-only.Writable	1		
0	Basic Chang	•		DO3	Read-only.Writable	1		
ΛΩ	Lengue	- 1		DO4	Read-only.Writable	1		
0	Overview			DO5	Read-only.Writable	1		
0	Products			DO6	Read-only.Writable	0		
0	All Devices			D07	Read-only.Writable	1		
٢	Groups			DO8	Read-only,Writable	0		
\$	Software/Firmware			DIN1	Read-only.Writable	1		
۲	Opgrades			DIN2	Read-only,Writable	1		
చి	Certificates			DIN3	Read-only.Writable	1		
0	Rules			DIN4	Read-only,Writable	1		
	Storage Management			DIN5	Read-only.Writable	1		
	Descurse Spaces	•		DIN6	Read-only,Writable	1		
	IoTDA Instances			DIN7	Read-only.Writable	1		
	Documentation	do		DIN8	Read-only.Writable	1		
	API Explorer	°	S475	temp	Read-only	2790		
	IoT Device Provisioning	d0		humidity	Read-only	6410		
	Forum for help	d ⁰		power	Read-only	1420		



Send command by HUAWEI CLOUD

Add command

	HUAWEI CLOUD	ନ୍ତି Consi	ote Q Beijing4											
	IoT Device Access		Model Definition	Online Debugging	Topic M	anagement								
6	Basic Chang Default	e	Add Service	Import from Library	Import fro	m Local	Import from Excel				Learn Abour	Product Model	8 Export	
AD.	Quandani		Service List	⊕ C	Servi	ce ID M140T	Service Type M140T	Description			Moo	ify Service E	elete Service	
6	Products		M140T		Add	Property	Batch Deletion							
	Devices	*	S475			Property Na	ne	Data Type	Access Mode	Description	Oper	ition		
۵	Rules	•				DO1		Integer	Readable,Writable		Copy	Edit Delet		
Ð	Storage Management					DO2		Integer	Readable,Writable		Copy	Edit Delet	•	
4	O8M New					DO3		Integer	Readable,Writable		Copy	Edit Delet	2	
Ø	Resource Spaces					DO4		Integer	Readable,Writable		Copy	Edit Delet		
A	L-TDA la desta					DO5		Integer	Readable,Writable		Copy	Edit Delet		
0	to LDA Instances					DO6		Integer	Readable,Writable		Copy	Edit Delet		
	Documentation	d'				D07		Integer	Readable,Writable		Сору	Edit Delet	э.	
	API Explorer	e ^o				D08		Integer	Readable,Writable		Сору	Edit Delet	2	
	IoT Device Provisioning	d ⁰				DIN1		Integer	Readable,Writable		Сору	Edit Delet	5	
	Forum for help	e ^o				DIN2		Integer	Readable,Writable		Copy	Edit Delet	•	
					10 ·	Total Rev Command	cords: 16 < 1 2	×						
					Comm	and Name		Command Parameters	Response Par	rameters	Operation			
					M1401	下发		D01,D02,D03,D04,D04,D05,D0	06,D07,D08		Copy Edit	Delete		
					10 ,	Total Re	cords: 1 < 1 >							

Command to send data

Take the DO2 of M140T as an example

****	HUAWEI CLOUD 👘 🎧	Consola • Boijing4 •		More English 🛛 🗁 😾
0	IoT Device Access	All Devices / Device Details Overview Commands Device	Shadow Message Trace Maintenance Child Devices Tags	
	Basic <u>Charge</u> Default	If the product that the device belongs command delivery.	Deliver Command	× support synchronous command delivery, and NB-IoT devices support asynchronous
0	Overview Products Devices	Synchronous Command Dell' Note: Historical record query is not availat	For synchronously delivered command, device should send response within 20 seconds after the command is sent. Otherwise, the status of this commands will be set as "Timed Out". Learn more	Delver Command
() () () ()	All Devices Groups	Asynchronous Command De Queued Commands Historical	Command M14DT THE Parameter type int	Deliver Command
© &	Upgrades Device CA Certificates	Status 🖓 Command N	DO3 Parameter type: int DO4 Parameter type: int	uane Q
0	Rulas •		DO4 Parameter type: Int DO5 Parameter hose Int	
	O&M New +		DOG Parameter type: Int	0
	Documentation d ^P		D07 Parameter type: Int D08 Parameter type: Int	•
	loT Device Provisioning d ^P Forum for help d ^P	l	OK Cance	



JAWEI CLOUD 🕴 ଜିବ	ionsole Q Beijing4	•			
IoT Device Access	M140T	DO1	Read-only,Writable	0	
		DO2	Read-only,Wvitable	0	
Basic Change		DO3	Read-only.Writable	010	
PERSON		DO4	Read-only,Writable	1	
Dverview		DOS	Read-only.Writable	1	
Products		DOG	Read-only,Writable	0	
All Devices		D07	Read-only,Writable	1	
Groups		DO8	Read-only,Writable	0	
Software/Firmware		DIN1	Read-only,Writable	1	
Upgrades		DIN2	Read-only,Writable	1	
Certificates		DIN3	Read-only,Writable	ţ.	
Rules +		DIN4	Read-only,Writable	1	
Storage Management		DIN5	Read-only,Writable	1	
D&M Now -		DING	Read-only.Writable	1	
IoTDA Instances		DIN7	Read-only,Writable	1	
Documentation o ⁰		DIN8	Read-only,Writable	1	
API Explorer d ⁰	S475	temp	Read-only	2790	
IoT Device Provisioning dP		humidity	Read-only	6400	
Forum for help d ^D		power	Read-only	1419	

Check whether the DO2 data has changed in the device shadow, from the original "1" to "0".

5.4.13 AWS(Amazon Web Service) Configuration

Amazon Cloud supports multiple release topics, and the configuration is the same as HUAWEI CLOUD's. This only introduces the configuration of single topic, and the data points are all uploaded.

BLiiot Bei	iLai Indust	trial Ga	teway w	ww.BLiiot.com	/1.1.3.8									σ×
) Search	Clear Ir	mport	Export	Read Config.	Write Config.	() Monitor	Remote	Log				● 中文	? Help	(i) About
	₩ ⁰ 4G	Г					·	AWS Io	T					
	VPN	1011	C Enabl	le										
	–⊕∪per	NVPN							Variable Type	Port	Device	Variable Na	me	
	Alarms													Status
	DataServ	/ices		IP/Domain	-ats.iot.	us-east-1.ama	zonaws.com							•
I Tì		Throu		Port	ŧ	8883								
	-M Mod	bus R		Thing										
	-MMod	bus T		Client ID										
	-MBACr	net/IP		CA File	AmazonRoc	otCA1.pem								
	GOPC	UA	Clie	nt Certificate File	-cer	tificate.pem.cr	t							
	Scloud			Client Key File	pr	ivate.pem.key								
		T Clie		Publish Topic	iot/topic	~ A	dd Delete							
	-OMQT	T Clie		Upload Cycle(s)		30								
	- @Ali lo	т												
	-OHUA	WEI I												
	- @ AWS	IoT										ОК	Cancel	
	- 🕀 Kingl	Pigeon	loT											
	King	Pigeon	Modbus I	от										
L{	ට්රි Advance	d Settir	igs	v										

 Double-click "Amazon IoT" to enter configuration box. (2) Click the Enable button to enable Amazon Cloud. Default: off. Gray: disabled Green: enabled. (3) IP/domain: Fill in the terminal node, enter the console, and click "Interaction" of "Thing" to view. (4) Port: 8883. (5)
 Shenzhen Beilai Technology Co., Ltd. V1.0



Thing: Fill in the ARN, and click "Details" of "Thing" to view the ARN. (6) Client ID: fill in the account ID and view it in the user information. (7) CA file: Select the root certificate file to upload. (8) Client certificate file: Select the client certificate file to upload. (9) Client key file: Select the client key file to upload. (10) Publish topic: the topic created when creating the rule, the topic name used by MQTT to publish the message, click "Add" to fill in the publishing topic name. You can fill in multiple publishing topics, select a publishing topic, and click "Delete" to delete the selected topic. For example: the topic viewed in the "rule" of "action" is "iot/topic", so fill in"iot/topic".

```
Rule query statement
```

```
The source of the messages you want to process with this rule.
SELECT * FROM 'iot/topic'
```

(11) Upload cycle: The interval for regular data release, the default is 30S. (12) Select data point upload: select the data point to be uploaded in the box on the right side of the configuration box, the default is blank means all upload. (13) Click "OK" to confirm the configuration of Amazon Cloud. (14) Click "Write Configuration", and Amazon Cloud will be enabled after the gateway device restarts. Re-open the configuration software to log in to the device, and on the basic information page, you can see that the "Amazon Cloud Online Status" indicator light is green, indicating that the Amazon cloud is connected. The rightmost shows the online status of the slave device.

BLiiot Be	iLai Industrial Gateway www.E	Liiot.com V1.1.3.8						- 0	X
Search	Clear Import Export Rea	nd Config. Write (Config. Monitor Remo	te Log			中文	() Help Abor) ut
	W ⁴ 4G ■ VPN ⊕ OpenVPN tis Alarms ∋ Tasks ∋ DataServices → Pass Through → Modbus RTU=TCP → Modbus TCP Server → BACnet/IP → OPC UA S Cloud → MQTT Client	Name Name Time Model Version 4G Module IMEI Signal Strength operator SIM ICCD SIM Status	Value BeiLai Gateway 18:51:15 08/29/2022 BL103Pro V1.1.3 EC200SCNAAR01A09M16 868618052294261 19 (Normal:14-31) NULL NULL Failed	Cloud MQTT Client MQTT Client II Ali IoT HUAVEI IoT KingPigeon IoT KingPigeon IoT	Status O O O O O O O O O O O O O	Port COM1 LAN	Device Name M140T \$475	Status	
	Ali IoT OHUAWEI IoT OHUAWEI IoT OKINGPigeon IoT OKINGPigeon Modbus IoT Advanced Settings	×		Refresh					

5.4.14 View and Send Command by AWS

Subscribe to the topic "iot/topic" in "Test" - "MQTT Test Client", and you can view the messages published by the BL103 gateway. ¹¹⁴ Shenzhen Beilai Technology Co., Ltd.

V1.0







5.4.15 King Pigeon Modbus Cloud Configuration

BLiiot Bei	Lai Indu	ustrial Ga	teway w	ww.BLiiot.com \	/1.1.3.8										ΟX
Ø	Ê					۲								?	1
Search	Clear	Import	Export	Read Config.	Write Config.	Monitor	Remote	Log					中文	Help	About
(i	1)4G			^			-	-							
E E	NVPN	E I		KingPig	eon Modbus Io	т									
		oenVPN	- Enak	Kingrig	eon moubus io										
—ř	Alarm	s	Critic					1	Cloud	Status	Port		Device Name		Status
-6	Tasks					!!		MQTT CI	lient	•	COM1	M140T			•
	 DataSi	ervices	You can	change the server a	ddress to log in to of	her cloud pla	tforms.	MQTT CI	lient II	•	LAN	S475			•
	Lan	cc Throu		IP/Domain	modbus.dtuij	o.com		Ali IoT							
				Port	6651			HUAWEI	loT						
	-ØM	odbus RI		Modbus Station	1			AWS IoT		•					
	-ØM	odbus TC		Login Message	General			KingPige	on loT	•					
	- @BA	ACnet/IP	Log	in ACK Message				KingPige	on Modbus IoT	•					
	-Ø0F	PC UA	He	artbeat Message	0		- 1	-							
Ed	Cloud		Heartha	at ACK Massage	-		-								
	-OM	QTT Clier	neartbe	at ACK Message	A		_								
	-MM	OTT Clier	Hea	rtbeat Interval(s)	60										
	QAR	UoT													
	- WAII					ОК	Cancel	-							
	-QH(JAWEI IO							Refresh						
	-@AV	NS IOT													
	-ØKi	ngPigeon	loT												
	└─ 🏵 Kii	ngPigeon	Modbus I	оТ											
-{	Advan	ced Settin	gs	~											

(1) Double-click "King Pigeon Modbus IoT" to enter configuration box. (2) Click the Enable button to enable King Pigeon Modbus. Default: off. Gray: disabled, Green: enabled. (3) IP/domain: modbus.dtuip.com, filled in by default, no need to fill in. (4) Port: 6651, filled in by default, no need to fill in. (5) Modbus station: Modbus communication address, set the Modbus communication address of this gateway device.

(6)Login Message: data package of register connecting server, fill in the serial number of the King pigeon cloud platform, need to contact the sales to provide the serial number. (7) Login ACK Message: King Pigeon Cloud does not need to fill in, the server responds to the registered data package. (8) Heartbeat Message: Heartbeat packets to maintain the connection. King Pigeon Cloud fills in: Q, filled in by default, no need to fill in. (9) Heartbeat ACK Message: The server responds to the heartbeat packet. King Pigeon Cloud fills in: A, filled in by default, no need to fill in.

(10) Heartbeat Interval: The heartbeat packet sending cycle, the default is 60 seconds. (11) Click "OK" to confirm the configuration of King Pigeon Modbus. (12) Click "Write Configuration", the King Pigeon Modbus will be enabled only after the gateway device restarts. Re-open the configuration software to log in to the device, and on the basic information page, you can see that the prompt light of "King Pigeon Modbus Online Status" is green, indicating that the King Pigeon Modbus is connected. The rightmost shows the online status of the slave device.

Shenzhen Beilai Technology Co., Ltd.



5.4.16 View and Send Commands by King Pigeon Cloud

The data point configuration of the King Pigeon Modbus platform is as shown in the figure below. First build the data point, and then go to the read and write instructions of the link protocol item to set the configuration data point Modbus ID, function code, address, data format, byte order, and collection cycle. The Modbus address filled in by King Pigeon Cloud is one bit offset from the Modbus mapping address on the configuration software. For example: to collect M140T data point DO1, the Modbus mapping address on the configuration software is "0", then fill in "1" for the King pigeon cloud bias. The names of the sensors on the platform can be configured inconsistently in the software.

M21	Monito	ring Center											Corsole D	1 🕫 English 🕘 🕶
•	Device List													
•	Device	BL	÷	Ø										Î
1	Device	BL10x(Modbus RTU)		<u>s</u>										
~	Link	MB RTU	Υ.	0										
•	time zone	UTC+08:00	¥	0										_
-	Dropping	Custom ~	60	0										
	Sensor	Append	Batch Addition											
	- г'	D01	Switch type (operable	0 (decimal places) 👻	Unit 0	1	Delete 💦		1					
		D02	Switch type (operable ~	0 (decimal places) 🛛 🖛	Unit 0	1	Deloto							
		D03	Switch type (operable 🤟	0 (decimal places) 👻	Unit 0	1	Celete 15							
		D04	Sintch type (operable 🗁	0 (decimal places) 📼	Unit 0	1	Delete 1%							
		D05	Switch type (operable ~	0 (decimal places) 💌	Unit 0		Delete							
		D06	Switch type (openable ~	0 (decimal places) -	Unit 0		Delete							
		D07	Switch type (operable >	0 (decimal places) 💌	Unit 0		Delete No							
		DIN1	Switch type (operable ~	D (docting blaces)	Joit 0									
		DIN2	Switch type (operable ~	0 (docimal places) -	Unit 0		Delete							
		DIN3	Switch type (operable ~	0 (decimal places) +	Unit 0		Detete 15							
v2.0	L	DIN4	Switch type (operable =	0 (decimal places) 👻	0		1 Delete 1							
 M2 □ /ul>	Monite Ink Protocol CP Protocol ITTP Protocol	wing Center	Ite List BL 10x(Mod	Read write instruc sus RTU Serial Number	ion settings Sensor	Slave Address	Function Care	Bias	Data Format	Data Bits	Byte Order	- 2 × Acquinition Cycle	Conste C). Ø English 🛞 🕶
	IB TCP		Ciminal Serial Numb	er.A6396 1	DO1	1	01Read and write =	1	at			10		
· ·	IQTT Protocol		All Sensors	2	DO2	1	01Read and write =	2	st			10		
• 7	IDP Protocol	wal.		3	DO3	1	01Read and write =	3	al .			10		
= c	TCoAP Protoc	si		4	DO4	1	01Read and write ~	4	54			10	n	
* N	B-IoT Protocol			5	DOS	1	01Read and write =	5	at .			10	il.	
c	CoAP Protocol		Ŧ		DOS		01Read and write "	6				10	005	
			Read write instruction setting		007		01Read and write	7				10	y be a number Wille In	
			-											
			Û	8	DOS	1	01Read and write *	8	of .			10	ິ	
			U.S.	9	DIN1	1	01Read and write	9	M)			10	il.	
			DOS	10	DIN2	1	01Read and write "	10	14			10	DIN3	
			Can only be a number (W		DIN3	1	01Read and write "	n	at .			10	y be a number White by	
				12	DIN4	1	01Read and write ==	12	at			10		
			ŋ	13	DINS	1	01Read and write =	13	ji.			-10	ŋ	
			6	14	Dates		01Dead and write	14	u.				6	
12.0			DIN4			-19			_		Deterr	ane Cancel	Ez	Receive 1



BLiiot Be	iLai Ind	ustrial Ga	teway w	ww.BLii	ot.com \	/1.1.3.8										- 0 X
) Search	Clear	Import	Export	Read	Config.	Write Config	Monitor	() Remote	Log						。 中文	?iHelpAbout
ப் ஃBI	L103Pro			^	Vari	able Name	Address Typ	e Addre	ess	Value	Unit	Data type		Varibale Key	Map Add	ress Ratio
Ė.	OCOM.	1			DO1	01	Coil Status(0x)	0	_			bool	DO1		0(11.000001) none
	LOW	140T			DO2	01	Coil Status(0x)	1				bool	DO2		1(11.000002) none
					DO3	01	Coil Status(0x)	2				bool	DO3		2(11.000003) none
					DO4	01	Coil Status(0x)	3				bool	DO4		3(11.000004) none
	-@s4	475			DO5	01	Coil Status(0x)	4				bool	DO5		4(11.000005) none
	₩AN				DO6	01	Coil Status(0x)	5				bool	DO6		5(11.000006) none
	'Å")4G				DO7	01	Coil Status(0x)	6				bool	DO7		6(11.000007) none
00					DO8	01	Coil Status(0x)	7				bool	DO8		7(11.000008) none
	 	nenVPN			DIN1	02	Input Status(1x)	0				bool	DIN1		8(11.000009) none
	* 11				DIN2	02	Input Status(1x)) 1				bool	DIN2		9(11.000010) none
	Lio Alarn	15			DIN3	02	Input Status(1x)) 2				bool	DIN3		10 M.00001	1) none
H	Tasks				DIN4	02	Input Status(1x)	3				bool	DIN4		11 M.00001	2) none
Ð	BDataS	ervices			DIN5	02	Input Status(1x)) 4				bool	DIN5		12 M.00001	3) none
	-ØP	ass Throug	h		DIN6	02	Input Status(1x)) 5				bool	DIN6		13 M.00001	4) none
	-ØN	lodbus RTI	J≒TCP		DIN7	02	Input Status(1x)) 6				bool	DIN7		14 M.00001	5) none
	-MN	lodbus TCF	Server		DIN8	02	Input Status(1x)) 7				bool	DIN8		15 M.00001	6) none
Đ	-⊕B -⊕O Cloue -⊕M	ACnet/IP PC UA I IQTT Client IQTT Client	t : 11													

The values of the collected data points are as follows:

	DO1 ID:1477676	Connected Updated 2022/05/29 19 15 43	OFF	AlmQ	RT Curve⊙ Hist Query
 東以相 東以相	DO2	Connected		AlmQ	RT Curve Hist Query
∑ \$265	DO3 ID:1477678	Connected Updated 2022/08/29 19:15:43		AlmQ	RT Curve : Hist Query
526 RTU5822	DO4 ID:1477679	Gennected Updated 2022/08/29 19:15:43		AlmQ	RT Curve Hist Query
BL 1/14	DO5 ID:1477680	Connected Updated:2022/08/29 19:15:43		AlmQ	RT Curve Hist Query
∑ BL10x-三党 ∑ D225-三党MQTT	DO6 ID:1477681	☐ Connected Updated:2022/08/29 19:15:43		AlmQ	RT Curve Hist Query
∑ [€] BL10x-S7-200SMART	DO7 ID:1477682	Connected Updated 2022/08/29 19:15:43		AlmQ	RT Curve Hist Query
SE BL10x-MQTT SE BL102-S7-200MQTT-1	DO8 ID:1477683	☐ Connected Updated 2022/08/29 19:15:43	OFF	AlmQ	RT Curve© Hist Query
5 BL102-S7-200MQTT-2	DIN1 ID:1477684	Gonnected Updated 2022/08/29 19:15:43		AlmQ	RT Curve® Hist Query
S275 S272 (modbus TCP)	DIN2	☐ Connected Updated 2022/08/29 19:15:43		AlmQ	RT Curve@ Hist Query/
8272 (MOTT)					
E BL10x(Modbus RTU)				-	



All Equipment: All moli Other Difficient of the state of th	Device name /ID	BL10x	(Modbus RTU) Se	rial Number			(502
Ku, g Diff Diff <thdiff< th=""> Diff Diff <th< th=""><th>I Equipment Alarm 0 Offline 20</th><th>1</th><th>DIN3 ID:1477686</th><th>Connected Updated: 2022/08/29 19:25:12</th><th></th><th>AlmQ</th><th>RT Curve©</th><th>Hist Quer</th></th<></thdiff<>	I Equipment Alarm 0 Offline 20	1	DIN3 ID:1477686	Connected Updated: 2022/08/29 19:25:12		AlmQ	RT Curve©	Hist Quer
2 005 DNS Connected ON NumO RT CurveS 2 005 DNS Connected ON NumO RT	ि Rtildel 0,0	1	DIN4 ID:1477687	Q Connected Updated 2022/08/29 19 25 12		AlmQ	RT Curve©	Hist Quer
Initial Transmission Diff Connected Orall Ann.O RT Curves Initial Transmission	5 ^e 8266	J	DIN5 ID:1477688	Gonnected Updated:2022/08/29 19:25:12		AlmQ	RT Curve®	Hist Quer
BL 114 DN7 Connected Updated 2020062919.25.12 COL Amc // It CurveS © BL30-ER DN6 DOrrected Updated 202062919.25.12 COL Amc // It CurveS © BL50-ER DN6 Connected Updated 202062919.25.12 COL Amc // It CurveS © BL50-ER DN6 Connected Updated 202062919.25.13 COL Amc // It CurveS © BL50-ER/30000174 DN7/F00 Updated 2020620919.25.13 COL Amc // It CurveS © BL50-ER/30000174 DN7/F00 Updated 2020620919.25.13 COL Amc // It CurveS © BL50-ER/30000174 DN7/F00 Updated 202062919.25.13 COL Amc // It CurveS © BL50-ER/30000174 DN7/F00 Updated 2020602919.25.13 COL Amc // It CurveS © BL50-ER/30000174 DN6/F00 Updated 2020602919.25.13 COL Amc // It CurveS © BL50-ER/30000174 DN6/F00 Updated 2020602919.25.13 COL Amc // It CurveS © BL50-ER/20000174 DN6/F00 Updated 2020602919.25.13 COL Amc // It CurveS © BL50-ER/20000174 DN6/F0000000000174.29.10	S282	1	DIN6 ID:1477689			AlmQ	RT Curve®	Hist Quer
Image:	BL 1/1	J	DIN7 ID:1477690	☐ Connected Updated:2022/08/29 19:25:12		AlmQ	RT Curve®	Hist Quer
Ist has 47 30000MAT Ist has 40 T Ist has 47 30000MAT Ist has 40 T Ist has 40 T <td< td=""><td>SL10x三萬 SL25-三萬MQTT</td><td>J</td><td>DIN8 ID:1477691</td><td>Connected Updated: 2022/08/29 19:25:12</td><td></td><td>AlmQ</td><td>RT Curve®</td><td>Hist Quer</td></td<>	SL10x三萬 SL25-三萬MQTT	J	DIN8 ID:1477691	Connected Updated: 2022/08/29 19:25:12		AlmQ	RT Curve®	Hist Quer
R ISBN 000TT Imitality C Connected 6740 RH Amo RT CurveS Is ISBN 0000TT-14 IsD 1477693 Opposed 000001919.25:13 6740 RH Amo RT CurveS Is ISBN 0000TT-14 IsD 1477693 Opposed 000000000000000000000000000000000000	EC BL10x-S7-200SMART	J	temp ID:1477692	Connected Updated:2022/08/29 19:25:13	2820 °C 🛩	AlmQ	RT Curve®	Hist Quer
Little 187 2004001712 D power C Connected 1424 v Amo RT CurveS ≤ 5075 0 0.150505 Updated 20205007 11.29.10 Amo RT CurveS	BL10x-MQTT BL102-S7-200MQTT-1	J	humidity ID:1477693	Connected Updated:2022/08/29 19:25:13	6740 RH 🛩	AlmQ	RT Curve@	Hist Quer
№ 815 ♀ Connected AmO IT CurveS № 5372 (modus) TCP) ↓ 10 155035 Updated 2021/05/07 14.29 10 ✔ AmO IT CurveS	E BL102-S7-200MQTT-2	J	power ID:1477694	Connected Updated:2022/08/29 19:25:13	1424 v 🛩	AlmQ	RT Curve®	Hist Quer
	S275 S272 (modbus TCP)	J	ID:195035			AlmQ	RT Curve®	Hist Query
🖕 5272 (U0TT)	S272 (MQTT)							

Send command by the platform

M	2M Monitoring Center		Console () <i>ሮ</i> ስ English	- 🛞 -
۲	Device name /ID 🔍	BL10x(Modbus RTU) Serial Number		8	0 2
	All Equipment Alarm 0 Offline 20	D01 @connected ID:1477676 Updated:2022-06-29 19:27:37	Amo	RT Curve⊙ H	list Query/-
٠	✓ REGARI 0/4"	DO2 ♀ connected ID:1477677 Updated:2022-06-29 19:27.19	Amū Amū	RT Curve© H	list Query4
*	<u><u>x</u>^c 3265</u>	D03 © connected ID:1477678 Updated 2022-08-29 19 27 19	Almū Almū	RT Curve© H	list Query/-
ø	▲ RTU5022 ▲ S282	DO4 Connected ID:1477679 Updated 2022-08-29 19:27:19	AlmQ.	RT Curve⊙ H	list Query 4
+	✓ BL 7/14	DOS © connected 10.1477680 Updated 2022-08-29 19 27-19	ON Atm.	RT Curve⊙ H	list Query/r
1	<u>上</u> ⁶ RL10×三軍 <u>上⁶ D225 三国</u> MQTT	006 (2022-08-29 19 2 10.1477681 Updated 2022-08-29 19 2	Alma.	RT Curve© H	list Query/-
	EL 10x-57-200SMART	DO7 D		RT Curve© H	list Query-
	▲ BL10x-MQTT ▲ BL102-S7-200MQTT-1	DO8 Connected ID:1477663 Updated 2022-08-29 19:27:19	OFF AimQ	RT Curve⊙ H	list Query-/-
	EL 102-57-200MQTT-2	DIN1 ♀ connected ID:1477684 Updated 2022:08-29 19:27:19	CN AlmQ	RT Curve O H	list Query-h
	≦ 5275 ≦ 5272 (modbus TCP)	DIN2 Connected 10:1477685 Updated:2022-06-29 19:27:19	CN Alma	RT Curve O H	list Query/-
	S272 (MQTT)				
	EL10x(Modbus RTU)				
v2.0	Device group managem New device group		10 Article/Page ✔ Total 69 Article < 1 2 3 4 5 7 > To	1 Page Det	tine C
				an course are used	0

	DETOX(MODDUS RTO) SC	n kar pigarnozer.			
Al Equipment Alarm O Offline 20	DO1 ID:1477676	Connection requested (heartbeat packet) Updated 2022-08-29 19:28:44		AlmQ	RT Curve Hist Query
∑ ^c test	DO2 ID:1477677	© Connection requested (heartbeat packet) Updated 2022-08-29 19:28:44		AlmQ	RT Curve Hist Query
<u>\$</u> 5265	DO3 ID:1477678	Gonnection requested (heartbeat packet) Updated 2022-08-29 19:28:44		AimQ	RT Curve Hist Query
\$ 8705022 \$ 9282	DO4 ID:1477679	Connection requested (heartbeat packet) Updated 2022-08-29 19:28:44		AlmQ	RT Curve Hist Query
 BL 1/14 	DO5 ID:1477680	Connection requested (heartbeat packet) Updated 2022-08-29 19:28:44		AlmQ	RT Curve© Hist Query
<u>新</u> 8L10x-三面 <u>新</u> 0225-三面MQTT	DO6 ID:1477681	Connection requested (heartbeat packet) Updated 2022-08-29 19:28:44		AlmQ	RT Curve® Hist Query
5 BL10x-97-2005MART	D07 ID:1477682	Connection requested (heartbeat packet) Updated 2022-08-29 19:28:44		AlmQ	RT Curve Hist Query
S 8L102-MOTT	DO8 ID:1477683	Connection requested (heartbeat packet) Updated 2022-08-29 19-28-44	OFF	AlmQ	RT Curve Hist Query
BL102-87-200MQTT-2	DIN1 ID:1477684	Connection requested (heartbeat packet) Updated 2022-06-29 19:28:44		AlmQ	RT Curve Hist Query
5275 5272 (modbus TCP)	DIN2 ID:1477685	☐ Connection requested (heartbeat packet) Updated 2022-08-29 19:28:44		AlmQ	RT Curve© Hist Query
\$272 (MQTT)					
S BL10x(Modbus RTU)					





5.4.17 King Pigeon MQTT Cloud Configuration



(1) Double-click "King Pigeon IoT" to enter configuration box. (2) Click the Enable button to enable King Pigeon MQTT. Default: off. Gray: disabled, Green: enabled. (3) IP/domain name: 1883.dtuip.com, filled in by default, no need to fill in. (4) Port: 1883, filled in by default, no need to fill in. (5) Client ID: fill in the serial number of the King Pigeon platform, need to contact the sales to have serial number. (6) Username: MQTT, filled in by default, no need to fill in. 7) Password: MQTTPW, filled in by default, no need to fill in. (8) Subscribe topic: Fill in the format: the serial number of the King Pigeon platform / +, need to contact the sales to have serial number. (9) Publish topic: fill in the serial number of the King Pigeon platform, need to contact the sales to have the serial number. (10) Upload cycle: The interval for regular data release, the default is 30S. (11) Data retransmission: Click the button to enable. Gray: disabled, Green: enabled. (12) Select data point upload: select the data point to be uploaded in the box on the right side of the configuration box, the default is blank means all upload. (13) Click "OK" to confirm the configuration of King Pigeon MQTT. (14) Click "Write Configuration", the King Pigeon MQTT will not be enabled until the gateway device restarts. Re-open the configuration software to log in to the device, and on the basic information page, you can see that the prompt light of "King Pigeon MQTT Online Status" is green, indicating that Golden Pigeon MQTT is connected. The rightmost shows the online status of the slave device.



BLiiot Be	Lai Indu	istrial Ga	teway w	ww.BLiiot.com	V1.1.3.8										_	ΟX
9 Search	Clear	\$ Import	Export	Read Config	. Write (Config.	() Monitor	() Remote	Log					中文	? Help	() About
	Advara	envPN s ervices ss Throug odbus RTC odbus TCF codbus TC	h J=TCP Server ∷ II IoT Modbus I	A Nam Time Mod Versi 4G N MM Sign oper SiM SiM	Name s sl non lodule il Strength ator CCID tatus	Beilai 19:32: BL103 V1.1.3 EC200 868861 19 (NULL NULL Failed	Value Gateway 33 08/29/2022 Pro SCNAAR01A0 8052294261 nrmal:14-31)	2 9M16	MQTT CI MQTT CI Ali IoT HUAWEI AWS IoT KingPige KingPige	Cloud ient ient II IoT on IoT on Modbus IoT	Status	Port COM1 LAN	M140T \$475	Device Name		Status

5.4.18 View and Send Command by King Pigeon Cloud

First, add data points, and then go to the setting link protocol item to configure the data point identifier. The identifier of the data point is consistent with the variable label on the configuration software. For example: collecting M140T data point DO1, the variable label on the configuration software is "DO1", then the read and write identification on the King Pigeon Cloud should be "DO1". The names of the sensors on the platform can be configured inconsistently in the software.

2// Monit	oring Center								
Device List									
Device	BL	Ψ.	ß						
Device	BL10x(MQTT)		2						
Link	MQTT	*	0						
time zone	UTC+08:00	. W.	0						
Dropping	Custom	v 60	0						
Sensor	Append	Batch Addition	1						
	D01	Switch type (operable 👻	4 (decima places)		Ť	0	Ĵ	Delete	N
	D02	Switch type (operable =		7	^	0	3	Delete	12
	D03	Switch type (operable 👻		Ŧ	*	0	1	Delete	12
	DO4	Switch type (operable =		÷		0	1	Delete	N
	D05	Switch type (operable 👻		*	· 10	0	3	Delete	12
	D06	Switch type (operable =		Ŧ	ф.,	0	1	Delete	12
	D07	Switch type (operable 👻		~	4	0	1	Delute	17
	D08	Switch type (operable 👻		v	个	0	1	Delete	12



> -⊕MQTT Client -⊕MQTT Client II

Monitoring Center						Console 🗘 🕫 English	-
Link Protocol	Sevice List						
TCP Protocol							
HTTP Protocol							
MB RTU							
MB TCP	Serial Nu	5 🖸					
MQTT Protocol	All Sensors						
UDP Protocol							
TCP JSON Protocol							- 1
CTCoAP Protocol							
NB-IoT Protocol		6	6	6	6		
CoAP Protocol		D01	D02	DO3	D04		
	<u> </u>	Sensor ID: 2368407	Sensor ID: 2368408	Sensor ID: 2368409	Sensor ID: 2368	410	
		Read write DO1	Read write DO2	Read write DD3	Read write DO4		
	Setting Parameters	Wite	Write	Write		Write	
	<u>n</u>	Û)	n	Û	n		
	ji,	ji,	J I	jl.	jį,		
	U	U	Y	U	•		
	DO5	DO6	D07	DO8	DIN1		
12.0	Sensor ID: 2368411	Sensor ID: 2368412	Sensor ID: 2368413	Sensor ID: 2368414	Sensor ID: 2368	415 Receive I	ø
Blijot Boil ai Industrial Gat	oway www.Blijot.com.V1.1	2.8		\mathbf{i}		- 0	\mathbf{v}
		5.0					~
		(D.
Search Clear Import	Export Read Config. Wr	ite Config. Monitor Re	mote Log			中文 Help Abo	out
습BL103Pro	Variable N	Name Address Type	Address Value	Unit Data type	Varibale Key	Map Address Ratio	0
E COM1	DO1	01 Coil Status(0x)	0	bool	DO1	0(M.000001) none	Ч
L_⊘M140T	DO2	01 Coll Status(0x)	1	bool	002	1(M.000002) none	
	003	01 Coll Status(0x)	2	bool	003	2(M.000003) none	
G \$475	005	01 Coil Status(0x)	4	bool	004	4(M.000004) none	-
- CIWAN	D06	01 Coil Status(0x)	5	bool	D06	5(M.000005) none	-
((x)) AG	D07	01 Coil Status(0x)	6	bool	DO7	6(M.000007) none	-
	DO8	01 Coil Status(0x)	7	bool	DO8	7(M.000008) none	
	DIN1	02 Input Status(1x)	0	bool	DIN1	8(M.000009) none	
└──@ OpenVPN	DIN2	02 Input Status(1x)	1	bool	DIN2	9(M.000010) none	
— ূ Alarms	DIN3	02 Input Status(1x)	2	bool	DIN3	10(M.000011) none	
Tasks	DIN4	02 Input Status(1x)	3	bool	DIN4	11(M.000012) none	
DataServices	DIN5	02 Input Status(1x)	4	bool	DIN5	12(M.000013) none	
- Pass Through	DIN6	02 Input Status(1x)	5	bool	DIN6	13(M.000014) none	
→ Modbus RTU	⇒TCP DIN7	02 Input Status(1x)	6	bool	DIN7	14(M.000015) none	

The values of the collected data points are as follows:





Send commands

Take control of DO2 of M140T as an example

Monitoring Center					🕼 English 🛞 🕶
Device name //D Q,	BL10x(MQTT) Serial Numbe	c			502
All Equipment Alarm 0 Offline 19	DO1 ID.2368407	© Connected Updated 2022/08/29 19:40:32		AlmO	RT Curve® Hist Query4-
▲ <u>1</u> RTU5022 S282	DO2 ID:2358408	Connected Updated 2022/08/29 19 40 32	on 💽	AlmQ	RT Curve Hist Query/-
BL 2/14	DO3 (D:2368409	© Connected Updated: 2022/08/29 19:40:32		AlmQ	RT Curve@ Hist Query/-
● M ² BL100-ΞΞ <u>M²</u> D225-Ξ100A0TT	DO4 ID:2368410	@ Connected Updated:2022/08/29 19:40:32		AlmQ	RT Curve® Hist Query/-
E EL10-57-2005MART	DO5 ID:2368411	© Connected Updated 2022/08/29 19:40 32	01	AlmQ	RT Curve© Hist Query4-
L SL10+MQTT L SC BL10+MQTT L SC BL10+S7-200MQTT-1	DO6 10.2368412	中国 Connected Updated 2022/08/29 19:4 Are your sure to operate the device switch?	NO	AimQ	RT Curve© Hist Query/-
<u>15</u> ^{<} BL102-57-200MΩTT-2	D07 ID:2368413	Connected Updated 2022/08/29 19.4 Cancel Determine		AlmQ	RT Curve© Hist Query4-
∑ [≤] S275 ∑ [≤] S272 (modbus TCP)	DO8 ID:2368414	© Connected Updated 2022/08/29 19:40:32	OFF	AlmQ	RT Curve® Hist Query4-
5272 (MQTT)	DIN1 ID:2368415	G Connected Updated 2022/08/29 19:40:32		AlmQ	RT Curve® Hist Query4-
BL10x(Modbus RTU)	DIN2 ID:2368416	Connected Updated 2022/08/29 19:40:32		AimQ	RT Curve© Hist Query/-
BL10x(MQTT)					
Test2021 0/3					
Device group managem New device group			10 Article/Page 🐱 Total 19 A	ticle < 1 2 > To	1 Page Define C

Shenzhen Beilai Technology Co., Ltd.



							Cons	••• Q	🕼 Eng	lish 🌚
Device name //D	•>Return BL1	Dx(MQTT) Serial Number:							1	300
All Equipment Alarm 0 Offline 19	DO1 ID:236	Connected 8407 Updated 2022/	08/29 19:42:01)			AlmQ	RT Curve©	Hist Query
▲ <u>x^c</u> RTU5022	DO2	Gennected Updated 2022/	08/29 19:42:01	OFF				AlmQ	RT Curve©	Hist Query
BL 2/14	DO3	Connected 8409 Updated:2022/	08/29 19:42:01)			AlmQ	RT Curve©	Hist Query
⊙ <u>≦</u> BL10x ΞΞ	DO4 10:236	Connected 8410 Updated 2022/	38/29 19:42:01)			AlmQ	RT Curve®	Hist Query
L225=BMQTT L10x-97-2005MART	DO5	Connected 8411 Updated 2022/	38/29 19 42 01	ON)			AlmQ	RT Curve©	Hist Query
BL10x-MQTT	D06	F Connected	38/29 19:42:01	ON)			AlmQ	RT Curve©	Hist Query
<u>∑</u> ^e BL102-57-200MQTT-1 <u>∑</u> ^e BL102-57-200MQTT-2	D07	↓ Connected	38/29 19:42:01	ON)			AlmQ	RT Curve©	Hist Query
<u>55</u> 8275	DO8		38/29 19:42:01	OFF				AlmQ	RT Curve®	Hist Query
S272 (MOTT)	DIN1	Connected	38/29 19:42:01)			AlmQ	RT Curve©	Hist Query
EL10x(Modbus RTU)	DIN2	Connected	38/29 19:42:01	ON)			AlmQ	RT Curve	Hist Query
EL10x(MQTT)										
Test2021 0/3										
2.0 Device group managem New device group					10 Art	icle/Page 👻 Total 19 Arti	cle < 1 2	> To	1 Page	Define C

5.4.19 King Pigeon MQTT Data Format

The "KingPigeon" JSON data format of MQTT Client and MQTT Client II is the same as that of King Pigeon MQTT. The details are as follows

1) The payload data format in the device publish message

```
Release topic: serial number (corresponding to the configured release topic setting item)
{
    "sensorDatas": [
         {
                //Boolean
              "flag": "REG001", //Read and write identification
              "switcher": 0 //data type and value
         },
          {
              //Numerical
              "flag": "REG005", //Read and write identification
              "value": 3 //data type and value
         },
          {
            //4G Module signal value
              "flag": " signal strength ", //Read and write identifiers, fixed and cannot
be modified
              "value": 28 //data type and value
```



}],

"state":"alarm", //Alarm identifier (the configuration software "Alarm and Event" is configured with an alarm event, which is only available when an alarm is triggered, but not in the regularly reported data) "state":"recovery", //Alarm recovery identifier (this identifier is only available when the alarm is recovered, and the data reported regularly does not have this identifier) "gateway_indentify": "Beilai" //Gateway name identifier, upload gateway name "time": "1622700769", //Time Identifier, the timestamp of when the data was published "addTime": "2021-06-03 06:12:49" //Time identifier, time of uploading to the gateway "retransmit":"enable" //Retransmission identifier, which represents MQTT historical data (this identifier is only available when there is retransmission historical data, and there is no such identifier for regularly reported data) }

Note:

//Read and write identification: The character is "flag", followed by "MQTT identifier of data point", the MQTT identifier filled in when adding data points can be defined independently.

BLiiot BeiLai Industrial Gateway www.	Liiot.com V1.1	.3.8							- 🛛 X
Search Clear Import Export Rea	ad Config. W	rite Config.	() Monitor	Remote				中文 He	lp About
🗗 கூBL103Pro	^ Variable	Name	Address Type	Address	Value	Unit Data type	Varibale Key	Map Address	Ratio
E-COM1	DO1	01 Coi	l Status(0x)	0		bool	DO1	0(M.000001)	none
	DO2	01 Coi	l Status(0x)	1		bool	DO2	(M.000002)	none
	201		/ariable Pro	operties			DO3	2(M.000003)	none
			runuble i n	operties			DO4	3(M.000004)	none
-@\$475							DO5	4(M.000005)	none
- WAN	Variable Name	DO1		Varibale Key	DO1		DO6	5(M.000006)	none
—('A') 4G		Decimal		_			D07	5(M.000007)	none
E WW VPN	OCI/DEC/TEX	Decimal					DO8	7(M.000008)	none
- OpenVPN	Address Type	01 Coil Status(0	x) ~	Address	0		DIN1	3(M.000009)	none
一说 Alarms	Data type	bool	~	Add Number	1		DIN2	9(M.000010)	none
	Read Write	Pood (M/rito		Patio			DIN3	10(M.000011)	none
Lo lasks	Read/ write	Read/write		Katio	none		DIN4	11(M.000012)	none
E DataServices	Map Address	0		Variable Unit			DIN5	12(M.000013)	none
							DIN6	13(M.000014)	none
—					Г	OK Canad	DIN7	4(M.000015)	none
- Modbus TCP Server						Cancer	DIN8	15(M.000016)	none
- BACnet/IP									
- CORCUM									
E & Cloud									
- MQTT Client									
MQTT Client II	~								

//Data type and value: According to the type, it is divided into:

1. Boolean: the character is "switcher", followed by "0" or "1" (0 means open, 1 means close).

2. Numerical: the character is "value", followed by "specific value".

//Alarm, recovery identification: the character is "state", followed by "alarm" or "recovery" (alarm represents alarm data, recovery represents alarm recovery data).



//Gateway name identification: the character is "gateway_indentify", followed by "gateway name".

//Time identification: the character is "time", followed by "specific reporting timestamp".

//Time stamp: the character is "addtime", followed by "gateway time".

//Retransmission identifier: the character is "retransmit", followed by "enable" The data collected during the network disconnection period will be temporarily stored on the device and republished when the network is restored. It is identified by the "retransmit" field to represent historical data. (Need to enable data retransmission on the configuration interface)

2) The payload data format in the device subscription message

Subscription topic: serial number/+ (corresponding to the configured subscription topic setting item)

(The topic name used by King Pigeon 2.0 to publish messages downstream is "serial number/sensor ID", so the device subscription topic needs to add the wildcard "/+", so as to receive the data sent by the platform for control)

{

```
"sensorDatas":[
   ł
     //Send Boolean
      "sensorsId": 211267,//Platform Sensor ID
      "switcher":1, //data type and value
      "flag":"DO1" //Read and write identification
   },
   {
     //Send Numerical
      "sensorsId": 160239,
                              //Platform Sensor ID
      "value":"10", //data type and value
      "flag":"REG001"
                          //Read and write identification
   }
],
"down":"down" //Platform downlink message identifier
```

Note:

//Platform sensor ID: the character is "sensorsID", followed by the ID number (the ID is automatically generated by the platform), and the self-built platform no need.

//Data type and value: According to the type, it is divided into:

1. Switch data: the character is "switcher", followed by "0" or "1" (0 means open, 1

}

means closed)

2. Numerical data: the character is "value", followed by "specific value"

//Read and write flag: the character is "flag", followed by "MQTT flag representing the data point"

//Platform downlink message identification: The character is "down", followed by "down", which means this is the platform downlink data.

Note: Boolean values are delivered without double quotes, and numeric values are delivered with double quotes.

6 Firmware Upgrade

Please contact us if you need to upgrade the firmware.

This gateway supports upgrading through the configuration software, click the configuration software "About", click "Firmware Upgrade" to select

the "update" folder, click confirm, there will be a prompt box when the upgrade is completed, click OK. Contact after sales for update folder.





7 Warranty

1) This equipment will be repaired free of charge for any material or quality problems within one year from the date of purchase.

2) This one-year warranty does not cover any product failure caused by man-made damage, improper operation, etc.

8 Technical Support

Shenzhen Beilai Technology Co., Ltd. Website: https://www.bliiot.com