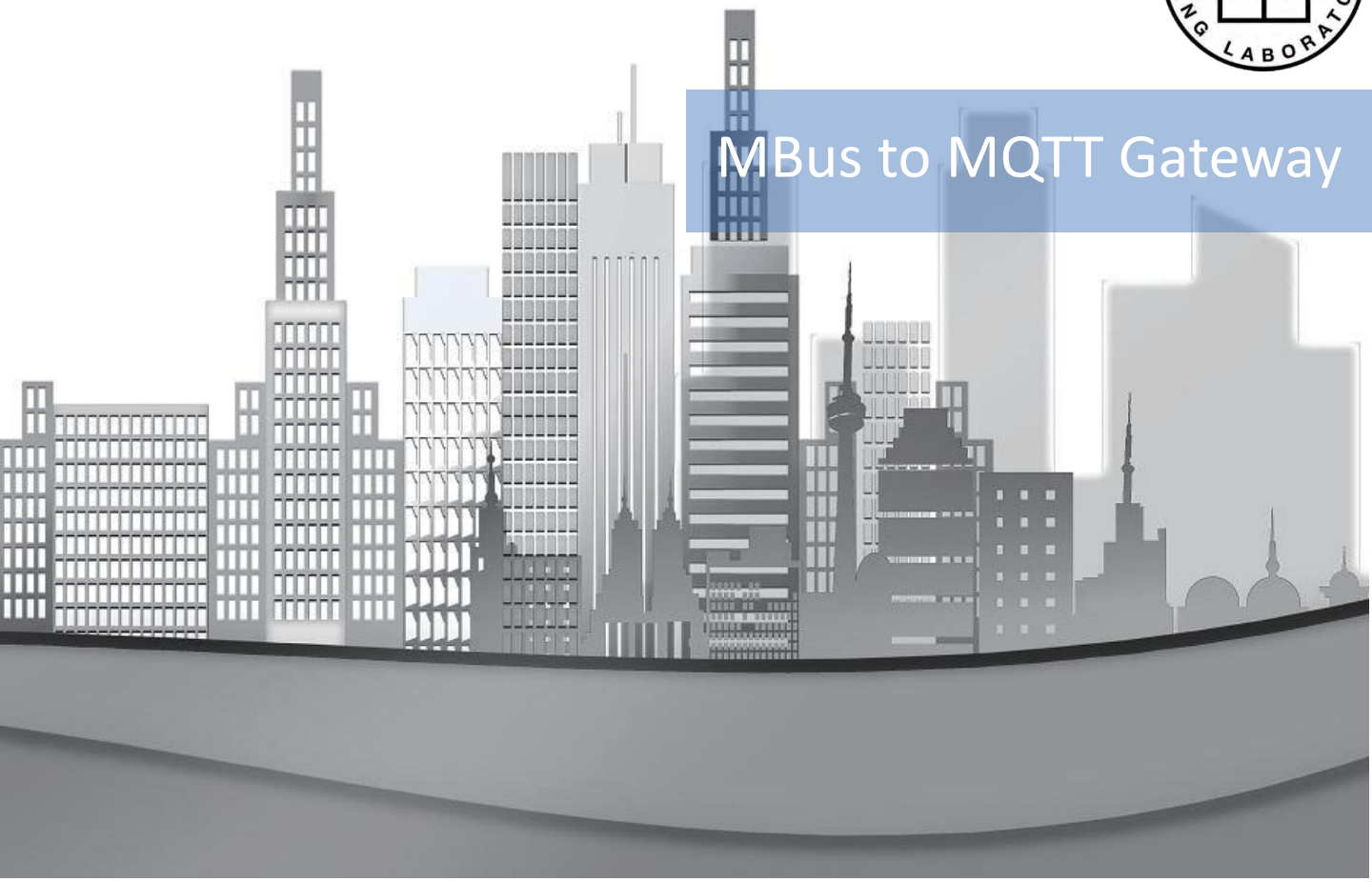
XINGHANG

Focus on IOT & WEB HMI



MBus to MQTT Gateway

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MBus to MQTT Gateway

1 LXC1011-MBus 3

Model	LXC 1011-MBus
Ethernet Port	1x Ethernet Port
MBus Port	1x MBus Port, COM1
RS485 Port	1x RS485, COM2
Supported Tags	512
Collection Protocol	1. MBus_WaterMeter(CJ188) 2. MBus_EnergyMeter(CJ188) 3. MBus_EnergyMeter_EN 4. ModbusRTUClient 5. ModbusTCPClient 6. DLT645-1997 7. DLT645-2007
Transfer Protocol	1. BACnet IP 2. Modbus RTU 3. Modbus TCP 4. MQTT 5. OPC UA

Product Model: LXC1011-MBus

1, Function Description

LXC1011-MBus can convert MBus to BACnet, with 1 Ethernet Port, 1 RS485 Port, 1 MBus Port.

Gateway can connect 2-Wire and 4-Wire MBus meter to Building control configuration software such as Johnson's Metasys, Honeywell's EBI or Niagara, Siemens' Insight or Desigo CC, Schneider's EBO, etc. Also can connect MBus meter to traditional configuration software such ad Citect, IFIX, RSVIEW, WinCC, KingView, Force Control etc.

Supported devices include MBus water meter, MBus energy meter, MBus heat meter, and Modbus devices.

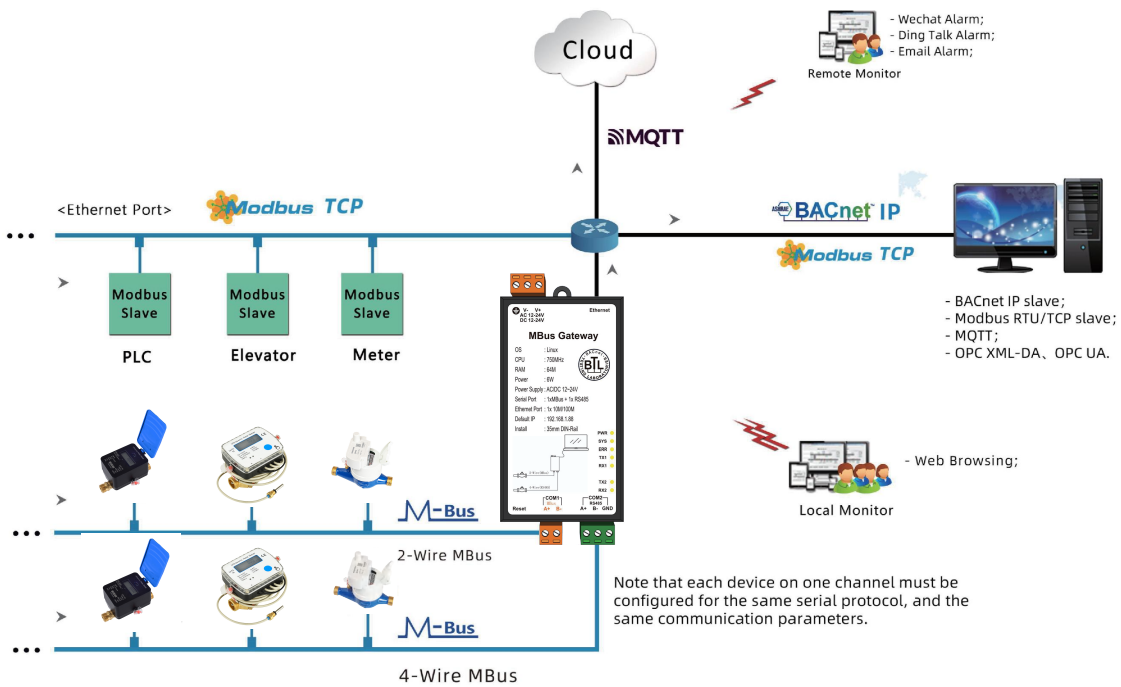
This product is to replace the original XH1005-MBUS concentrator with a WEB configuration gateway. MBus concentrator and gateway functions are integrated into one device, there is no need to install two devices, which is convenient for customers to wire, saves installation space, and saves costs.

The gateway is configured by X2View software. It can also support personal WeChat Alarm, enterprise WeChat Alarm, DingTalk Alarm, MQTT, OPC UA server, project upload cloud and other functions.

Users can configure the project based on the on-site device list and forward it to a standard BACnet IP, Modbus RTU/TCP server. Upload to the hardware gateway, and BACnet/Modbus clients can access the data of on-site devices through the gateway. (Note: The Modbus register of the gateway collection end starts with a decimal address of 1 (Base1) and a hexadecimal address of 0 (Base0).)

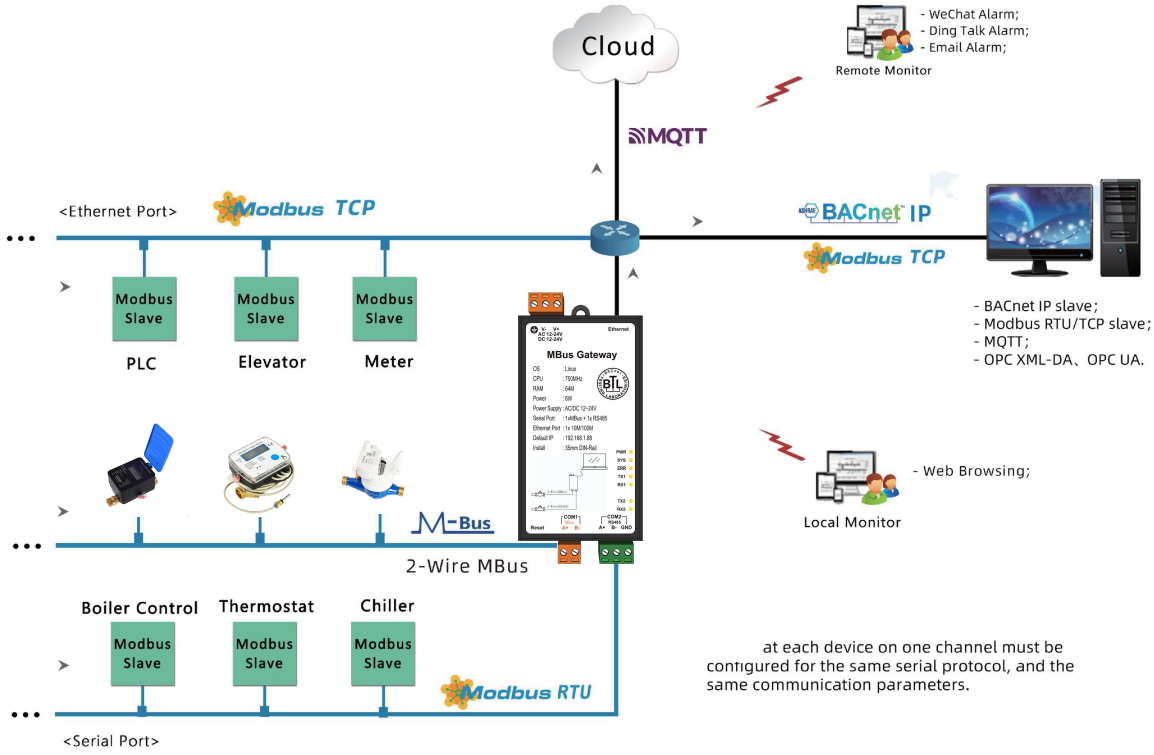
2, Application Principle Diagram

Application-1 Connect 2-Wire and 4-Wire M-Bus device



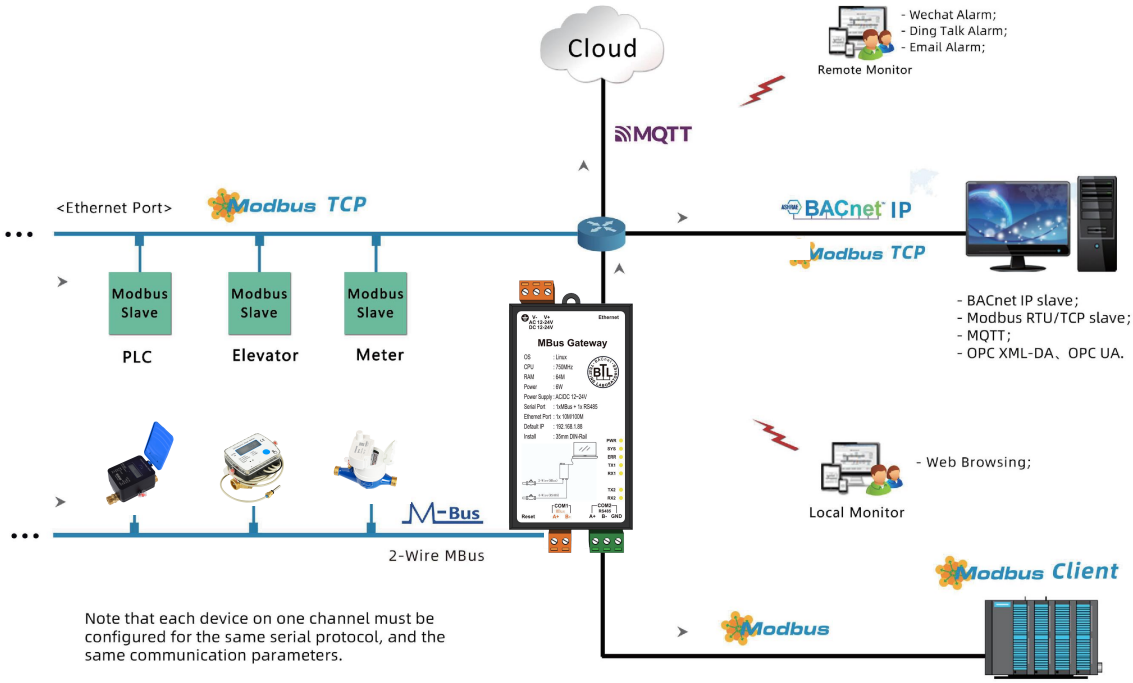
Product Model: LXC1011-MBus

Application-2 Connect 2-wire MBus and ModbusRTU



at each device on one channel must be configured for the same serial protocol, and the same communication parameters.

Application-3 Connect 2-Wire MBus to Modbus RTU



Note that each device on one channel must be configured for the same serial protocol, and the same communication parameters.

Product Model: LXC1011-MBus

3, Collection Protocol

Interface	Support Points	Collection Protocol	Transfer Protocol
1xEthernet 1xMBus 1xRS485	512	① MBus_WaterMeter ② MBus_EnergyMeter ③ MBus_EnergyMeter_EN ④ ModbusRTUClient ⑤ ModbusTCPClient ⑥ DLT645-1997 ⑦ DLT645-2007	1. BACnet IP 2. Modbus RTU 3. Modbus TCP 4. MQTT 5. OPC UA

4, Note

I. 2-Wire MBus device can only be connected to the M+ and M- terminals of COM1 port, with a voltage of around 36V; 4-wire MBus device can be connected to COM2. The A+ and B - terminals have a voltage within 5V. Connecting them in reverse can burn the gateway or meter, and any consequences caused by wiring issues are the responsibility of the customer Undertake.

II. COM2 is a standard RS485 port that can be used to connect devices with Modbus RTU protocol, while the Ethernet port can connect devices with Modbus TCP protocol.

III. Customers encounter non-standard MBus protocols that support paid custom development, which can generally be completed within 3 working days.

5, Runtime environment

OS： Win7、Win8、Win10、 Win11、Win Server 2008、Win Server 2016

The hardware gateway comes with a built-in web server that supports browsers such as Google Chrome, Microsoft Edge, Apple Safari, Firefox, Opera, and 360 Speed Mode.

6, Register Type&Num

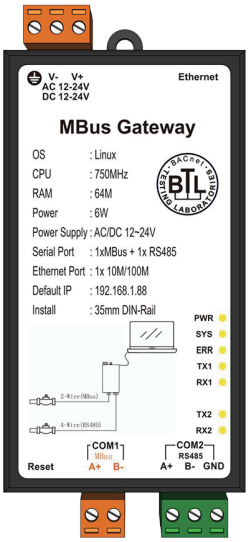
The number of gateway registers is dynamically supported, and 512 points can be built for each register.

BACnet Register Type	BACnet Register number
AI (Read Only)	512
AO (R&W)	512
AV (R&W)	512
BI(Read Only)	512
BO(R&W)	512
BV(R&W)	512
MSI(Read Only)	512
MSO(R&W)	512
MSV(R&W)	512

Modbus Register Type	Modbus Register number
0X(Coil Status, R&W)	512
1X(Input Status, , Read only)	512
3X(Input Register, Read Only)	512
4X(Holding Register, R&W)	512

Note:
4X and 3X register addresses = transfer addresses *2+1
0X and 1X Register address = transfer address +1

Product Model: LXC1011-MBus



Software Features:

- BTL Certificate and Bacnet International corporate GoldMember;
- Support convert MBus_WaterMeter(CJ188), MBus_EnergyMeter(CJ188), MBus_EnergyMeter_EN, ModbusRTUClient, ModbusTCPClient, DLT645-1977, DLT645-2007 to BACnet IP, Modbus RTU/TCP, MQTT, OPC UA server;
- Support MQTT server, Upload cloud server;
- Support personal WeChat Alarm, enterprise WeChat Alarm, DingTalk Alarm, MQTT, OPC UA server , project upload cloud and other functions;
- Support JS script and PLC editing to realize logical control;
- Support user group management, timer, trigger;
- Support Web browsing and real-time data monitoring;
- Support Chinese name and description;
- X2View software is easy configuration, with 512 points configurable within 15minutes.
- Non-human damage, warranty is 2 year.

Hardware Parameters

OS:	Linux	MBus Send Voltage:	30V~36V DC
CPU:	1 Core 750MHz	Seiral Port:	1xRS485(Electromagnetic isolation)
RAM:	64M	Dimensions (L×W×H):	119mm*55mm*33mm
Power:	6W	Weight:	210g
Power Supply:	AC/DC 12~24V (2-wire MBus meters must be powered by 24V)	Material:	Galvanized Steel
Ethernet Port:	1*10M/100M NIC	Installation:	DIN-Rail
MBus:	one MBus bus (M+, M -); up to 32 devices	Temperature:	-20℃~+70℃(Working) -30℃~+75℃(storage and transportation)
Mbus Static voltage:	20V~24V DC	Humidity:	20%~90% no condensation (working) 15%~95%no condensation condensation (storage and transportation)

Product Model: LXC1011-MBus

Product Dimensions

