MQTT Gateway（Model: LM Gateway203-MQTT）Data Sheet V2.2.1

PRODUCT INTRODUCTION

LM Gateway203-MQTT data acquisition gateway, based on a solid hardware platform design, a complete software kernel. The gateway provides 2 RS-485 serial ports and 1 10/100 Mbps Ethernet port. The gateway embeds standard data acquisition drivers such as Modbus,DLT645,CJ188,BACnet,Mbus,PPI,provides proprietary protocol driver integration.

The gateway and the cloud platform use the instant messaging protocol MQTT to transmit data. To ensure the security of message transmission, SSL encryption can be adopted. The data format is JSON. The gateway supports data operations, data storage, event management and other functions.

PACKING LIST

- LM Gateway203 data acquisition gateway
- SMA interface antenna

HARDWARE SPECIFICATION

LM Gateway203 Hardware parameters:	
CPU	ARM926EJ, clocked at 300MHz
RAM	64MByte high performance memory
Nand Flash	128MByte SLC Flash
Serial port	2 fully isolated RS485 interface
Network port	1 100M/10M Ethernet interface
power supply	DC9V～36V
Total Weight	370g
Enclosure rating	IP51
Installation size	135mm×111mm×35mm(L×W×H)
Mechanical installation	DIN rail card slot fixing
4G module	Built-in 4G full Netcom module
LM Gateway203 Environmental parameters：	
Power consumption	The average power consumption is ⩽5W, the peak value of wireless transmission reaches 10W, and the effective output power of the power supply provided by the user must be >10W.
Operating temperature	-40～85℃ 20 to 90% non-condensing

INTERFACE DEFINITION

1. POWER

SIGNAL	DESCRIPTION
V+	Power supply
V-	Negative power supply
E	Safety ground

2. DC seat, 5.5*2.1mm

- In an environment with poor power quality, it is recommended to use a switching power supply to effectively improve the gateway's anti-interference ability.。

3. Network port

- 10/100M high speed adaptive network card;
- It adopts dual-level lightning protection and anti-static protection to resist 2KV lightning strikes;
- Unique MAC address。

LAN	IP	Subnet mask
Eth0	192.168.1.233	255.255.255.0

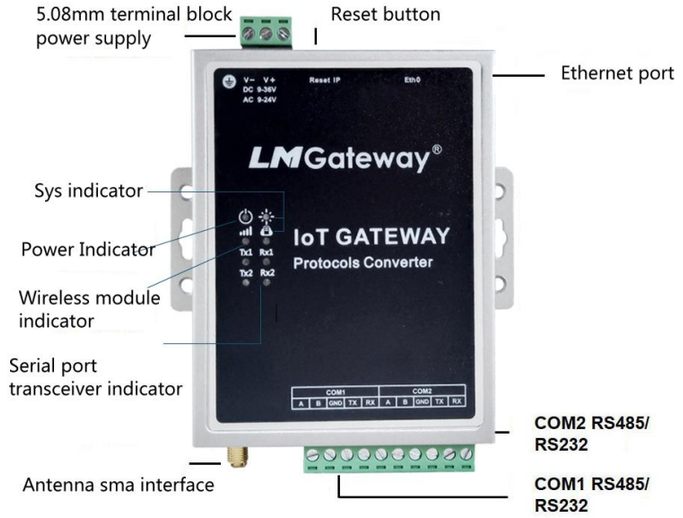
- Eth0 is a LAN port and cannot access the Internet.

4. CON

PIN	SIGNAL	DESCRIPTION
1	COM1-A	RS485-1 Positive signal
2	COM1-B	RS485-1 Negative signal
3	COM1-GND	Signal ground
4	COM1-TX	RS232-1 Signal sender
5	COM1-RX	RS232-1 Signal receiving
6	COM2-A	RS485-2 Positive signal
7	COM2-B	RS485-2 Negative signal
8	COM2-GND	Signal ground
9	COM2-TX	RS232-2 Signal sender
10	COM2-RX	RS232-2 Signal receiving

RS485：

- Fully isolated RS485 interface with three levels of protection;
- Supports the highest level of 4KV protection for the 10/700uS test in the GB/T 17626.5-2008 standard;
- ±15kV human body discharge mode;
- ±15kV IEC1000-4-2 air gap discharge;
- Communication parameters can be configured, default communication parameters: 9600, 8-1-N.



DATA ACQUISITION DRIVER

Network port
Modbus TCP Client
Modbus RTU_over_TCP
BACnet IP
Siemens S7-200 Network
Siemens S7-1200 Network
Siemens S7-300 Network
OPC UA
Serial port
Modbus RTU
DLT645-1997,DLT645-2007
CJ188
Siemens S7-200 PPI
MBus_EnergyMeter

DATA SERVICE

As the MQTT client, the gateway connects to the private cloud, Alibaba Cloud, Baidu Cloud, Tencent Cloud, etc., and pushes the data points of the gateway to the cloud through the mechanism of subscription and publishing. The cloud can read and write the front-end device through the gateway.

DATA OPERATION

The data can be calculated by the expression. For example, A represents a collection point, the expression A/100 can be edited, the data is reduced by 100 times, A+0.5, the value is shifted by 0.5, and so on.

DATA STORAGE

The gateway has data storage function, which can realize data storage of I/O points, user points, calculation points and system points. The data of the gateway can only be stored in the TF card.

IoT

IoT data center, which is convenient for users to verify Internet of Things applications such as gateways, cloud services, and WeChat public accounts.

ALARMS AND EVENTS

The Alarms and Events page allows the user to set the trigger condition for the event, trigger the event when the condition is met, and perform the event release when the state transitions from the satisfied condition to the unsatisfied condition.

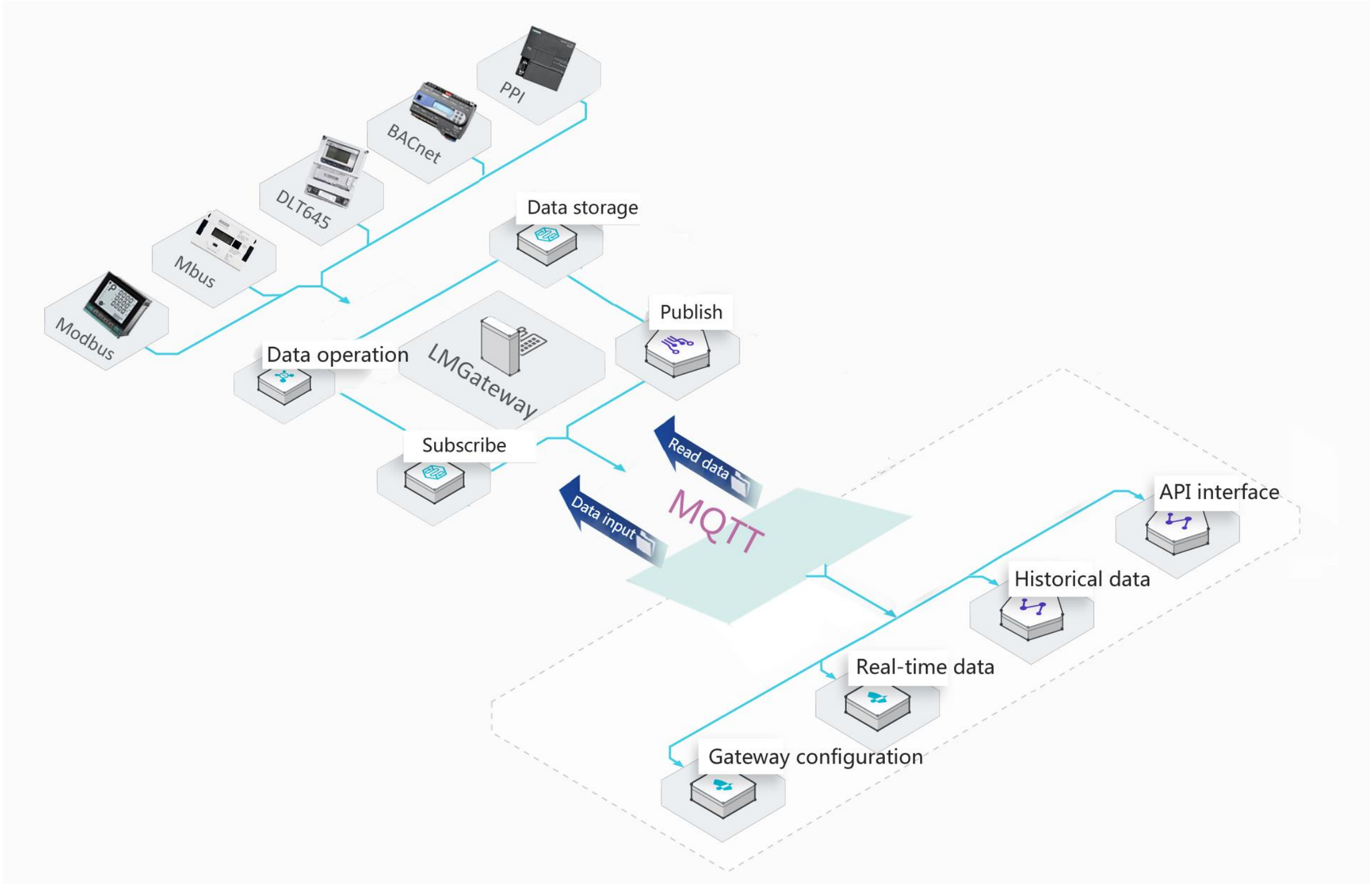
MISSION PLAN

The user establishes a mission plan that specifies the values for multiple points for the day of the week and time period. Please calibrate the gateway time before using the mission planning function

JavaScript EDITING

JavaScript script editor built-in function, user can customize logic control by editing script language

----------Application icon----------



CONFIGURING THE GATEWAY

1, Power the gateway;

2. Connect the LM Gateway203 data collection gateway to the computer or switch using a crossover cable; (note that the gateway and the computer are in the same network segment);

3. Use the tool software to configure the data acquisition gateway. For the operation, see the configuration manual of the configuration tool.

Download configuration tool

CONTACT US

Huangshan Luomi Measurement and Control Technology Co., Ltd.
Sun Chen
18049040679
1926608609@qq.com

www.lmgateway.com