

**PRODUCT INTRODUCTION**

LM Gateway414-M data acquisition gateway, based on a solid hardware platform design, a complete software kernel. Provides 4 RS-485 serial ports and 2 10/100 Mbps Ethernet ports. The gateway embeds Modbus, BACnet, DLT645, PPI, Mbus and other data acquisition drivers, provides proprietary protocol driver integration, and the gateway acts as Modbus RTU, and the Modbus TCP server provides external data.



**HARDWARE SPECIFICATION**

LM Gateway414 Hardware parameters:	
CPU	4 core A9, clocked at 1.4GHz
RAM	512MB DDR3 High performance memory
Nand Flash	MLC eMMC Onboard is 4GByte eMMC
Serial port	4 fully isolated RS485 interface
Network port	2 100M/10M Ethernet interface
Power	DC9V~36V
Total Weight	230g
Enclosure rating	IP51
Installation size	140mm×112mm×35mm (L×W×H)
Mechanical installation	DIN rail card slot fixing
LM Gateway414 Environmental parameters:	
Power consumption	The maximum power consumption of the motherboard is ≤3W
Operating temperature	-40~80℃ 20 to 90% non-condensing

**INTERFACE DEFINITION**

1. POWER

SIGNAL	DESCRIPTION
Vin+	Power supply
Vin-	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	192.168.1.230	255.255.255.0
Eth1	192.168.0.230	255.255.255.0

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	COM2-A	RS485-2 Positive signal
5	COM2-B	RS485-2 Negative signal
6	COM2-GND	Signal ground
7	COM3-A	RS485-3 Positive signal
8	COM3-B	RS485-3 Negative signal
9	COM3-GND	Signal ground
10	COM4-A	RS485-4 Positive signal
11	COM4-B	RS485-4 Negative signal
12	COM4-GND	Signal ground

- 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.
5. LED

PIN	MARK	DESCRIPTION
1	POWER	Power indicator, the light is on
2	RUN	System operation indication
3	COM1	Serial port 1 transceiver indication, green transmission, yellow reception
4	COM2	Serial port 2 transceiver indication, green transmission, yellow reception
5	COM3	Serial port 3 transceiver indication, green transmission, yellow reception
6	COM4	Serial port 4transceiver indication, green transmission, yellow reception

**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
- BACnet MS/TP

**DATA SERVICE**

As a Modbus RTU, the Modbus TCP server provides external data, supports 0x, 1x, 3x, 4x, 4 functional areas, and supports various data types of int16, int32, float32 and large and small end changes.

**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.

**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**

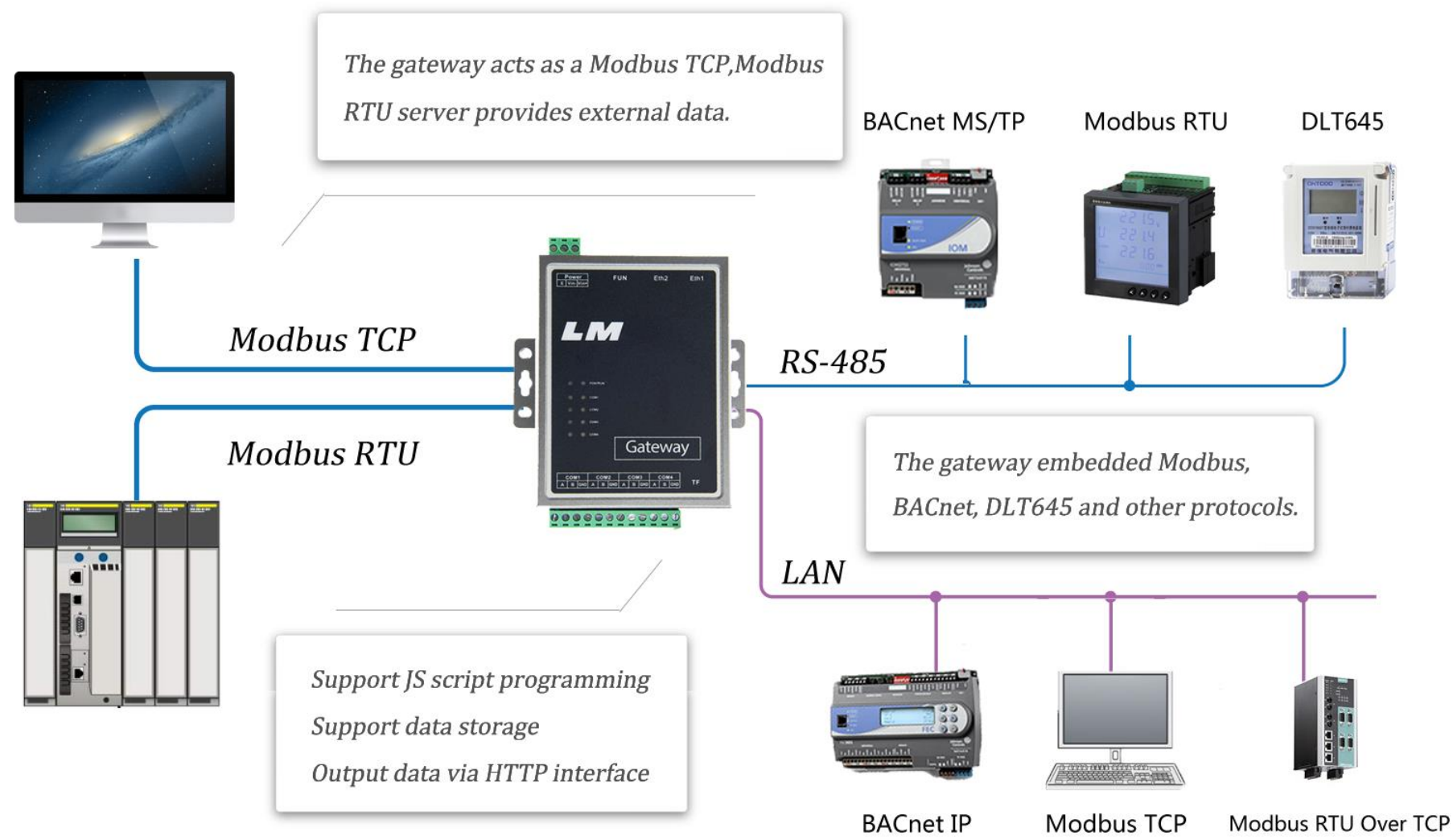
The user establishes a mission plan that specifies the values for multiple points for the day of the week and time period. Please calibrate the gateway time before using the mission planning function

**JavaScript EDITING**

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

**APPLICATION**

The gateway supports Modbus RTU, Modbus TCP, Modbus RTU Over TCP protocol, DLT645-1997, DLT645-2007 protocol, CJ188 protocol, Mbus, PPI, BACnet IP, BACnet MS/TP protocol. The gateway acts as a Modbus RTU, and the Modbus TCP server provides external data.



## CONFIGURING THE GATEWAY

- 1, Power the gateway;
2. Connect the LM Gateway202 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

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