

# LM Gateway101-HMI



## Product Features

- Capacitive touch screen
- 10.1- inch TFT color display with LED backlight
- 1280x800 pixel resolution
- Capacitive multi-touch
- 64 -bit CPU , 2.0 GHz
- 2 x 10/100 Mbit Ethernet interfaces
- 2 x RS485
- Multi-protocol support: Modbus , BACnet , OPC UA , IEC104 , DLT/645 , S7 , etc.
- Supports MQTT cloud communication
- Supports online monitoring of web services .
- Supports alarm settings and push notifications
- Support edge computing
- Supports JavaScript scripts for logic control
- Supports remote monitoring and firmware upgrades
- Supports edge storage and WebScada configuration
- Supports reading and writing 2048 data points



## Product Introduction

The LM Gateway101-HMI is a gateway product with an integrated touchscreen. It features a web-based human-machine interface ( HMI ) with a capacitive touchscreen, a 10.1- inch TFT color display with a resolution of 1280 x 800. The gateway embeds standard data acquisition drivers and provides proprietary protocol integration. It provides data externally as a Modbus , BACnet , and OPC UA service. The gateway transmits data with the cloud platform using MQTT and HTTP protocols, providing a unified data interface, making it an ideal choice for digital factories, smart buildings, and energy management.

## Product Specifications

Screen	Size	10.1 inches
	Resolution	1280x800
	Brightness	500 cd/m <sup>2</sup> (typical value)
	Dimming	Support
	Touchscreen	Projected capacitive multi-touch
Processor and memory	CPU	RK3568 ARM 4 × Cortex-A55
	Operating system	Linux
	Flash memory	8GB eMMC
	Memory	2GB
	Real-time clock (RTC)	Support
	RTC backup power	Supercapacitor

# LM Gateway101-HMI

I/O interface	Serial port	2xRS485
	Network port	2xLAN
	Power connector	DC block , 3-Pin DC Phoenix Contact power input connector
	Buzzer	support
	Indicator lights	3 ( RGB LEDs )
Electrical parameters	Power supply	24Vdc ( 9 to 32Vdc )
	Current consumption	Maximum 0.90A , Class 2
	Input protection	Electronic protection
Environmental conditions	Operating temperature	-20°C to +55°C (vertical installation)
	Storage temperature	-30°C to +70°C
	Working / Storage Humidity	5-85%RH , non-condensing
	Protection level	IP66 (front), IP20 (back)
Size	Overall dimensions (width x height)	274.3 x 178.8 mm ( 10.80 x 7.04 inches)
	Panel dimensions (width x height)	264.5 x 169 mm ( 10.41 x 6.65 inches)
	Opening dimensions ( A×B )	238 x 158 mm ( 9.37 x 6.22 inches)
	thickness	35 mm ( 1.378 inches )
Certification	CE	Electromagnetic Compatibility Directive 2014/30/EU ( EMC )
	FCC	Class A

## Northbound Data Services

The gateway provides various data services for automatic control systems such as SCADA , power, and BA .

- Modbus service
- BACnet service
- OPC UA service
- IEC104 service
- OPC XML-DA Server
- S7 Server

## Remote database

The gateway supports remote access to the database and allows for related operations on the tables within the database.

- MySQL
- SQL Server
- PostgreSQL
- influxDB
- TDengine

## Remark:

How to distinguish the positive and negative terminals of the power supply for gateway accessories: The one marked with a letter is negative, and the one completely black is positive.

## IoT

The gateway communicates with the cloud server via the MQTT protocol.

- Standard MQTT client
- AWS
- IoTDA
- Azure
- Customized private cloud connection
- LM ThingsIoT Value-Added Cloud Services

# LM Gateway101-HMI

List of southbound data acquisition drivers (supports customization of private protocols)

	Data acquisition driver	Serial port	Network port
Meter	Modbus	Modbus RTU	Modbus TCP
		ModbusAscii	Modbus RTU_over_TCP
		ModbusRTUBroadcast	
		Modbus RTU monitoring	
		Modbus RTU service	
	DLT645	DLT645-1997	DLT645_over_TCP
		DLT645-2007	
DLT645.98			
DLT645 monitoring			
CJ188	CJ188	CJ188_over_TCP	
Mbus	Mbus_EnergyMeter		
	Mbus_EN1434		
Flow meter	LJS ZLJS Flow Meter		
PLC	Mitsubishi	Mitsubishi FX3U	MC_Qna-3EBinary
		Mitsubishi FX485	MC_Qna-1EBinary
			EtherNet /IP CIP
	Siemens	Siemens S7-200 PPI	Siemens S7
			FetchWrite
	AB	Allen_Bradley_DF1	AB NET
	Omron	HOSTLINK-FINS	OMRON_FINS
		HOSTLINK-CMODE	
	Matsushita	Mewtocol	EtherNet /IP CIP
	Yokogawa		Yokogawa PLC
	Fuji		FUJI_SPH_NET
	Keyence		Keyence host link communication
Fatek	Fatek	Fatek	
Inovance		H5U	
Beckhoff		Ads	
OPC			OPC UA
			OPC DA
			OPC XML DA
IEC			IEC104
			IEC61850
CNC			FANUC
			Kane
			Siemens
Smart Building	BACnet	BACnet MS/TP	BACnet IP
		BACnet Router	
		Hitachi Elevator	
	EBM		
Smart lighting			KNX IP
ups		MegaTec Three-Phase UPS	
		SANTAK UPS	
Fire alarm		GST Gulf Controller	
Hydrology and Environmental Protection	HJ/T 212	HJ/T 212 Serial Port Monitoring	HJ/T 212 Network Port Monitoring
			Hydrological monitoring SL651-2014
database			SQL Server
			MySQL
IT Interface			MQTT client
			HTTP client