FLEXEMATiC

FGate-lite-NA

Datasheet

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Revision History

Date	Document Version	Revision History	Editor
2025-07-04	01	Initial Release	QYS

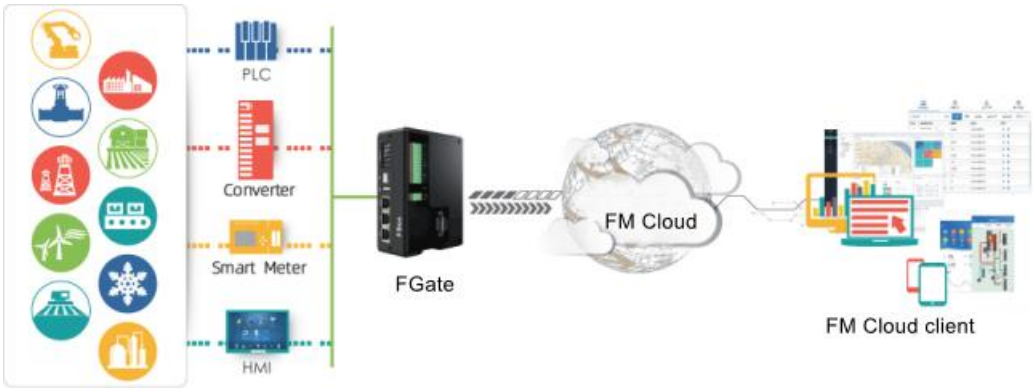
1 Product Overview

1.1 Product introduction

The FGate series gateway, developed by FLEXEMATIC, serves as an intelligent field data acquisition device within industrial IoT platform. This advanced edge gateway enables:

- Remote operation
  - Data acquisition of field device
  - Perform program download to PLC, HMI, etc.
  - Remote O&M of field devices
- Multiple-protocol support

  400 + communication protocols for industry devices, including Modbus RTU/Modbus TCP, OPC UA, etc.
- Hybrid connectivity
  - Wired: 1 Ethernet port, RS232/RS485/RS422 ports
  - Wireless: 4G
  - Cloud integration: MQTT
- Cloud-based management
  - Remote configuration&diagnostics via FM Cloud
  - Provides RESTful API.



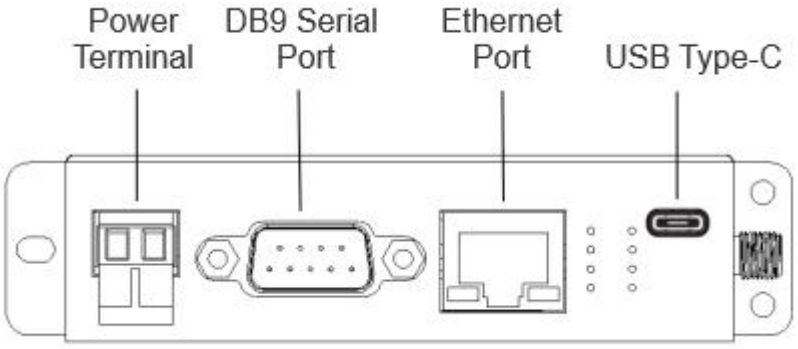
1.2 Product Appearance

2 Specifications

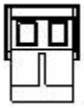
Category	Item	Specification
Hardware	Network Access	◆ Ethernet ◆ North America 4G
	CPU	Cortex-A7(main frequency is 1GHz, dual-core)
	RAM	64MB DDR2
	Flash	128MB
	Ethernet	1*10/100BASE-TX RJ45 port
	USB Port	1*USB Type-C 2.0 port
	Serial Port	◆ COM1：RS232/RS485/RS422 ◆ COM3：RS232
	Network Band	LTE FDD：B2/B4/B5/B12/B13/B66
	SIM Card	Single SIM, supports Nano-SIM slot
	RTC	Built-in
Software Feature	VPN Transparent Transmission	Available
	Data Monitoring	500 points, support timing upload or upload based on value change
	Alarm Push	200 points, support client push and Email alerts
	Historical Data	100 points, cloud retention for 180 days and support resumable data transmission
	Edge Computing	Support scripting
	Network Protocol	Support over 400 industrial device protocols
	Management and Maintenance	Support remote firmware upgrade and support configuration file import/export
Electrical Feature	Rated Power	< 5W
	Rated Voltage	DC 24V, operating voltage range is DC 9V ~ 28V
	Power Protection	Lightning surge protection
	Power Interruption Tolerance	< 3ms

Category	Item	Specification
	RoHS	RoHS certified; lightning surge ± 1kV; group pulse ± 2kV; electrostatic contact 4kV, air discharge 8kV
Environment Requirement	Operating Temperature	-10 ~ 60℃
	Storage Temperature	-20 ~ 70℃
	Relative Humidity	10 ~ 90%RH (non condensation)
	Vibration Resistance	10~25Hz (Acceleration of 19.6 m/s^2 for 30 minutes in X, Y, and Z directions)
	Cooling Mode	Natural cooling
Mechanic Property	Dimensions	106mm × 72mm × 25mm (excluding antennas)
	Weight	Approximately 220g
	Material	Galvanized sheet with powder-coated surface

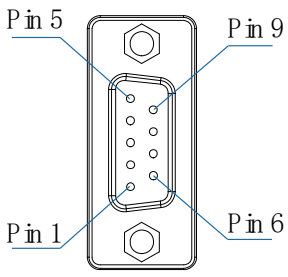
3 Port Description



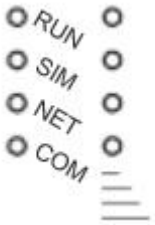
3.1 Power Terminal

Power Terminal (Pin 1~2 from left to right)	Pin	Description
	Pin1	DC24V
	Pin2	GND

3.2 DB9 Serial Port

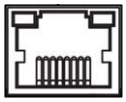
	Pin	COM1(RS485)	COM1(RS422)	COM1(RS232)	COM3(RS232)
	Pin1	B-	Rx-		
	Pin2			RxD	
	Pin3			TxD	
	Pin4		Tx-		
	Pin5			GND	GND
	Pin6	A+	Rx+		
	Pin7				RxD
	Pin8				TxD
	Pin9		Tx+		

3.3 Indicator

	Symbol	Status	Description
	RUN	OFF	Module is not powered on or hardware failure
		ON	Initiating or system failure
		Flashes	Operating normally
	SIM	OFF	No SIM card inserted
		ON	Registered network, dialing to establish connection
		Flashes	Registering the network
	NET	ON	Online
		Flashes	Connecting to the network
	COM	OFF	No data communication or hardware failure
		Flashes	Transmitting or receiving data

3.4 Ethernet Port

Ethernet port is used for network connectivity: Communicate with local devices and collect local devices' data.



3.5 USB Type-C 2.0 Port

USB Type-C 2.0 Port is used for downloading programs and device configuration.

4 Dimensions