IoTmaxx

maxx GW4101

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Gateway LTE 4G with sensor interface

The programmable maxx GW4101 mobile communication gateway for industrial applications collects and processes the information from your devices, machines and sensors, and transmits it via the expanded LTE network. The sensor interface expansion enhances the basic unit with interfaces for PT100/1000 temperature sensors and the widely used 4 – 20 mA current loop interface, as well as other digital inputs and outputs.
The maxx GW4101 gateway is therefore ideal for transmitting measurements from the field to the head office or the cloud.

Features

- **LTE 4G**
  Use of LTE networks for good network coverage and bandwidth

- **Always online**
  Automatic connection check for a stable online connection

- **2 x SIM**
  Network provider redundancy when using SIM cards from two network providers

- **GNSS**
  GPS, GLONASS, BeiDou/Compass, Galileo and QZSS receiver

- **Programmable**
  Freely programmable (e.g. in C/C++ and Python)

- **Linux**
  Lean Linux distribution with Mainline Kernel

- **Data storage**
  Storage of user data on internal flash and SD card (optional)

- **Serial interfaces**
  RS232, RS485, USB and CAN interfaces

- **1-wire interface**
  1-wire bus for connecting sensors and iButtons, for example

- **I/O interfaces**
  Multifunctional analogue I/O interfaces

- **VPN**
  OpenVPN Client for secure data transmission and availability

- **Sensor expansion**
  Expansion of the GW4100 to include eight digital inputs, two digital outputs, four current inputs, one current output, RS485 with galvanic isolation, four RTD inputs for P100 and PT1000 sensors

www.iotmaxx.com

Technical data

General	Description	GW4100	GW4101
Gateway		LTE	LTE incl. sensor board

Power supply

Power supply	Description	GW4100	GW4101
Power supply	8 V … 30 V DC	x	x
Maximum power consumption	max. 25 Watts	x	x

Ambient conditions

		GW4100	GW4101
Storage temperature range	-40 to +85 °C	x	x
Operating temperature range	-25 to +70 °C	x	x
Relative humidity during storage	0 to 95 %, non condensing	x	x
Relative humidity during operation	0 to 95 %, non condensing	x	x

Interfaces

		GW4100	GW4101
1 x Ethernet	10/100 MBit/s	x	x
1 x USB	USB 2.0	x	x
1 x CAN	CAN 2.0b, switchable terminating resistor	x	x
1 x RS232	V.28, RXD, TXD, RTS, CTS	x	x
1 x 1-wire	Dallas 1-wire @5 V	x	x
1 x RS485	Not galvanically isolated	x	x
2 x Digital IN / OUT	Multi purpose I/O, switching threshold ca. 3.5 V	x	x
4 x Digital IN	Digital inputs, 0 – 30 V, switching threshold ca. 4.5 V	x	x
4 x RTD	PT100 / PT1000		x
4 x 4 – 20 mA inputs	Sensor inputs		x
1 x 4 – 20 mA output			x
4 x Digital IN	Digital inputs, 0 – 30 V, switching threshold ca. 4.5 V		x
4 x Digital IN galvanically isolated	Digital inputs, 0 – 30 V, switching threshold ca. 3.5 V		x
2 x Digital OUT	Galvanically isolated, max. 350 mA		x
1 x RS485 galvanically isolated	Switchable terminating resistor		x
1 x Antenna GSM	SMA socket, impedance 50 Ω	x	x
1 x antenna GSM	SMA socket, impedance 50 Ω	x	x
2 x SIM	Mini-SIM, 1.8 V or 3.3 V	x	x
1 x SIM chip	Optional	x	x

Signalling

		GW4100	GW4101
1 x LED Power	Power supply	x	x
1 x LED mobile communication	Mobile communication connection status	x	x
2 x LED freely programmable		x	x
2 x LED Ethernet	ACT, LINK	x	x

![IoTmaxx logo]

Mechanics

Case type	Plastic case V0	x	x
Dimensions (H x W x D)	119 x 27 x 105 mm	x	
Dimensions (H x W x D)	119 x 49 x 105 mm		x
Weight	ca. 160 g	x	
Weight	ca. 260 g		x
Assembly	DIN rail	x	x
IP rating	IP40	x	x

Controller and memory

Controller	2 x ARM Cortex-A7, 1 GHz	x	x
RAM	DDR3, 1 GByte	x	x
Flash	8 GByte eMCC	x	x
EEPROM	64 kbit	x	x
Security chip	Infineon TPM®	x	x
SD card	Micro SD card reader	x	x

OS and software

OS	Linux with Mainline Kernel	x	x
Programming languages	C, C++ and Python (typical), others on request	x	x

Configuration and updates

Configuration	Web browser, SSH, YAML	x	x
Update system	RAUC	x	x

Mobile communication

Supported bands	LTE FDD: B1/B3/B5/B7/B8/B20 WCDMA: B1/B5/B8 GSM: B3/B8	x	x
Data rates	LTE FDD: Max 10 Mbps (DL)/Max 5 Mbps (UL) DC-HSPA+: Max 42 Mbps (DL)/Max 5.76 Mbps (UL) UMTS: Max 384 Kbps (DL)/Max 384 Kbps (UL) EDGE: Max 236.8 Kbps (DL)/Max 236.8 Kbps (UL) GPRS: Max 85.6 Kbps (DL)/Max 85.6 Kbps (UL)	x	x
SIM1 and SIM2	Programmable switching	x	x

GNSS

Antenna	Active antenna support	x	x
Sensitivity	Cold start: autonomous, -146 dBm Reacquisition: autonomous, -157 dBm Tracking: autonomous, -157 dBm	x	x
TTFF	Cold start @open sky: autonomous, 35 s Cold start @open sky: XTRA enabled, 18 s Warm start @open sky: autonomous, 26 s Warm start @open sky: XTRA enabled, 2.2 s Hot start @open sky: autonomous, 2.5 s Hot start @open sky: XTRA enabled, 1.8 s	x	x
Accuracy	CEP-50, autonomous @open sky, <2.5 m	x	x

Ordering information

GW4100	Article number 410001	x	
GW4101	Article number 410002		x

Ralf Glaser, Development Manager: **"Our gateways have been specifically designed for remote automation in the IIoT and enable the use of your process and sensor data for a wide range of applications remotely."**