

MC100

Gateway GPIO



The MC100 GPIO Gateway is equipped with a wide range of analogue inputs and digital in- and outputs.

Node-RED™, a simple graphical programming interface supporting various pre-configured transmission protocols, can be used to forward measured values, meter readings, switching statuses and calculations to inhouse servers or visualization software via LTE mobile networks.

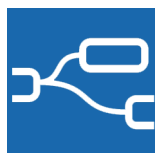
In many cases the MC100 GPIO can be used to replace an under-used but cost-intensive electrical PLC controller while simultaneously functioning as an IoT gateway in a single device.

Key features & functionalities:

- Programmable 4G LTE GPIO Gateway
- Quectel EC21-E module integrated
- Out of the box ready for mobile Internet communication
- OpenWrt 21 based Linux distribution, Kernel 5.4.154, optimized for the ARM-based MC100 Gateway
- Node-RED™ – flow-based programming tool pre-installed
- Supports comprehensive cloud and server protocols
- Configuration via web interface
- Free programmable



4G LTE



Node-RED™



OpenWrt Linux



Cloud-Service



10in/10out



2out



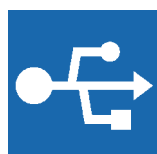
GPS/GNSS



10/100 MBit/s
Ethernet



RS232



USB 2.0



RS485



CAN 2.0B



2in/2out or
4in



WLAN

MC100 Gateway GPIO

Technical Data

General	Description	
Type	Wireless 4G LTE gateway with GPIO interfaces	x
Dimensions (W x H x D)	120 x 75 x 35 mm	x
Weight	approx. 175 g	x
Supply voltage	8 to 30 V DC	x
Operation temperature	-20 °C to +70 °C	x
Housing	Plastic	x
Protection class	IP20	x
Mounting	Wall mounting (DIN rail adapter optional)	x
Wireless module embedded	Quectel EC21-E	x
Mobile		
Supporting networks	LTE Cat1: Bands: 1, 3, 5, 7, 8, 20	x
	WCDMA: Bands: 1, 5, 8	x
	GSM/GPRS/EDGE: Bands: 3, 8	x
Transmission rates LTE	Up to 5 Mbps uplink and 10 Mbps downlink	x
Transmission rates HSPA+	Up to 5.76 Mbps uplink and 42 Mbps downlink	x
Transmission rates WCDMA	Up to 384 kbps uplink and 384 kbps downlink	x
Transmission rates EDGE	Up to 236.8 kbps uplink and 296 kbps downlink	x
Transmission rates GPRS	Up to 85.6 kbps uplink and 107 kbps downlink	x
Antenna connections	SMA (female)	2
Controller, Memory and OS		
Controller	ARM Cortex-A7 NXP i.MX 6 UltraLite, 528 MHz	x
RAM	512 MB	x
Flash	4 GB	x
OS	OpenWrt Linux	x
Programmable	C/C++, Python™, Java™, Node-RED™ or others	x
Interfaces controller board (sides)		
Power	Plug-in screw-type terminal	1
Ethernet	10/100 MBit/s	1
RS232	DB9 (RX,TX,RTS,CTS)	1
RS485	Not galvanic isolated, plug-in screw-type terminal	1
USB	USB 2.0 Type A	1
Digital inputs	Galvanic isolated, special common GND (IGND), 0 - 30 V, threshold 6 V	2
Digital outputs	Galvanic isolated, special common GND (IGND), solid state relais, 300 mA max low-side-switch to IGND	2
CAN	CAN 2.0B, plug-in screw-type terminal	1
LED 1	Power	x
LED 2 and 3	Free programmable	x
LED 4	GSM	x
SIM	Mini SIM	x
SD card	Micro SD, up to 32 GB (internal)	x
GPS	GPS/GNSS (GLONASS/BeiDou/Galileo)	x
WLAN	802.11 b/g/n	x
Interfaces extension board (top)		
Digital inputs	Galvanic isolated 0 - 30 V, threshold 6 V	10
Digital outputs	Galvanic isolated solid state relais, 300 mA max	10
Analog inputs current	0 - 20 mA	2/4
Analog inputs voltage	0 - 10 V	2/0
PWM outputs	low-side-switch to GND	2
Other properties		
Configurations	Basic configuration via web interface, SSH	x
RS232 console port	on RS232 interface	optional
Delivery includes		
Wall adapter	Plastic holder	x
Connectors	WR-TBL Series 361 - 3.81 mm vertical cable entry plug (Würth)	x
Printed documentation	Quick Guide	x

Mistakes and changes are reserved.

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Variants / Accessories

Variants		Part No.
MC100 GPIO	2 x 0-20 mA, 2 x 0-10 V	193545
MC100 GPIO	4 x 0-20 mA	162736
Accessories		Part No.
Top-hat rail bracket KIT	for DIN rail mounting	100046
Power supply / Mount Adapter EU	18 W AC/12 V DC 1,5A	100909
Network cable	Cat. 5, 1 m	100810
Data cable	Adapter cable for ASC1, RS232 (SuB D9, female) - 1m - 3pin plug	162500
MiMo wall antenna	5G/4G/MIMO/3G/2G, 2x 2 m RG174, 2x SMA (male)	193600
Portable antenna	GSM/UMTS/LTE/WLAN, SMA (male)	101292
GPS antenna	1575.42 MHz, 2 dBi, 3 m RG174 SMA (male), magnetic	101259

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