

# MC100 GPIO

## Mobile programmable GPIO gateway

### 4G LTE IoT gateway with Ethernet and GPIO interfaces

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 in-house 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:

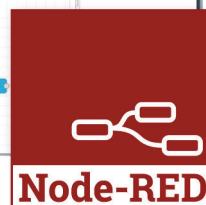
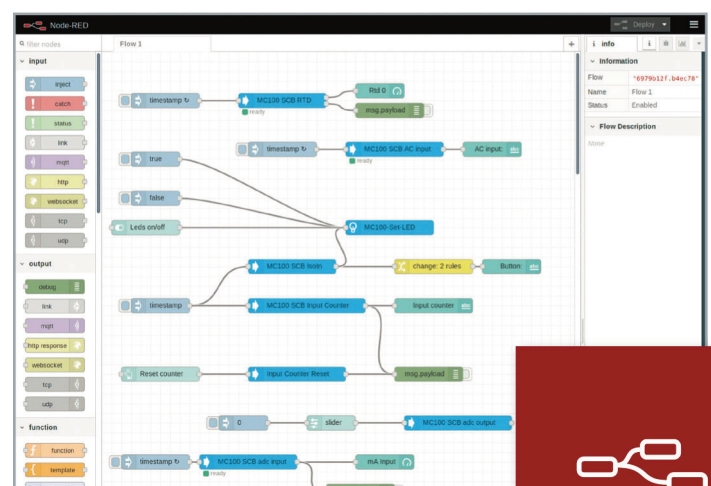
- Programmable logic gateway with mobile 4G LTE modem
- Fallback to 3G and 2G networks
- Out of the box ready for mobile Internet communication
- Ethernet interface, 8 digital inputs, 8 digital outputs, dual 4 – 20mA inputs, dual 0 – 10 V inputs, 2 PWM outputs
- OpenWRT Linux Distribution 19.07 based on Kernel 4.14 and optimized for the ARM-based MC100 Gateway
- Node-RED™ – flow-based programming tool already installed
- Includes Node-RED™ nodes for all hardware interfaces
- Unterstützt umfassende Cloud- und Serverprotokolle
- Konfiguration über Web-Interface
- Data storage on internal Flash or micro SD card
- Wide temperature range, industrial grade platform
- Wall or DIN rail mounting
- Optional with WLAN

#### MC 100 Gateway Layer Model

Cloud and Server Protocols	OPC UA, MODBUS TCP, MQTT, CLOUD OF THINGS, HTTP, FTP, MS AZURE, E-MAIL, TELEGRAM, SMS
Applications	Node-RED™, Python™, Java™ and more
Hardware interfaces	8 digital inputs, 8 digital outputs, dual 4 – 20mA inputs, dual 0 – 10 V inputs, 2 PWM outputs

Node-RED™ is a trademark of the JS Foundation.  
 JAVA™ is a trademark of Oracle.  
 Python™ is a trademark of the Python Software Foundation

#### Node-RED™ – MC 100 Gateway Layer Model flow-based programming tool



09/2020

# MC100 GPIO

## Mobile programmable GPIO gateway



Product	Description	MC100 GPIO	
		Basic interfaces	Extended interfaces
<b>Characteristic feature</b>			
<b>General</b>			
<b>Type</b>	Wireless 4G LTE gateway with GPIO interfaces	x	x
<b>Dimensions (W x H x D)</b>	120 x 75 x 35mm	x	x
<b>Supply voltage</b>	8 to 30V DC	x	x
<b>Operation temperature</b>	-20°C to +70°C	x	x
<b>Housing</b>	Plastic	x	x
<b>Mounting</b>	Wall mounting (DIN rail adapter optional)	x	x
<b>Mobile</b>			
<b>Supporting networks</b>	LTE Cat1 (4G): Band 1,3,5,7,8 and 20 HSDPA/HSUPA/HSPA+ (3G): Band 1,5,8, all bands with diversity GSM/GPRS/EDGE (2G): Band 3,8	x x x	x x x
<b>Transmission rates LTE</b>	Up to 5 Mbps uplink and 10 Mbps downlink	x	x
<b>Transmission rates HSPA+</b>	Up to 5.76 Mbps uplink and 21.6 Mbps downlink	x	x
<b>Transmission rates EDGE</b>	Up to 236.8 kbps uplink and 236.8 kbps downlink	x	x
<b>Transmission rates GPRS</b>	Up to 85.6 kbps uplink and 85.6 kbps downlink	x	x
<b>Antenna connections</b>	SMA (female)	2	2
<b>Controller, memory and OS</b>			
<b>Controller</b>	ARM Cortex-A7, 528 MHz	x	x
<b>RAM</b>	512 MB	x	x
<b>Flash</b>	4 GB	x	x
<b>OS</b>	OpenWrt Linux	x	x
<b>Programmable</b>	C/C++, Python™, Java™, Node-RED™ or others	x	x
<b>Interfaces controller board (sides)</b>			
<b>Ethernet</b>	10/100 MBit/s	1	1
<b>USB</b>	USB 2.0 Type A	-	1
<b>Digital inputs</b>	Galvanic isolated, special common GND (IGND), 0 - 30V, threshold 6V	-	2
<b>Digital outputs</b>	Galvanic isolated, special common GND (IGND), solid state relais, 300mA max low-side-switch to IGND	-	2
<b>RS232</b>	DB9 (RX,TX,RTS,CTS)	-	1
<b>RS485</b>	Plug-in screw-type terminal	-	1
<b>CAN</b>	CAN 2.0B, plug-in screw-type terminal	-	1
<b>Power</b>	Plug-in screw-type terminal	1	1
<b>LED 1</b>	Power	x	x
<b>LED 2 and 3</b>	Free programmable	x	x
<b>LED 4</b>	GSM	-	-
<b>SIM</b>	Mini-SIM (opt. embedded SIM)	x	x
<b>SD card</b>	Micro SD, up to 64 GB (internal)	x	x
<b>WLAN</b>	802.11 b/g/n	-	optional
<b>Interfaces extension board (top)</b>			
<b>Digital inputs</b>	Galvanic isolated 0 - 30V, threshold 6V	8	8
<b>Digital outputs</b>	Galvanic isolated solid state relais, 300mA max	8	8
<b>Analog inputs current</b>	4 - 20mA	2	2
<b>Analog inputs voltage</b>	0 - 10V	2	2
<b>PWM outputs</b>	low-side-switch to GND	2	2
<b>Other properties</b>			
<b>Configurations</b>	Basic configuration via web interface, SSH	x	x
<b>RS232 console port</b>	on RS232 interface (optional)	-	x
<b>Delivery includes</b>			
<b>Wall adapter</b>	Plastic holder	x	x
<b>Connectors</b>	WR-TBL Series 361 - 3.81mm vertical cable entry plug (Würth)	x	x
<b>Printed documentation</b>	Quick Guide	x	x
<b>Part-Number</b>			
<b>MC100 GPIO</b>		MC100P-41Q-T-GIO-O	MC100P-41Q-G-GIO-O
<b>MC100 GPIO with WLAN</b>		-	MC100P-41Q-GW-GIO-O

Mistakes and changes are reserved.