

# MC-MR-L2

## LTE WAN Router



The MC-MR-L2 makes it easy to connect devices to the internet, VPNs or local networks, as it has an integrated 4G LTE modem, WiFi and 2 Ethernet interfaces.

Using Node-RED as graphical programming tool, or an OpenWRT-based SDK the MC-MR-L2 is customer-programmable in general purpose languages like Java, Go, Python or C/C++. Data can be collected from the GPIOs, Analog Inputs, RS232/RS485 serial, GPS or other connected devices, which may be preprocessed on the device and sent to a company or cloud server via pre-configures protocols in Node-RED or proprietary ones with the SDK.

It features a web based configurator for set-up of features like the VPN providers, SIM data or firewall rules. Configurations can be backed up and restored for easier deployment of the same configuration in a fleet of devices.

### Key features & functionalities:

- Secure communication with OpenVPN and IPsec with integrated firewall
- Programable system with support for custom applications and IO interactions
- Efficient configuration via WEB interface or command line using configuration files
- OpenWrt 21 based Linux distribution, Kernel 5.4.154, optimized for the ARM-based MC100 Gateway
- Node-RED™ – flow-based programming tool pre-installed
- Support for cloud IoT services like Azure
- Log for system and security events
- Integrated WiFi functionality



4G LTE



LAN port



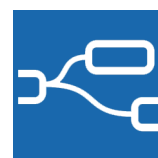
WAN port



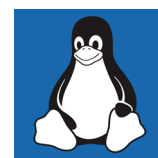
2in/2out



WiFi



Node-RED™



OpenWrt Linux



GPS/GNSS (optional)



RS232 (optional)



RS485 (optional)



USB 2.0 (optional)

# MC-MR-L2

## Technical Data

General	Description	Europe	Global
Type	2-Port LTE Cat 4 Router with IO	x	x
Dimensions (W x H x D)	44 x 105 x 94 mm	x	x
Weight	approx. 350 g	x	x
Supply voltage	8 to 30V DC	x	x
Operation temperature	-20°C to +70°C	x	x
Housing	Aluminium	x	x
Protection class	IP20	x	x
Mounting	tabletop / DIN rail	x	x
Module embedded	Quectel	EC200T	EG25-G
<b>Mobile Europe (EC200T)</b>			
Supporting networks	<b>LTE Cat. 4:</b> Bands: 1, 3, 5, 7, 8, 20, 28, 38, 40, 41 <b>WCDMA:</b> Bands: 1, 5, 8 <b>GSM:</b> 900/1800MHz	x	
Transmission rates LTE	Max 130Mbps (DL) / Max 30Mbps (UL)	x	
Transmission rates WCDMA	Max 384k (DL) / 384k (UL)	x	
Transmission rates EDGE	Max 236.8k (DL) / 236.8k (UL)	x	
Transmission rates GPRS	Max 85.6k (DL) / 85.6 (UL)	x	
Antenna connections	SMA (female)	x	
<b>Mobile Global (EG25-G)</b>			
Supporting networks	<b>LTE Cat. 4:</b> Bands: 1, 2, 3, 4, 5, 7, 8, 12, 13, 18, 19, 20, 25, 26, 28, 38, 39, 40, 41 <b>WCDMA:</b> Bands: 1, 2, 4, 5, 6, 8, 19 <b>GSM:</b> Bands: 2, 3, 5, 8		x
Transmission rates LTE	Max 130Mbps (DL) / Max 30Mbps (UL)		x
Transmission rates WCDMA	Max 384k (DL) / 384k (UL)		x
Transmission rates EDGE	Max 296k (DL)/ 236.8k (UL)		x
Transmission rates GPRS	Max 107k (DL)/ 85.6k (UL)		x
Antenna connections	SMA (female)		x
<b>Controller, Memory and OS</b>			
Controller	ARM Cortex-A7 NXP i.MX 6 UltraLite, 528 MHz	x	x
RAM	512 MB	x	x
Flash	4 GB	x	x
OS	OpenWrt Linux	x	x
Programmable	C/C++, Python™, Java™, Node-RED™ or others	x	x
<b>Interfaces</b>			
Power	plug-in screw-type terminal	x	x
Ethernet	10/100 MBit/s	2	2
Analog Input	2x 0..36V	optional	optional
Digital Input	2x 0..30V, 6V	optional	optional
Digital Output	2x 0..30V, 6V	optional	optional
USB	2.0 Type A	optional	optional
RS232 / RS485	D-Sub	optional	optional
WiFi	802.11 b/g/n	x	x
GPS	GPS/GNSS (GLONASS/BeiDou/Galileo)	-	optional
SIM	Mini-SIM (internal)	x	x
<b>Services</b>			
Base	DHCP-Server, HTTP-Server, FTP, SSH, SMS, Dyn. DNS, NTP	x	x
Cloud	Azure, Telekom Cloud of Things, MQTT, REST	x	x
VPN	Open VPN, IPSec (Support for X.509 certs), Wireguard	x	x
Customization	Full range of services for customized software	x	x
<b>Other properties</b>			
RTC	Real time clock	x	x
<b>Delivery includes</b>			
Power Supply	12 V / 1,2 A	x	x
DIN mount	Clip-in for DIN Rail	x	x
Antenna	1x GSM/UMTS/LTE, SMA (male) (Part-No. 101292)	x	x
Ethernet cable	1 m	x	x
Printed documentation	Quick Guide	x	x

Mistakes and changes are reserved.

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## Variants & Accessories

Variants		Part-Number	
MC-MR-L2 B4	4G Router	162985	-
MC-MR-L2 4-232	4G Router with IO, USB and RS232	162986	-
MC-MR-L2 4-485	4G Router with IO, USB and RS485	162987	-
MC-MR-L2 B4G	4G Router, Global	-	163121
MC-MR-L2 4-232-G	4G Router with IO, USB, RS232 and GPS, Global	-	163117
MC-MR-L2 4-485-G	4G Router with IO, USB, RS485 and GPS, Global	-	163118

Accessories		Part-Number	
MiMo wall antenna	GSM/UMTS/LTE, 2 m RG174, 2x SMA (male)	101268	101268
Portable antenna	GSM/UMTS/LTE/WLAN, SMA (male)	101292	101292
GPS antenna	1575.42 MHz, 2 dBi, 3 m RG174 SMA (male), magnetic	101259	-

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