

# MC-MR-L2 450

## LTE WAN Router



The router MC-MR-L2 450 is equipped with 4G LTE modem and two Ethernet interfaces.

It provides a 450 MHz band for critical infrastructure. The router is available in 450 MHz only or a dual module option for 450 MHz and public LTE.

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



450 MHz  
and LTE



LAN port



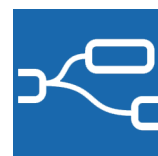
WAN port



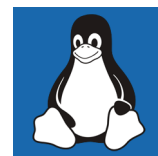
2in/2out



WiFi



Node-RED™



OpenWrt Linux



GPS/GNSS  
(optional)



RS232  
(optional)



RS485  
(optional)



USB 2.0  
(optional)

# MC-MR-L2 450

## Technical Data

General	Description	163170
Type	2-Port LTE Cat 1 Router 450 MHz	x
Dimensions (W x H x D)	44 x 105 x 94 mm	x
Weight	approx. 350 g	x
Supply voltage	8 to 30V DC	x
Operation temperature	-20°C to +70°C	x
Housing	Aluminium	x
Protection class	IP20	x
Mounting	Tabletop / DIN rail	x
Module embedded	Quectel EC200S-EN	x
<b>Mobile</b>		
Supporting networks	<b>LTE Cat. 1:</b> Bands: 1, 3, 5, 7, 8, 20, 28, 31, 72 <b>GSM:</b> 900/1800MHz	x
Transmission rates LTE	Max 10Mbps (DL) / Max 5Mbps (UL)	x
Transmission rates EDGE	Max 296kbps (DL) / 236.8kbps (UL)	x
Transmission rates GPRS	Max 107kbps (DL) / 85.6kbps (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
RAM	512 MB	x
Flash	4 GB	x
OS	OpenWrt Linux	x
Programmable	C/C++, Python™, Java™, Node-RED™ or others	x
<b>Interfaces</b>		
Power	plug-in screw-type terminal	x
Ethernet	10/100 MBit/s	2
Analog Input	2x 0..36V	optional
Digital Input	2x 0..30V, 6V	optional
Digital Output	2x 0..30V, 6V	optional
RS232 / RS485	D-Sub	optional
USB	2.0 Type A	optional
WiFi	802.11 b/g/n	x
SIM	Mini-SIM (internal)	x
<b>Services</b>		
Base	DHCP-Server, HTTP-Server, FTP, SSH, SMS, Dyn. DNS, NTP	x
Cloud	Azure, Telekom Cloud of Things, MQTT, REST	x
VPN	Open VPN, IPSec (Support for X.509 certs)	x
Customization	Full range of services for customized software	x
<b>Other properties</b>		
RTC	Real time clock	x
<b>Delivery includes</b>		
Power Supply	12 V / 1,2 A	x
DIN mount	Clip-in for DIN Rail	x
Antenna	1x GSM/UMTS/LTE, SMA (male) (Part-No. 101292)	x
Ethernet cable	1 m	x
Printed documentation	Quick Guide	x
<b>Accessories</b>		
MiMo wall antenna	GSM/UMTS/LTE, 2 m RG174, 2x SMA (male)	101268
Portable antenna	GSM/UMTS/LTE/WLAN, SMA (male)	101292

Mistakes and changes are reserved.