

Industrial cellular router (3G/4G/5G) + WiFi 6e (802.11ax)

Description:

The MC2X8-R connects components that communicate via Ethernet LAN or serial interfaces to other networks via WLAN or 5G (LTE).

The typical usage area for the MC2X8-R is machine-to-machine communication, locally over WLAN as well as remotely connected over mobile networks (5G).

Properties:

Hardware:

Processor: iMX8 (NXP)
Memory: 512MByte DDR4-RAM and 4GB Flash
WiFi: 802.11ax for 2.4 + 5 GHz WiFi6 + 6GHz WiFi6e
Cellular: 5G/LTE RedCap
Navigation: Multi-constellation GNSS
Ethernet: 2 x Gigabit LAN interface
Serial: 1 x RS232 or RS485 serial interface
USB: 1 x USB2 Port also for interface extensions
IO: 1 x relay switch (dependent on power connector)
1 x aux input (dependent on power connector)
Power supply: 12-60V or 802.3af PoE via LAN Port 1
Housing: Robust aluminum housing with various mounting options

Functions:

Configuration via website, REST-API
or by using the MC-Config program.
Different bridge modes to connect the LAN clients.
- NAT
- Single Client NAT
- VPN (openVPN, Wireguard or IPsec)
WEP, 802.11i WPA-WPA2-WPA3-AES-TKIP-PSK
WPA Enterprise 802.1x PEAP LEAP TLS TTLS
Certificate management for authentication via 802.1x
SCEP (Simple Certificate Enrollment Protocol)
MQTT-Client
Connects worldwide to 3G, 4G or 5G networks
Precedence selection to prefer WLAN over LTE and vice versa
Serial-Client via TCP or UDP or MQTT
ipv6 + ipv4



Device Options:

Mounting:

- 1) side mounting brackets (MC2X8-R-SL...)
- 2) DIN rail mounting clip (MC2X8-R-SC...)

Power supply connection:

- 1) 5 pol. M12 connector (MC2X8-R-Sx-M12)
 - always with relay
- 2) 8pol terminal block (MC2X8-R-Sx-WK8)
 - always with relay and auxiliary input

Antenna connector WLAN:

- 1) 2 x RP-SMA

Antenna connector 5G:

- 1) 4 x LTE antenna SMA

Serial Interface:

- 1) 1 x RS232 (Standard)
- 2) 1 x RS485
- 3) 1 x RS422

Specification:	
<i>Ethernet</i>	2 x 10/100/1000 MBit Auto MDI/MDIX
<i>Serial</i>	1 x RS232, 300-460,8 KBit/s, RTS, CTS, DSR, DTR or RS485
<i>USB</i>	1 x USB 2.0 to connect printers or USB adapter with various other interfaces
<i>Relay</i>	1 x change-over switch max 1A@24V, max 125VAC
<i>AUX-Input</i>	1 x galv. isolated 10 – 60V
<i>Antenna connectors</i>	2 x RPSMA (WiFi) 4 x SMA (5G)
<i>Sim card slot</i>	1 x Standard/Mini-SIM slot
<i>Power supply</i>	12 – 60 VDC or 802.3af PoE via the LAN Port
<i>Energy consumption</i>	max 15W (4.5W idle)
<i>Operating temperature range</i>	0-60°C
<i>Dimensions</i>	105x125x35mm
<i>Weight</i>	ca. 500g

WLAN-Interface:	
<i>Technologies</i>	802.11 ax WLAN (2.4 + 5 + 6GHz Band) IEEE 802.11-Standards: a/b/g/n/ac/ax Features: OFDMA, 1024QAM, MU-MIMO, TPC/DFS, TWT Frequency: 2,4 GHz, 5 GHz, 6GHz
<i>Antennas:</i>	2 Antennas (2T2R MIMO)
<i>Encoding</i>	WEP (64,128bit) + TKIP/AES
<i>Security</i>	802.11i WPA(2+3) – PSK 802.1x EAP-PEAP, -TLS, -TTLS, -LEAP
<i>Fast Roaming</i>	802.11r + 802.11k
<i>Channels</i>	2,4GHz ETSI 1-13, USA/Canada 1-11 5.0GHz ETSI + USA/Canada 24 (36 – 165) (U-NII-1 + UNII-2A + U-NII-2C+U-NII-3) 6.0GHz 5.945 - 6.425 MHz (EU)