

# MC1

## 802.11a/b/g/n WLAN Ethernet & Serial Adapter

### Description:

The MC1 provides network connections between devices equipped with Ethernet ports or serial interfaces and wireless LAN networks. The typical usage area for the MC1 is the broad field of industrial WLAN applications in machine-to-machine communication. This includes mobile installations such as forklifts or AGV's.

### Properties:

#### Hardware:

- Processor board with ARM® Cortex®-A9 Core
- Memory: 128MByte DDR-RAM and 4GB Flash
- 802.11a/b/g/n for 2.4 + 5 GHz WLAN, Data rate up to 300 MBit/s
- Gigabit LAN interface
- RS232 or RS485 or RS422 serial interface
- USB2 Port also to interface extension
- 1 x relay switch
- 1 x aux input
- Power supply 10-60V or over PoE (LAN)
- Robust aluminum housing with various mounting options

#### Functions:

- Configuration and Firmware upgrade via the website, REST-API or by using the MC-Config program.
- Different bridge modes to connect the LAN clients.
  - NAT
  - Single Client NAT
  - Single Client Cloning
  - Level 2 Bridge
  - MWLC Mode (transparent tunnel mode)
- 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)
- 802.11r Fast-Roaming
- 802.11k Radio Resource Management
- 802.11e Wi-Fi Multimedia Quality of Service (WMM QoS)
- Serial-Client via TCP or UDP

### Device Options:

#### Mounting:

- 1) side mounting brackets
- 2) DIN rail mounting clip

#### Antenna connector:

- 1) 2 x RP-SMA (standard)
- 2) 1 or 2 TNC or RPTNC

#### Power supply connection:

- 1) 5 pol. M12 connector
- 2) 8pol terminal block
- 3) 3pol M8 connector
- 4) DC-Jack connector (5.5x2.1mm)

#### Serial Interface:

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



MC1-SL



MC1-SL-M12



MC1-SL-WK8



MC1-SL-M8



MC1-SL-J



MC1-SC

**Technical data:**

<b>Specification:</b>	
Ethernet	1 x 10/100/1000 MBit Auto MDI/MDIX
Serial	1 x RS232, 300-460,8 KBit/s, RTS, CTS, DSR, DTR or RS485 (RS422)
USB	1 x USB 2.0 to connect printers or USB adapter with various other interfaces
Relay	1 x change-over switch max 1A@24V, max 125VAC
AUX-Input	1 x galv. isolated 10 – 60V isolating voltage >=1000V
Antenna connectors	2 x RPSMA (optional TNC or RPTNC)
Power supply	10 – 60VDC, galvanically isolated, isolating voltage >=1000V or 802.3af PoE via the LAN Port
Energy consumption	<= 5W (3W typical)
Operating temperature range	0-60°
Dimensions	105x125x35mm
Weight	ca. 400g

<b>WLAN-Interface:</b>		
Technologies	802.11 a/b/g/n WLAN (2.4 + 5 GHz Band)	
Antennas:	2 Antennas (2T2R MIMO)	
Encoding	WEP (64,128bit) + TKIP/AES	
Security	802.11i WPA(2+3) – PSK 802.1x EAP-PEAP, -TLS, -TTLS, -LEAP	
Channels	802.11b/g/n ETSI 1-13, USA/Canada 1-11 802.11a/n ETSI 19 + 5, USA/Canada 25 (U-NII-1 + UNII-2A + U-NII-2C+U-NII-3)	
Data rates	<b>Mode</b>	<b>Data rate</b>
	802.11b:	1, 2, 5.5, 11Mbps
	802.11g / a	6, 9, 12, 18, 24, 36, 48, 54Mbps
	802.11n (20MHz)	1Nss: max. 72.2Mbps 2Nss: max. 144.4Mbps
	802.11n (40MHz)	1Nss: max. 150Mbps 2Nss: max. 300Mbps
Transmit power	802.11b/g 17 dBm	802.11a 15 dBm
	802.11gn 16 dBm	802.11an 15 dBm

**Order codes:**

	<b>Option</b>	<b>Order code</b>
<b>Housing</b>		
	Housing with mounting brackets	<b>MC1-SL....</b>
	Housing with DIN-rail-clip	<b>MC1-SC....</b>
<b>Power supply connection</b>		
	M12 connector	<b>MC1-Sx-M12</b>
	8pol. Weidmüller terminal block	<b>MC1-Sx-WK8</b>
	M8 connector	<b>MC1-Sx-M8</b>
	DC-Jack	<b>MC1-Sx-J</b>
<b>IO-Option</b>		
	Relay	<b>MC1-Sx-xx-REL</b>
	Aux-Input	<b>MC1-Sx-xx-INP</b>
<b>Serial</b>	Standard: 1 x RS232	
	1 x RS422	<b>MC1-Sx-xx-RS422</b>
	1 x RS485	<b>MC1-Sx-xx-RS485</b>
<b>Antenna Options</b>	Standard: 2 x RPSMA	
	1 or 2 TNC Antenna connector(s)	<b>MC1-Sx-xx-1(2)TNC</b>
	1 or 2 RPTNC Antenna connector(s)	<b>MC1-Sx-xx-1(2)RTNC</b>