

# 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 10-72V or over PoE (LAN)  
 Robust aluminum housing with various mounting options  
 Largely mechanical and functional compatibility to the earlier models  
 WLX + ESCG.

#### Functions:

Configuration via the website 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)
- Certificate management for authentication via 802.1x  
 SCEP (Simple Certificate Enrollment Protocol)  
 Fast-Roaming 802.11r  
 Serial-Client via TCP or UDP

### Device Options:

#### Mounting:

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

#### Power supply connection:

- 1) 5 pol. M12 connector
- 2) 8pol terminal block
- 3) 3pol M8 connector

#### Antenna connector:

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

#### Serial Interface:

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



MC1-SL



MC1-SL-M12



MC1-SL-WK8



MC1-SL-M8



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 – 72V
Antenna connectors	2 x RPSMA (optional TNC or RPTNC)
Power supply	10 – 72VDC 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) – 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, USA/Canada 25 (U-NII-1 + UNII-2A + U-NII-2C+U-NII-3)										
Data rates	<table border="1"> <thead> <tr> <th>Mode</th> <th>Data rate</th> </tr> </thead> <tbody> <tr> <td>802.11b:</td> <td>1, 2, 5.5, 11Mbps</td> </tr> <tr> <td>802.11g / a</td> <td>6, 9, 12, 18, 24, 36, 48, 54Mbps</td> </tr> <tr> <td>802.11n (20MHz)</td> <td>1Nss: max. 72.2Mbps 2Nss: max. 144.4Mbps</td> </tr> <tr> <td>802.11n (40MHz)</td> <td>1Nss: max. 150Mbps 2Nss: max. 300Mbps</td> </tr> </tbody> </table>	Mode	Data rate	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
	Mode	Data rate									
	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	<table border="1"> <tbody> <tr> <td>802.11b/g 17 dBm</td> <td>802.11a 15 dBm</td> </tr> <tr> <td>802.11gn 16 dBm</td> <td>802.11an 15 dBm</td> </tr> </tbody> </table>	802.11b/g 17 dBm	802.11a 15 dBm	802.11gn 16 dBm	802.11an 15 dBm						
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>
<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>