

# Industrial 4G LTE Cellular Router

## MRD-405

- ⌘ Industrial remote access using the Internet
  - Economic and environmental benefits
  - Access SCADA systems, HMI and PLCs remotely
  - Cellular 2G / 3G / 4G connections
- ⌘ Designed for industrial applications
  - Compact casing for easy integration
  - Power input range, 12 to 24VDC
  - Built-in two port Ethernet switch
- ⌘ Secure resilient Internet access
  - The connection manager monitors and ensures constant connectivity
  - Easy to use firewall prevents unauthorized access
  - Encrypted and secure data transmission with VPN-tunnels
- ⌘ A wide variety of communication solutions
  - Can act as a gateway to the internet
  - Works very well with M2M type SIM cards
  - Management via easy to use web-interface or SMS



Remote access removes boundaries, eliminates the need for time consuming site visits and provides a network infrastructure suitable for today's "always on" society. The MRD-405 uses the Internet to cost effectively inter-connect systems, allowing HMI, PLCs, sensors etc to communicate with each other, a pre-requisite for any Industrial Internet (IIoT/IoT) solution.

A compact case design with a power input range between 12 to 24VDC make the unit well suited for industrial applications. Easy integration with other devices is achieved using the built-in two port Ethernet switch.

The stability of mobile connections can be affected by a variety of parameters and in order to ensure constant connectivity the MRD-series features the customer praised connection manager: The unit will monitor the cellular connection and, without human-interaction, solve most network related issues, preventing unnecessary power-cycle site visits!

The MRD-405 offers network protection from malicious eavesdroppers via encrypted communication tunnels (VPN), and features a simple, yet powerful, packet inspection firewall.

Requirements and needs vary between different types of M2M/IIoT applications. Sometimes all that is needed is a reliable gateway to the internet whereas other applications might have simpler devices that need to be securely connected to each other, or a server, via a VPN. Regardless of which type of remote access application you might have the MRD-405 can fulfill your communication needs. The unit works very well with any type of SIM card, such as static IP SIM, M2M SIM, or an off-the-shelf SIM.

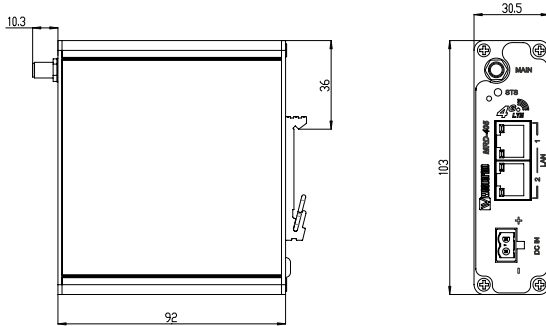
Configuring the unit is very easy with the built-in web-interface, no need for special AT-commands or similar. The device can also provide both management and monitoring via SMS, for example an SMS could be sent to start a VPN.

### Ordering Information

Art.no	Description
3623-0501	MRD-405 Industrial 4G LTE Cellular Router
3125-0001	PS-30 Power Supply (Accessories)

# Specifications MRD-405

## Dimensions



Dimension W x H x D    30.5 x 103 x 103 mm (1.20 x 4.06 x 4.06 in)  
 Weight                    0.25 kg  
 Mounting                 DIN-rail mounting  
 Degree of protection    IP40

## Environmental conditions

Operating temperature	-40 to +70°C (-40 to +158°F)
Storage & Transport Temperature	-40 to +85°C (-40 to +185°F)

## Power

Operating voltage	10 – 36 VDC
Rated voltage	12 – 24 VDC
Rated current	60 mA @ 24 VDC

## Interfaces

Ethernet	2 x RJ-45, 10 Mbit/s or 100 Mbit/s
SIM	1 x Mini-SIM (3 volt SIM supported)
Antennas	1 x SMA female (Main (Tx/Rx))

## Cellular Technologies

Technology	Frequency (MHz)
GSM: GPRS, EDGE	900 / 1800
UMTS: DC_HSDPA, HSUPA, WCDMA	850 / 900 / 2100
LTE: FDD, TDD	800 / 850 / 900 / 1800 / 2100 / 2600
Category	LTE Cat. 1

## Agency approvals and standards compliance

Certifications	CE according to RED 2014/53/EU, RoHS
Safety	IEC/EN 60950-1:2006, EN 50385:2002, EN 62311:2008
EMC	EN 301489-1, EN 301489-19, EN 301489-52
Radio Spectrum usage	EN 301908-1, EN 301908-2, EN 301908-13
Shock & Vibration	EN 61373:2010

## Protocols and Functionality

<b>Ethernet Technologies</b>	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseTX
<b>Layer-2 QoS</b>	IEEE 802.1p Class of Service
<b>IP Routing, Firewall, VPN and Cyber Security</b>	Static IP routing Stateful inspection Firewall / ACL, NAT, Port Forwarding 1 x IPsec VPN, PSK & X.509, Fail-over 1 x OpenVPN / SSL VPN client Simple Certificate Enrollment Protocol (SCEP) RADIUS PPP Dial in/Dial out
<b>Manageability</b>	Management tools <ul style="list-style-type: none"> <li>• Web interface (HTTP and HTTPS)</li> <li>• Command Line Interface (CLI) via SSHv2 and TELNET</li> <li>• SNMPv1/v2c/v3</li> <li>• SMS Control</li> </ul> Flexible alarm/event handling system Syslog (log files and remote syslog server) SNTP (NTP client) DHCP client & server DDNS (Dynamic DNS update client)