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 24 VDC
- 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

CE ⚠ **RED** Radio equipment directive

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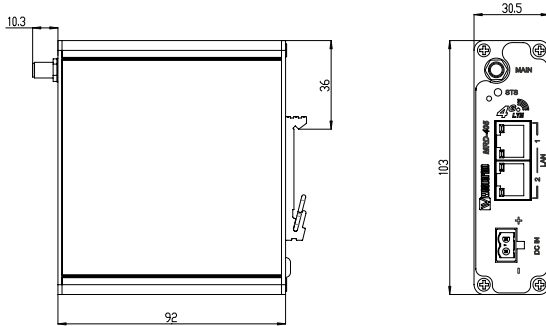
Dimension W x H x D	30.5 × 103 × 103 mm (1.20 × 4.06 × 4.06 in)
Weight	0.25 kg
Mounting	DIN-rail mounting
Degree of protection	IP40

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 × RJ-45, 10 Mbit/s or 100 Mbit/s
SIM	2 × Mini-SIM (3 volt SIM supported)
Antennas	1 × 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	EC/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

Ethernet Technologies	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseTX
Layer-2 QoS	IEEE 802.1p Class of Service
IP Routing, Firewall, VPN and Cyber Security	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
Manageability	Management tools • Web interface (HTTP and HTTPS) • Command Line Interface (CLI) via SSHv2 and TELNET • SNMPv1/v2c/v3 • SMS Control Flexible alarm/event handling system Syslog (log files and remote syslog server) SNTP (NTP client) DHCP client & server DDNS (Dynamic DNS update client)