

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 with DIN-rail mounting
 - All LEDs and interfaces on the front of the unit for easy access
 - Robust hardware design, works well in shock and vibration
- **Secured resilient Internet access**
 - Easy to use firewall prevents unauthorized access
 - Encrypted and secure data transmission with VPN-tunnels
- **A wide variety of solutions to common communication issues**
 - Connection manager monitors and ensures constant connectivity
 - Easy to use and effective Internet gateway for Industrial applications
 - Ability to control and receive status changes via SMS



Remote access removes boundaries, eliminates the need for time consuming site visits and provide a network infrastructure suitable for today's "always-on" society.

A compact design bundled with all interfaces and LEDs in the front make the unit extremely 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 powercycle site visits!

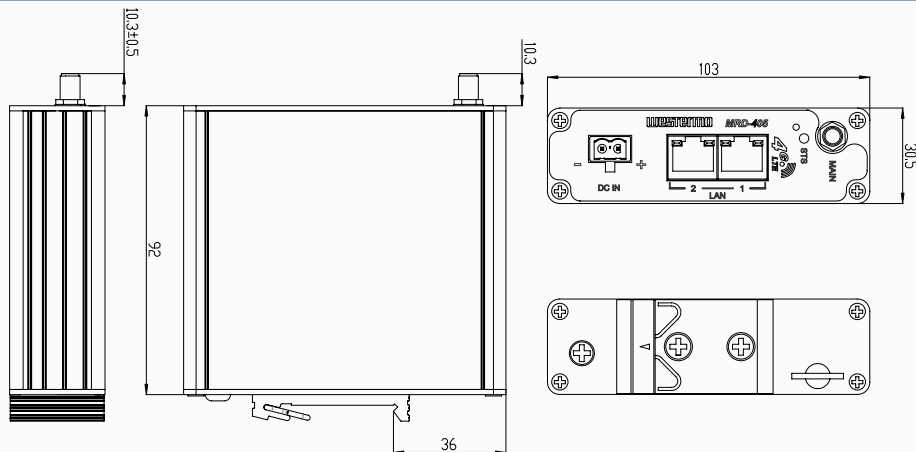
Devices connected to the Internet require counter-measures towards cyber threats. The MRD-405 offers protection of transmissions from malicious eavesdroppers via encrypted communication tunnels (VPN), and features a simple, yet powerful, packet inspection firewall.

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
3623-0521	MRD-405-AU, Industrial 4G LTE Cellular Router for Australia
3125-0150	PS-60, power supply, DIN-mounted (accessories)

Specifications - MRD-405

Dimensional drawing



Technical data

Dimensions (W x H x D)	30.5 x 103 x 103 mm (1.20 x 4.06 x 4.06 inches)
Weight	0.25 kg
Operating temperature	-40 to +70°C (-40 to +158°F)
Storage and transport temperatures	-40 to +85°C (-40 to +185°F)
Ingress protection	IP40
MTBF	MRD-405: 1.978.000 hours MRD-405-AU: 1.989.300 hours

Power

Rated voltage	12 to 24 VDC
Operating voltage	10 to 36 VDC
Rated current	60 mA at 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)

Cellular Technologies

Technology	MRD-405	MRD-405-AU
2G Frequency (MHz)	900/1800	850/900/1800/1900
3G Frequency (MHz)	B1 (2100), B5 (850), B8 (900)	B1 (2100), B2 (1900), B5 (850), B8 (900)
4G Frequency (MHz)	B1 (2100), B3 (1800), B5 (850), B7 (2600), B8 (900), B20 (800)	FDD: B1 (2100), B2 (1900), B3 (1800), B4 (1700), B5 (850), B7 (2600), B8 (900), B28 (700), B40 (2300)
Category	LTE Cat. 1	LTE Cat. 1

Approvals and Standards

Certifications	CE according to RED 2014/53/EU, RoHS, ACMA/RCM
EMC	EN 301489-1, EN 301489-19, EN 301489-52
Safety	EN/IEC 62368-1, Safety Requirements for audio/video, information and communication technology equipment
Radio spectrum usage	EN 301908-1, EN 301908-2, EN 301908-13
Shock and vibration	EN 61373 Rail Class A - Bodymounted

Protocols and Functionality	
Ethernet Technologies	<ul style="list-style-type: none"> -IEEE 802.3 for 10BaseT -IEEE 802.3u for 100BaseTX
Layer-2 QoS	<ul style="list-style-type: none"> -IEEE 802.1p Class of Service
IP Routing, Firewall, VPN and Cyber Security	<ul style="list-style-type: none"> -Static IP routing -Stateful inspection Firewall / ACL, NAT, Port Forwarding -3 x IPsec VPN^a, PSK & X.509, Fail-over, SHA-2 and Xauth Server/Client -1 x OpenVPN / SSL VPN client -Simple Certificate Enrollment Protocol (SCEP) -RADIUS -PPP Dial in/Dial out
Manageability	<ul style="list-style-type: none"> -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 server -DDNS (Dynamic DNS update client)
Network Connectivity	<ul style="list-style-type: none"> -Private APN compatible -Supports Roaming SIM -Connection management (passive and active)

^a3 x Configurable IPsec VPNs, processing power in relation to traffic over VPN sets limitation on number of VPNs