

Industrial Cellular Router MRD-415

- **Industrial remote access using the Internet**
 - Economic and environmental benefits
 - Access SCADA systems, HMI and PLCs remotely
 - Wireless 2G/3G/4G connections
- **Designed for industrial applications**
 - Compact casing with wall mounting for easy integration
 - Wide power input range, 10 to 60 VDC
 - Built-in two port Ethernet switch as well as an RS-232 D-Sub
- **Secured 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 solutions to common communication issues**
 - Simple replacements of analogue leased lines
 - Ability to control and receive status changes via SMS
 - Low-power mode for energy efficient applications



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 case design with wall mounting and the wide power input range between 10 to 60 VDC make the unit well suited for industrial applications. Easy integration with other devices is achieved using the built-in two port Ethernet switch and the RS-232 D-sub.

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.

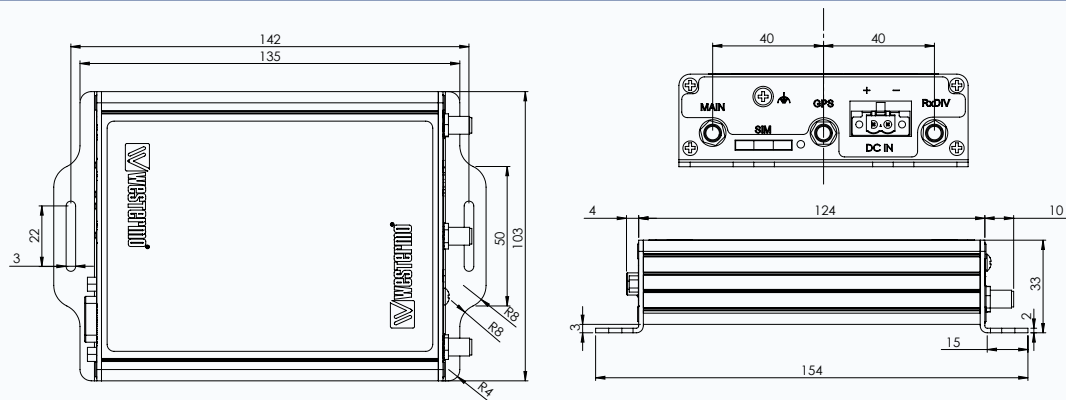
The MRD-415 offers network protection from malicious eavesdroppers via encrypted communication tunnels (VPN), and features a simple, yet powerful, packet inspection firewall.

For solar and battery powered application energy efficiency is vital and the MRD-415 features a low-power mode to only be fully powered when needed. The built-in serial port offers a simple modern replacement solution with the benefit of not having to reprogram or change legacy components during an upgrade.

| Ordering information | |
|----------------------|--|
| Art. no. | Description |
| 3623-0515 | MRD-415, Industrial Cellular Router |
| 3125-0150 | PS-60, power supply, DIN-mounted (accessories) |

Specifications - MRD-415

Dimensional drawing



Technical data

| | |
|------------------------------------|---|
| Dimensions (W x H x D) | 103 x 32 x 156 mm (4.06 x 1.26 x 6.14 inches) |
| Weight | 0.3 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 | Ground Benign 40°C: 1.367.000 hours Ground Fixed 40°C: 341.800.000 hours |

Power

| | |
|-------------------|------------------|
| Rated voltage | 12 to 48 VDC |
| Operating voltage | 10 to 60 VDC |
| Rated current | 110 mA at 24 VDC |

Interfaces

| | |
|----------|-------------------------------------|
| RS-232 | 1 x 300 bit/s - 115.2 kbit/s |
| Ethernet | 2 x RJ-45, 10 Mbit/s or 100 Mbit/s |
| SIM | 1 x mini-SIM (3 volt SIM supported) |
| Antennas | 3 x SMA female (Main, RxDiv, GPS) |

Cellular Technologies

| Technology | Frequency (MHz) |
|------------|--|
| 2G | 900/1800 |
| 3G | B1 (2100), B3 (1800), B8 (900) |
| 4G | B1 (2100), B3 (1800), B7 (2600), B8 (900), B20 (800), B28A (700) |
| Category | 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 50385, EN 62311 |
| 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 |
| Serial Port Technologies | <ul style="list-style-type: none"> -RS-232 -Serial Over IP (Serial Extender and Virtual Serial Port) -Modem emulation -AT command interpreter -MODBUS -DNP3 SMS |
| Layer-2 QoS | <ul style="list-style-type: none"> -IEEE 802.1p Class of Service |
| Positioning (GNSS) | <ul style="list-style-type: none"> -Passive -GPS/GLONASS/BeiDou/Galileo/QZSS |
| IP Routing, Firewall, VPN and Cyber Security | <ul style="list-style-type: none"> -Static IP routing -Dynamic IP routing: RIPv1/v2 -VRRP -GRE -Stateful inspection Firewall / ACL, NAT, Port Forwarding -25 x IPsec VPN^a, PSK & X.509, Fail-over -1 x L2TP client -1 x PPTP 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 client and server -DDNS (Dynamic DNS update client) |

^a25 x Configurable IPsec VPNs, processing power in relation to traffic over VPN sets limitation on number of VPNs