

# Mobile broadband router

## MR-210



- ■ ■ Industrial remote access using the Internet
  - Economic and environmental benefits
  - Access SCADA systems, HMI and PLCs remotely
  - Wireless mobile broadband GPRS / EDGE connection
- ■ ■ Network resilience to minimize down-time
  - Dual SIM support removes carrier dependency
  - Fail-over technologies ensure high availability
  - Easily integrated with external ADSL devices, Falcon and DR-260
- ■ ■ Cyber secured Internet access
  - Advanced firewall prevents unauthorized access
  - Encrypted and secure data transmission with VPN-tunnels
  - Extensive logging for system surveillance
- ■ ■ A wide-variety of solutions to common communication issues
  - Simple replacements of analogue leased lines
  - Advanced diagnostics to solve legacy network issues
  - Easy to use packet analyzer for quick feedback to engineers



**EN 61000-3-2**  
Electromagnetic compatibility

**EN 61000-3-3**  
Electromagnetic compatibility

**R&TTE**  
Radio and telecommunications  
terminal equipment

Remote access removes boundaries, eliminates the need for time consuming site visits and provide a network infrastructure suitable for today's "always-on" society. The MR-210 mobile broadband GPRS / EDGE router uses the Internet to cost effectively inter-connect systems, allowing HMI, PLCs, sensors etc to communicate with each other.

The dual SIMs ensures high availability for critical applications. Bundle the mobile broadband GPRS with ADSL devices, Falcon or DR-260, for both wired and wireless access.

Devices connected to the Internet require countermeasures towards cyber threats. The MR-210 offers protection of transmissions from malicious eavesdroppers via encrypted communication tunnels (VPN, optional upgrade), access prevention from unauthorized addresses, and extensive logging to detect intrusion attempts. With an advanced and highly configurable firewall the unit is easily set up to only allow valid application data.

The MR-210 with its built-in serial port offers a simple modem replacement solution with the benefit of not having to reprogram or change any other component. The powerful software in the MR-210 offers methods to engineers to easily analyze the data-flow, valuable for fast troubleshooting of connected devices.

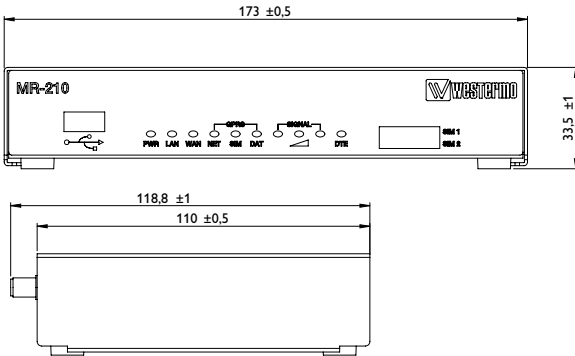
The MR-210 supports GPRS and EDGE and is equipped with one serial port and one Ethernet port.

### Ordering Information

| Art.no    | Description   |
|-----------|---|
| 3622-0201 | Enterprise Cellular Router (GSM / GPRS / EDGE), 1 x RJ-45 Ethernet port, 2 SIM slots, IPsec encryption optional |
| 4200-3000 | Optional IPsec encryption update  |
| 4200-3006 | Optional VPN tunnel extension upgrade to support 50 Tunnels   |
| 3125-0001 | PS-30 Power Supply  |

# Specifications MR-210

## Dimensional drawing



|                      |                   |
|----------------------|-------------------|
| Dimension W x H x D  | 173 x 40 x 119 mm |
| Weight               | 0.49 kg           |
| Degree of protection | IP 30             |
| Mounting             | DIN-rail or shelf |

### Power

|                   |                  |
|-------------------|------------------|
| Operating voltage | 9 – 48 VDC       |
| Start-up current  | 1500 mA @ 12 VDC |

### Interfaces

|             |   |
|-------------|---|
| RS-232      | 1 x 300 bit/s – 115.2 kbit/s                |
| Ethernet TX | 1 x 10 Mbit/s or 100 Mbit/s                 |
| Antenna     | 1 x 850 MHz – 2100 MHz                      |
| SIM         | 2 x SIM slots (3 volts SIM supported)       |
| USB         | 1 x USB 2.0 Interface (Max speed 12 Mbit/s) |

### Temperature

|                     |  |
|---------------------|--|
| Operating           | -20 to +55°C (-30 to +70°C restricted operation) |
| Storage & Transport | -40 to +85°C                                     |

### Agency approvals and standards compliance

|        |   |
|--------|---|
| EMC    | EN 55024, EN 55024 A1, EN 55024 A2, Electromagnetic compatibility - Immunity IT equipment |
|        | EN 55022, EN 55022 A1, Information technology equipment.                                  |
|        | Radio disturbance characteristics. Limits and methods of measurement                      |
|        | FCC part 15 Class B   |
| Safety | IEC/EN 60950-1, IT equipment  |

# Protocols and Functionality

|   |   |
|---|---|
| <b>Ethernet Technologies</b>                        | IEEE 802.3 for 10BaseT<br>IEEE 802.3u for 100BaseTX   |
| <b>Cellular Technologies</b>                        | GSM<br>GPRS Multi-slot class 12, mobile station class B, PBCCH support, coding schemes CS 1-4<br>EDGE Multi-slot class 12 (max 236.8 Kbit/s), mobile station class B, modulation and coding scheme MCS 1-9<br>3G (WCDMA) 384 Kbit/s downlink / uplink<br>HSDPA up to 7.2 Mbit/s downlink<br>HSUPA up to 2.0 Mbit/s uplink   |
| <b>Serial Port Technologies</b>                     | RS-232<br>Serial Over IP (Serial Extender and Virtual Serial Port)<br>LAPB, MODBUS  |
| <b>Resiliency and High Availability</b>             | IEEE 802.1D Spanning Tree Protocol (STP)<br>IEEE 802.1w Rapid STP (RSTP)  |
| <b>Layer-2 Switching</b>                            | IEEE 802.1Q Static VLAN and VLAN Tagging<br>IEEE 802.3x Flow Control<br>IGMPv2/v3 snooping<br>Static Multicast MAC filters  |
| <b>Layer-2 QoS</b>                                  | IEEE 802.1p Class of Service<br>Flexible classification VLAN tag, VLAN ID, IP DSCP/ToS, Port ID)  |
| <b>IP Routing, Firewall, VPN and Cyber Security</b> | Static IP routing<br>Dynamic IP routing <ul style="list-style-type: none"> <li>• BGP</li> <li>• OSPFv2</li> <li>• RIPv1/v2</li> </ul> VRRP, VRRP+™<br>GRE<br>Stateful inspection Firewall / ACL, NAT, 1:1 NAT, Port Forwarding<br>IPSec VPN including failover functionality, PSK & X.509, SCEP <ul style="list-style-type: none"> <li>• Encryption package needed, see first page for details.</li> <li>• 5 Non-encrypted tunnels included, supports 50 tunnels in total with upgrade.</li> </ul> L2TP, PPTP<br>OpenVPN / SSL VPN<br>TACACS+<br>RADIUS<br>SMS Control  |
| <b>Manageability</b>                                | Management tools <ul style="list-style-type: none"> <li>• Web interface (HTTP and HTTPS)</li> <li>• Command Line Interface (CLI) via console port, SSHv2 and TELNET</li> <li>• SNMPv1/v2c/v3</li> <li>• Powerful Packet/Protocol Analyzer with PCAP-export support</li> <li>• Flexible management of configuration and log files <ul style="list-style-type: none"> <li>• Local file management via HTTP, FTP, TFTP and SCP</li> <li>• Load/save files from/to USB memory stick</li> <li>• Upgrade firmware from USB memory stick</li> </ul> </li> </ul> Flexible alarm/event handling system<br>Syslog (log files and remote syslog server)<br>Port Monitoring<br>SNTP (NTP client)<br>PPP<br>DHCP client<br>DHCP server<br>DDNS (Dynamic DNS update client) |
| <b>Programming / Custom Control</b>                 | Python and ScriptBasic  |