

INDUSTRIAL DIN RAIL **Wm** SYSTEMS ROUTER ETHERNET

Compact and cost-effective DIN-rail industrial Ethernet router for M2M and industrial applications

This industrial Ethernet router is compact and small in size, making it suitable for the various M2M and industrial applications such as smart metering and industrial automation.

The router has an optional GPS dedicated antenna connector (order option).

This device is a cost-effective solution for connecting multiple industrial devices, energy meters, and sensors with a single router. The router enables the remote reading of multiple industrial including AMI (HES) or Smart Grid infrastructures.

Our wired router has been specifically designed for industrial and metering environments.

It can be mounted on a DIN-rail as an external device and connected to multiple devices simultaneously, such as industrial measurement systems, utility meters,

and sensors. The router features industry-standard interfaces and protocols, making it suitable for use in industrial automation, smart metering.

Connect your devices to a central server by creating a transparent data link, allowing you to access them remotely. The router can also read registers of connected PLCs and sensors on RS485 or RS232 (via Modbus RTU), on Ethernet (via Modbus TCP), and sending data to the center, providing a cost-effective solution for industrial automation and smart grid connectivity.

The router comes in a plastic IP31 housing that can be securely mounted to a 35mm DIN rail. It operates on the open-source, Linux-based OpenWRT® operating system and it is compatible with our Device Manager® platform.

MAIN FEATURES

- Optional GPS/GNSS dedicated antenna connector
- RJ45: Ethernet port (LAN, 10/100Mbps)
- Terminal blocks: RS232 port, RS485 port, DI (digital input)
- IP31 plastic modular casing, with 35mm DIN-rail fastening
- OpenWrt® operation system
- Transparent data link
- Data Acquisition: Reading PLC registers using Modbus, sending data to the data center / Transparent data transmitting
- Configurable via OpenWrt web interface or Device Manager via TLS communication (option) / Remote FW updates and configuration
- Protocols: DHCP, DynDNS, IP Route, NAT, IPv4/IPv6, (S)FTP, (S)NTP, OpenSSH, OpenSSL, HTTPS, IPsec/OpenVPN, TLS v1.2, LAN, Modbus RTU/TCP, MQTT, GPS/GLONASS (NMEA-0183)
- Device Management platform (order option)



APPLICATION

- INDUSTRIAL AUTOMATION
- INDUSTRIAL MEASUREMENT
- UTILITY COMPANIES
- SMART METERING
- SMART GRID



INDUSTRIAL DIN RAIL ROUTER ETHERNET



DESIGN AND OUTFIT

- IP31 plastic housing with 8 LEDs
- Ethernet port (RJ45, LAN, 10/100Mbps)
- RS232, RS485, and DI (digital input) terminal block connectors
- DC power input
- External GPS/GNSS antenna connector (MMCX, 50 Ohm) (optional)

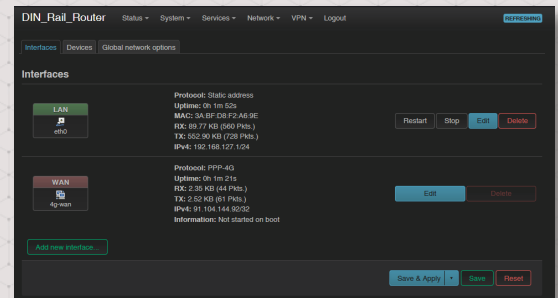


SOFTWARE SYSTEM

- Web user interface and Linux command line, UCI
- Security features include firewall, diagnostic monitoring of operational parameters, and remote control, including reboot and command execution via voice call
- Protocols: DHCP, DynDNS, IP route, NAT, IPv4 / IPv6, (S)FTP, (S)NTP, HTTP(S), IP passthrough, OpenSSH, OpenSSL, IPSec, OpenVPN, TLS, LAN, Modbus RTU/TCP, MQTT, NMEA-0183
- Transparent communication / Data Acquisition

ACCESSORIES (ORDER OPTIONS)

- 12V DC power adapter
- External GPS antenna (MMCX, 50 Ohm)
- Device Manager® software for updates and configuration



INDUSTRIAL DIN RAIL ROUTER ETHERNET®							
Power Voltage / Nominal Frequency	• 12V DC, 1A power supply (9-32VDC)						
Power Consumption / Current	• Average: 100mA 12VDC (according to module version) / 1.2W, 12VDC						
System	<table border="1"> <tr> <td>Performance</td> <td>• ARM Cortex®-A7 M1, 1.2GHz processor / 64MB DDR2 memory</td> </tr> </table>	Performance	• ARM Cortex®-A7 M1, 1.2GHz processor / 64MB DDR2 memory				
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GPS module	<table border="1"> <tr> <td>GPS feature (order option)</td> <td>• GNSS engine (GPS, GLONASS and BD), Protocol: NMEA - Tracking sensitivity: -159 dBm (GPS) / -158 dBm (GLONASS) - Cold-start sensitivity: -148 dBm - Accuracy (Open Sky): 2.5 m (CEP50)</td> </tr> <tr> <td>Antenna connector</td> <td>• TTF (Open Sky): Hot start <1 s, Cold start <35 s - GPS L1 Frequency: 1575.42±1.023 MHz - GLONASS Frequency: 1597.5-1605.8 MHz - Update rate: Default 1 Hz</td> </tr> </table>	GPS feature (order option)	• GNSS engine (GPS, GLONASS and BD), Protocol: NMEA - Tracking sensitivity: -159 dBm (GPS) / -158 dBm (GLONASS) - Cold-start sensitivity: -148 dBm - Accuracy (Open Sky): 2.5 m (CEP50)	Antenna connector	• TTF (Open Sky): Hot start <1 s, Cold start <35 s - GPS L1 Frequency: 1575.42±1.023 MHz - GLONASS Frequency: 1597.5-1605.8 MHz - Update rate: Default 1 Hz		
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Switch	• RJ45 (10/100 Mbps, Ethernet LAN) • RS232 port (2-pin terminal block connector, up to 9600/19200 bps) - RS485 (4-pin terminal block connector) • Digital input connector (for monitoring, sabotage detection; 2-pin terminal block connector) • DC power input (2-pin terminal block connector) • Reset button						
Operation	<table border="1"> <tr> <td>System / Services</td> <td>• WebGUI / LuCI® interface, OpenWrt® operation system, Linux command line, UCI • Protocols: DHCP, DynDNS, IP route, NAT, IPv4/IPv6, (S)FTP, SNTp time handlink, NTP time service, HTTP(S), OpenSSH, OpenSSL, IP passthrough, Modbus RTU/TCP, MQTT • Transparent communication - It can read registers of connected PLCs and sensors on RS485 or RS232 (via Modbus RTU), on Ethernet (via Modbus TCP), and transmit data to the center</td> </tr> <tr> <td>Security features</td> <td>• Security: Firewall, diagnostic, and monitoring of the operation parameters, remote control (reboot and command execution by a voice call), OpenVPN, IPSec, TLS v1.2 • Management: Device Manager connection - optional</td> </tr> <tr> <td>Configuration</td> <td>• OpenWRT® / LuCI® web user interface (local/remote configuration) • Device Manager® software (firmware/software refresh, parameter modification, reboot) with TLS communication - order option</td> </tr> </table>	System / Services	• WebGUI / LuCI® interface, OpenWrt® operation system, Linux command line, UCI • Protocols: DHCP, DynDNS, IP route, NAT, IPv4/IPv6, (S)FTP, SNTp time handlink, NTP time service, HTTP(S), OpenSSH, OpenSSL, IP passthrough, Modbus RTU/TCP, MQTT • Transparent communication - It can read registers of connected PLCs and sensors on RS485 or RS232 (via Modbus RTU), on Ethernet (via Modbus TCP), and transmit data to the center	Security features	• Security: Firewall, diagnostic, and monitoring of the operation parameters, remote control (reboot and command execution by a voice call), OpenVPN, IPSec, TLS v1.2 • Management: Device Manager connection - optional	Configuration	• OpenWRT® / LuCI® web user interface (local/remote configuration) • Device Manager® software (firmware/software refresh, parameter modification, reboot) with TLS communication - order option
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Indication	• 8pcs of bi-color status LEDs (configurable)						
Construction	<table border="1"> <tr> <td>Temperature</td> <td>• Operating: from -20°C to +70°C at 95% rel humidity - Storage: from -40°C to +80°C at 95% rel humidity</td> </tr> <tr> <td>Enclosure</td> <td>• IP31 plastic modular casing, mountable to 35mm DIN-rail</td> </tr> </table>	Temperature	• Operating: from -20°C to +70°C at 95% rel humidity - Storage: from -40°C to +80°C at 95% rel humidity	Enclosure	• IP31 plastic modular casing, mountable to 35mm DIN-rail		
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Enclosure	• IP31 plastic modular casing, mountable to 35mm DIN-rail						
Dimension / Weight	• 90 x 62 x 18mm (without DIN-rail fasteners) / 98 x 62 x 18mm (with DIN-rail fasteners) - 45gr						



The presented images on the datasheet are for illustration purposes only. The details on the data sheet are for general information purposes only. WM Systems LLC cannot be held liable for erroneous information on the datasheet. The announced information are subject to change without notice. For more details, please contact us.

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