

INDUSTRIAL DIN RAIL ROUTER LTE



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

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

The router is a cost-effective solution for connecting multiple industrial devices, energy meters, and sensors with a single router. It enables remote reading of multiple industrial systems and transmit data to a central server, including AMI(HES) or Smart Grid infrastructures.

Our cellular 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 and utility meters, 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 transmit 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 is compatible with our Device Manager® platform.

MAIN FEATURES

- Cellular modules options:
 - LTE Cat.1 / 2G or LTE Cat.1 / 3G / 2G
 - LTE Cat.M / Cat.NB (with 450MHz and 2G „fallback” options)
- 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 (order option)
- Remote firmware updates and configuration
- Protocols: DHCP, DynDNS, IP Route, NAT, IPv4/IPv6, (S)FTP, (S)NTP, OpenSSH, OpenSSL, HTTPS, IPsec/OpenVPN, TLS v1.2, LAN, WAN, Modbus RTU/TCP, MQTT



APPLICATION

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



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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 LTE antenna connector (SMA, 50 Ohm)



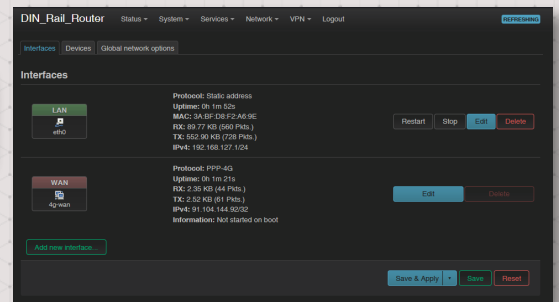
SOFTWARE SYSTEM

- 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, WAN, Modbus RTU/TCP, MQTT
- Transparent communication / Data Acquisition



ACCESSORIES (ORDER OPTIONS)

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



INDUSTRIAL DIN RAIL ROUTER®		LTE Cat.1		LTE Cat.M / Cat.NB									
Power Voltage / Nominal Frequency		12V DC, 1A power supply (9-32VDC)											
Power Consumption / Current		Average: 200mA/12VDC (according to module version) / 2.4W, 12VDC											
System		ARM Cortex® A7 M1, 1.2GHz processor / 64MB DDR2 memory											
Communication module	Performance	-LTE Cat.1 with 2G "fallback"		-LTE Cat.1 / 3G / 2G		-LTE Cat.M / Cat.NB		-LTE Cat.M / Cat.NB with 2G "fallback"		-LTE Cat.M / Cat.NB / 450MHz		-LTE Cat.M / Cat.NB / 450MHz with 2G "fallback"	
	Cellular technology	-Quetel EC915N-EU		-Quetel EC91-EX		-Quetel BC95-M2		-Quetel BC95-M3		-Quetel BC95-M4		-Quetel BC95-M8	
	Internet module	-Quetel EC915N-EU		-Quetel EC91-EX		-Quetel BC95-M2		-Quetel BC95-M3		-Quetel BC95-M4		-Quetel BC95-M8	
	Bands / Frequency (MHz)	-LTE Cat.1: B1(2100) / B3(1800) / B5(850) / B7(2600) / B8(900) / B20(800) / B2(900) -2C: B3(1800) / B8(900)		-LTE Cat.1: B1(2100) / B3(1800) / B7(2600) / B8(900) / B20(800) / B2(900) -3C: B1(2100) / B8(900) -2C: B3(1800) / B8(900)		-LTE Cat.M: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B18(850) / B19(850) / B20(800) / B25(1900) / B26(850) / B27(850) / B28(700) / B66(1700) / B85(700) -LTE Cat.NB: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B18(850) / B19(850) / B20(800) / B25(1900) / B26(850) / B27(850) / B28(700) / B66(1700) / B85(700) -2C: B2(900) / B3(1800) / B5(850) / B8(900)		-LTE Cat.M: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B18(850) / B19(850) / B20(800) / B25(1900) / B26(850) / B27(850) / B28(700) / B66(1700) / B85(700) -LTE Cat.NB: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B18(850) / B19(850) / B20(800) / B25(1900) / B26(850) / B27(850) / B28(700) / B66(1700) / B85(700) -2C: B2(900) / B3(1800) / B5(850) / B8(900)		-LTE Cat.M: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B18(850) / B19(850) / B20(800) / B25(1900) / B26(850) / B27(850) / B28(700) / B66(1700) / B85(700) -LTE Cat.NB: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B18(850) / B19(850) / B20(800) / B25(1900) / B26(850) / B27(850) / B28(700) / B66(1700) / B85(700) -2C: B2(900) / B3(1800) / B5(850) / B8(900)		-LTE Cat.M: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B18(850) / B19(850) / B20(800) / B25(1900) / B26(850) / B27(850) / B28(700) / B66(1700) / B85(700) -LTE Cat.NB: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B18(850) / B19(850) / B20(800) / B25(1900) / B26(850) / B27(850) / B28(700) / B66(1700) / B85(700) -2C: B2(900) / B3(1800) / B5(850) / B8(900)	
	Speed (DL/UL)	-LTE: 10/5 Mbps -EDGE: 236.8/236.8 kbps -2C: 85.6/85.6 kbps		-LTE: 10/5 Mbps -UMTS: 42/5.76 Mbps -WCDMA: Max 384/384 kbps -EDGE: 236/236.8 kbps -GPRS: 107/85.6 kbps		-LTE Cat.M: 588/119 kbps -LTE Cat.NB: 127/158.5 kbps -LTE Cat.NB1: 32/70 kbps		-LTE Cat.M: 588/119 kbps -LTE Cat.NB: 127/158.5 kbps -LTE Cat.NB1: 32/70 kbps -EDGE: 236/236.8 kbps -GPRS: 107/85.6 kbps		-LTE Cat.M: 588/119 kbps -LTE Cat.NB: 127/158.5 kbps -LTE Cat.NB1: 32/70 kbps -EDGE: 236/236.8 kbps -GPRS: 107/85.6 kbps		-LTE Cat.M: 588/119 kbps -LTE Cat.NB: 127/158.5 kbps -LTE Cat.NB1: 32/70 kbps -EDGE: 236/236.8 kbps -GPRS: 107/85.6 kbps	
SIM card slot	mini SIM card (2FF type, push-insert SIM)												
Antenna connector	External antenna connector (SMA, 50 Ohm)												
Interfaces	Connectors	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)											
	Switch	-Reset button											
Operation	System / Services	-WebGUI / LuCI® interface, OpenWrt® operation system, Linux command line, UCI -Protocols: DHCP, DynDNS, IP route, NAT, IPv4/IPv6, (S)FTP, SNMP 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											
Construction	Indication	-8pcs of bi-color status LEDs (configurable)											
	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											
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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