

M2M INDUSTRIAL WMBUS ROUTER



Best-seller basic, rugged industrial IoT router with wireless Mbus DCU features

A compact, robust cellular router designed for industrial M2M/IoT applications. Cost-effective solution for secure, stable mobile connection even in harsh conditions. A high-quality, rugged communication device for use in many smart grid and industrial applications, including Distribution Automation (DA), Automated Metering Infrastructure (AMI), industrial automation projects etc.

The ideal product for gathering all kinds of data from sensors and sending them to a remote data center, securely, over high-speed cellular networks.

It comes with all the most important interfaces, protocols and management functions desirable in the world of industrial automation and smart grid.

It is the preferred choice for the mission-critical cellular communications of many large energy companies and IoT system integrators.



The modular design makes it easy to expand its functionalities by adding extension cards. We also offer customization (protocols, interfaces, modules etc.) for our clients.

Wireless M-Bus was originally developed with Smart Metering in mind, but it's also the ideal solution for Industrial Wireless Sensor Networks (IWSNs).

The device has full remote access, monitoring and maintenance features.

MAIN FEATURES

- Power: 12/24V, 1A power supply (9-24V), microfit 4-pin
- Physical Interfaces: Ethernet (RJ45, 10/100 Mbit, LAN) / RS485 / OMS Wireless Mbus (Modulation: FSK;868MHz) / MicroUSB / MicroSD
- Protocols: DHCP, DynDNS, IP Route, IPv4 / IPv6, (S)FTP, (S)NTP, SSHv2, HTTP(S), IPsec, OpenVPN, IP passthrough, Modbus TCP / Modbus RTU, Wireless Mbus
- Cellular module order options:
 - LTE Cat.1 with 2G or 3G/2G „fallback“,
 - LTE Cat.M/Cat.NB with 2G „fallback“ or 450MHz option
- Operating System: OpenWrt
- User Interfaces: WebGUI/LuCi interface, Linux command line
- Management: TR-069 protocol; optionally by our Device Manager software (AES-256 encrypted)
- Enclosure/Casing: rugged, robust, IP51 industrial aluminum

APPLICATION

- UTILITY COMPANIES
- SMART METERING
- SOLAR / PV FARMS
- INDUSTRIAL CLIENTS
- CORPORATE PARTNERS



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DESIGN AND OUTFIT

- IP51 aluminum enclosure, mount to DIN-rail
- OMS Wireless Mbus (Modulation: FSK; Frequency: 868MHz; Receive sensitivity: -112 dBm)

COMPATIBILITY

- Wireless Mbus meters and sensors

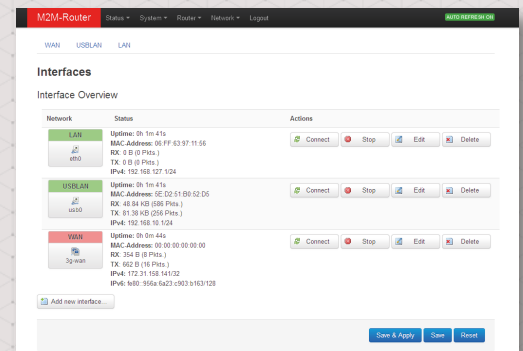
OPENWRT® SYSTEM

- Web user interface and Linux command line
- Protocols: DHCP, DynDNS, IP route, NAT, IPv4/IPv6, (S)FTP, SNTP/NTP time service, SSHv2, HTTP(S), GRE, mGRE, IP passthrough, Firewall, IPSec, OpenVPN, Mbus master, Modbus TCP/ Modbus RTU, wireless Mbus



ACCESSORIES

- 12V DC power adapter (microfit connection)
- External antenna (according to the module version)
- DIN-rail adapter
- You can manage the router by Device Manager® software (order option)



M2M Industrial wMBUS Router®		LTE Cat.1		LTE Cat.M / NB				
Power	Voltage	-DC 12V 1A power supply (9-32VDC) / microfit 4-pins power adapter connection						
	Current	-Stand-by:160-260mA 12VDC (according to module version) / 19 - 31W, 12VDC						
System	Performance	-Cortex-A3 ARM 400MHz processor / 128MB memory						
	Cellular technology	-LTE Cat.1 with 2G "fallback"	-LTE Cat.1 with 3G/2G "fallback"	-LTE Cat.M / Cat.NB	-LTE Cat.M / Cat.NB	-LTE Cat.M / Cat.NB with 2G "fallback"	-LTE Cat.M / Cat.NB / LTE 450MHz	
Communication module	Internet module	-Telit LE910SI-EA	-Telit LE910CI-EUX	-Telit ME910CI-E1	-Telit ME910CI-W1	-Telit ME910CI-WW	-Telit ME310CI-W2	
	Frequency (MHz)	-LTE: B1(2100) / B3(1800) / B5(850) / B7(2600) / B8(900) / B20(800) / B28A(700) / B28(700) / B38(2600) / B40(2300) / B41(2500) / B3(1800) / B8(900)	-LTE: B1(2100) / B3(1800) / B7(2600) / B8(900) / B20(800) / B28A(700) / B28(700) / B38(2600) / B40(2300) / B41(2500) / B3(1800) / B8(900)	-LTE Cat.M / Cat.NB: B3(1800) / B8(900) / B20(800)	-LTE: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B18(800) / B19(800) / B20(800) / B25(1900) / B26(850) / B27(800) / B28(700) / B66(1700) / B71(600) / B85(700)	-LTE Cat.M / Cat.NB: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B18(800) / B19(800) / B20(800) / B25(1900) / B26(850) / B27(800) / B28(700) / B66(1700) / B71(600) / B85(700)	-LTE Cat.M / Cat.NB: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B18(800) / B19(800) / B20(800) / B25(1900) / B26(850) / B27(800) / B28(700) / B66(1700) / B71(600) / B85(700)	-LTE Cat.M / Cat.NB: B1(2100) / B3(1800) / B5(850) / B8(900) / B20(800) / B28(700) / B31(450) / B72(450)
	Speed (DL/UL)	-LTE Cat.1: 10/5 Mbps -2G (CSM/EDGE): 80/40 kbps	-LTE Cat.1: 10/5Mbps -3G (HSPA+): 42/576 Mbps -2G (CSM/EDGE): 80/40 kbps	-LTE Cat.M: 300/375 kbps -LTE Cat.NB: 20-250/250 kbps	-LTE Cat.M: 588 kbps/1 Mbps -LTE Cat.NB: 120/160 kbps	-LTE Cat.M: 588 kbps/1 Mbps -LTE Cat.NB: 120/160 kbps -2G (ECPPRS): 264/210 kbps	-LTE Cat.M: 588 kbps/1 Mbps -LTE Cat.NB: 120/160 kbps -2G (ECPPRS): 264/210 kbps	-LTE Cat.M: 588 kbps/1 Mbps -LTE Cat.NB: 120/160 kbps
	SIM card slot	- mini SIM (2FF type)						
Antenna connector	- for LTE antenna (SMA, 50 Ohm)							
Interface connections	Ethernet port	- RJ45 (10/100 Mbps Ethernet LAN/WAN)						
	microUSB port	- micro-USB						
	microSD slot	- micro-SD memory card slot						
	Industrial ports	- RS485 port (transparent or Modbus communication - terminal block) - OMS Wireless Mbus (Modulation: FSK; Frequency: 868MHz; Receive sensitivity: -112 dBm)						
User interface	System / Services	- WebGUI / Luci interface, OpenWrt® operation system, Linux command line, UCI - Security/Management: Firewall, diagnostics and monitoring of operation parameters, TLS v1.2 - Networking protocols: DHCP, DynDNS, IP Route, IPv4/IPv6, FTP, SFTP, SNTP time handlink, NTP time service, SSHv2, HTTP, IPSec, OpenVPN, IP passthrough, Modbus TCP/Modbus RTU, Wireless Mbus Management, TR-069 protocol, Device Manager® (AES-256 encrypted, safe data connection) - Scada's support: Modbus TCP/Modbus RTU (for meters and measurement systems) - Wireless Mbus protocol (for meters and sensors)						
	Configuration	- OpenWRT® local website (local/remote configuration) - Optional Remote Device Manager® (firmware/software refresh, parameter modification)						
	Indication	- 3 bi-color status LED (programmable)						
Construction	Temperature range	- Operation: from -40°C to +75°C / Storage: from -40°C to +80°C at 0 to 95 rel. humidity						
	Enclosure	- IP51 industrial aluminum case, mount to DIN-rail/wall						
	Dimensions/Weight	- 92 x 85 x 35 mm, 170gr (without antenna and power adapter)						



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