

# M2M ROUTER PRO4



## Industrial cellular router, gateway and data concentrator developed specifically for IoT and IIoT applications

Designed specifically for industrial use, the PRO4 router offers reliable, secure high-speed wireless connectivity and remote access.

It enables the integration of various applications such as distribution automation, smart metering or the integration of Distributed Energy Resources (DER).

It comes with all the interfaces, protocols and management functions desirable in the world of industrial automation and smart grids. It is the preferred choice for mission-critical cellular communications of many large energy companies and IoT system integrators.

The PRO4 has a modular design, meaning that there is an Mbus option for expansion.

The open-source, Linux-based operating system OpenWRT (optionally Debian) allows users to run their own applications on the platform. The OS has OTG functions - which also guarantees that our clients will not depend on us in developing custom apps for their device. It comes in a IP51 housing, supports DIN-rail, and the ports can be protected under sealable terminal cover.

Supports the most important industrial and network protocols like TCP/IP, Modbus TCP, Modbus RTU, Modbus Gateway, etc. It has full remote access, monitoring and maintenance features (by our Device Manager® application).



## MAIN FEATURES

- Cellular module: LTE Cat.1 / 3G / 2G (order options)
- 4 Ethernet ports (RJ45, LAN, 10/100Mbit)
- Industrial standard terminal block: RS485, 2 digital inputs
- Expansion option: M-Bus port (terminal block)
- micro-SD card slot
- micro-USB configuration port
- Supercapacitor (against small power outages)
- Secure wireless data transmitting with Automatic Data Acquire System (for Modbus, MBus communication)
- OpenWrt® operation system
- Safety, networking and management protocols
- Remote firmware updates, configuration
- Optional Device Manager® (configuration/updates)

## APPLICATION

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



# M2M Router PRO4



## DESIGN AND OUTFIT

- Plastic enclosure, fit to DIN-rail
- Industrial standard interfaces are presented
- Ports can be protected by sealable terminal cover
- Expansion option: Mbus port
- Compatibility with utility meters, Scada- and metering systems



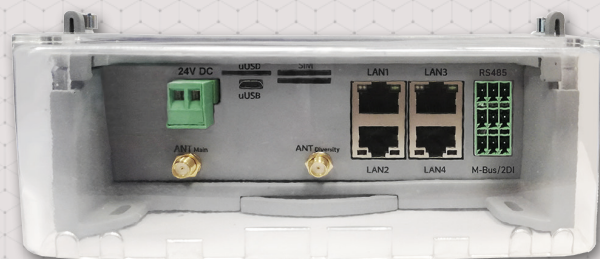
## OPENWRT® SYSTEM

- Web user interface and Linux command line, UCI
- Security: Firewall, diagnostic and monitoring of operation parameters, IEEE 802.1x encryption, AES128 / AES256 encryption, TLS v1.2 protocol, supercapacitor against power outages, remote control (reboot and command execution by a voice call)
- Protocols: DHCP, DynDNS, IP route, NAT, IPv4/IPv6, (S)FTP, (S)NTP, HTTP(S), SSHv2, IPsec IP passthrough, OpenVPN
- Management: SNMPv3; by optional Device Manager® software
- Scada Protocols: Modbus TCP / Modbus RTU
- M-Bus master protocol

ONLINE MANAGEMENT   QoS & ANALYTICS   REMOTE FW UPDATES   CENTRAL CONTROL

## ACCESSORIES (ORDER OPTIONS)

- 12V DC power adapter
- RS485 / DI / Mbus cable
- External antenna
- Device Manager® software (configuration/updates)



M2M Router PRO4*		LTE Cat.1
Power	Voltage	• Mains: 12-24V DC
	Current/Consumption	• Min: 3W   • Average: 4W   • Max: 10W
System	Performance	• T2 Dual-Core Cortex-A7 ARM 700MHz processor / 256MB RAM / internal slot for optional module
	Cellular technology	• LTE Cat.1 with 3G/2G "fallback"
Communication module	Internet module	• Telit LE910CI-EUX
	Bands / Frequency (MHz)	• LTE-FDD: B1(2100) / B3(1800) / B7(2600) / B8(900) / B20(800) / B28A(700) • 3G: B1(2100) / B3(1800) / B8(900) • 2G: B3(1800) / B8(900)
	Speed (DL/UL)	• LTE Cat.1: 10/5 Mbps • HSPA+: 42 Mbps • GPRS: 80/40 kbps
	SIM card slot	• mini SIM card (2FF type, push-insert SIM)
	Antenna connector	• 2pcs external LTE antenna connector (SMA, 50 Ohm)
Interface connectors	Ethernet port	• 4 Ethernet ports (10/100Mbit, LAN, RJ45)
	Industrial terminal block	• RS-485 data interface (up to 30 devices, isolated port, 3-pins connection)   • 2 digital inputs (potential-free 50 type, 3-pins connection)
	microUSB	• micro-SD card slot for data storage / system boot
	microSD	• micro-USB connection (for local configuration, USB self powered during configuration)
	Expansions (order option)	• M-Bus connector (up to 32 devices, isolated, 3-pins connection) • "One-wire" connection (for temperature sensors)
User interface	OS / Services / Local Configuration	• WebGUI (LuCi®) interface, OpenWrt® embedded operating system, CLI, UCI • Security protocols: Firewall, diagnostic and monitoring of operation parameters, IEEE 802.1x encryption, AES128/AES256 encryption, TLS v1.2 • Network protocols: DHCP, DynDNS, IP route, NAT, IPv4/IPv6, FTP/SFTP, SNT/NT/NT, HTTP/HTTPS, SSHv2, IP passth., IPsec, OpenVPN • Management protocols: SNMPv3   • Scada support: Modbus TCP/Modbus RTU (for measurement)   • Mbus master protocol (for meters)
	Remote Access / Remote Configuration	• Configuration: web user interface (configuration, firmware replacement) via local or remote TCP/IP connection • Remote access and CLI: SSHv2 (remote configuration, monitoring) • Management: optional Device Manager® (for distant management and configuration, updates) - Ask us about conditions!
Environment	Temperature range	• Operation: from -35°C to +55°C, at 0 to 95 rel. humidity / Storage: from -40°C to +80°C at 0 to 95 rel. humidity
Construction	Enclosure	• IP51 plastic housing, sealable terminal cover, DIN-rail mounting supported   • 16 status LEDs (re-programmable)
	Supercapacitor	• Normal: presented, against short power outages (for secure operation up to 5 seconds) • High-capacity: against up to 5 minutes of power outages (order option)
	Dimensions/Weight	• 150 x 150 x 58 mm / 460 gramms (with terminal cover)   • 150 x 130 x 58 mm / 410 gramms (without terminal cover)



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