

M2M PRO4 MODEM



Transparent cellular modem for smart metering, remote access of utility meters, PLCs and industrial devices

Read consumption data from up to 31 utility meters with a single modem!

This device is equipped with RS232 and RS485 interfaces, and permits to connect up multiple devices through its RS485 bus system.

The compatibility with the IEC 61107 smart meter protocols allows communications with PLCs and other industrial devices.

The enclosure was designed with industrial applications in mind: the communication ports, connectors, SIM card holder, can all be protected under the sealable terminal cover, casing supports a DIN-rail mount or the 3-point mounting.

The device can be supplied from AC mains or USB port (DC).

The modem is supplied with an embedded, Linux-based OpenWrt® system, which is configurable on the local interface. The device has remote access and maintenance features.



MAIN FEATURES

- Internet module: LTE Cat.4 / 3G / 2G (order options)
- RS232 / RS485 port (RJ45)
- RS232 / RS485 port (terminal block)
- AC power
- IEC 61107 meter protocol compatibility
- Transparent data transmission (for HES connection, data sending)
- OpenWRT system, web configuration
- SSHv2 access, UCI command line
- Supercapacitor (against power outages)
- TR-069 remote management protocol support
- Safety, networking and management protocols
- Remote firmware updates, configuration

APPLICATION

- UTILITY COMPANIES
- SMART METERING
- INDUSTRIAL PARTNERS



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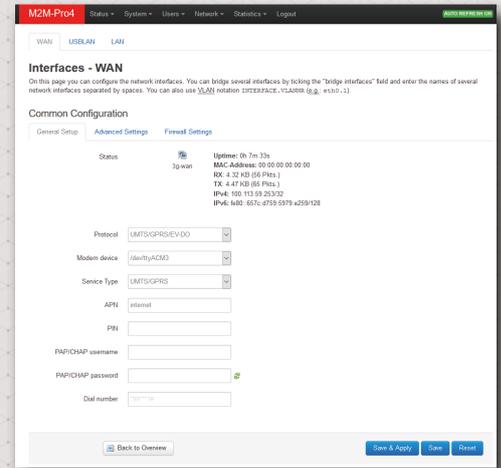
DESIGN AND OUTFIT

- IP51 protected enclosure, fit to DIN-rail
- Communication ports, connectors, SIM card holder, all can be protected by the sealable terminal cover
- RS232 and RS485 ports (RJ45 / terminal block) - up to 31 meter connections
- 100-230V AC power connector
- micro-USB port (for configuration, alternative 5VDC power source)



OPENWRT® SYSTEM

- Configuration on web interface - through USB (OpenWrt®, LuCi®) with SSHv2 access, UCI
- Supported protocols: TCP/IP, DHCP, ser2net, FTP, NTP time sync, VPN, Firewall
- Diagnostic, monitoring of operation, modem event logging
- TR-069 protocol support (remote management / updates / configuration reboot)



METER CONNECTION

- Meter reading from any IEC 61107 compatible utility meters
- It is configured for transparent communication by default, but it is also suitable for independent data collection and periodical data upload (OpenWRT / cron.d)
- Configurable readout cycle on local web interface

M2M PRO4 MODEM®		LTE Cat.4
Power	Voltage	• Dual Power / Mains: AC power supply from 100.230V AC, 50 Hz, 0.1A current / alternative 5V DC mains 800mA current (via USB powered connection)
	Current/Consumption	• Average: 2-3W · Max.: 5W
System	Performance	• T2 Dual-Core Cortex-A7 ARM 700MHz processor / 128MB memory
Communication module	Cellular technology	• LTE Cat.4 / 3G / EDGE / 2G
	Internet module	• Quectel EC200A-EU
	Bands / Frequency (MHz)	• LTE: B1(2100) / B3(1800) / B5(850) / B7(2600) / B8(900) / B20(800) / B28(700) / B38(2600) / B40(2300) / B41(2500) • 3G: B1(2100) / B2(1900) / B4(1700) / B5(850) / B8(900) • 2G: B2(1900) / B3(1800) / B5(850) / B8(900)
	Speed (DL/UL)	• LTE-FDD: 150/50 Mbps / LTE-TDD: 130/30 Mbps • HSPA+: 21/5.76 Mbps • WCDMA: 384/384 kbps
	Antenna connector	• for 2pcs LTE antenna (SMA 50 Ohm)
	SIM card slot	• mini SIM card (2FF type)
Interface connectors	RS232/RS485 port	• Terminal block - isolated, the port is operating parallel with the RJ45 connector port (RS232/RS485) • RJ45 connector (RS232/RS485, half duplex, 300 - 115200 bps) for accepting 1-31 utility meter connections (IEC61107 meters / IEC 62056-21 protocol compatible meters)
	microUSB	• microUSB connection (for alternative 5V DC power source, local configuration)
User interface	OS / Services / Local Configuration	• OpenWrt® embedded operating system, Web (LuCi®) interface, UCI, SSHv2 • Transparent server-modem connection, transparent data transmission • Network protocols: TCP/IP, DHCP, ser2net, FTP, NTP time synchronisation, Firewall, VPN, SSHv2 • Server connection: FTP service (automatic data upload through wireless network) • Security: Diagnostic and monitoring of operation parameters, modem event logging
	Remote Access / Remote Configuration	• Configuration: web user interface (configuration, firmware replacement) via local or remote TCP connection • Remote access and CLI: SSHv2 (remote configuration software replacement, monitoring) • Management: TR-069 protocol (for remote management and configuration, firmware updates)
Environment	Temperature range	• Operation: from -30°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
	Supercapacitor	• Supercapacitor protection against power outage (order option)
	Dimensions/Weight	• 150 x 150 x 58 mm / 245 gramms (with terminal cover) · 150 x 130 x 58 mm / 185 gramms (without terminal cover)



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