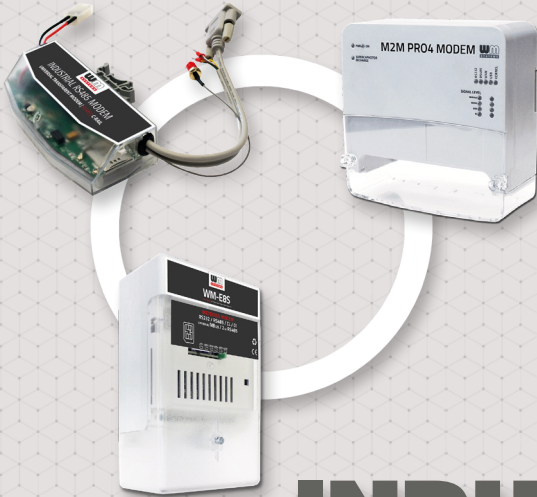




WM SYSTEMS LLC



PRODUCT CATALOG

INDUSTRIAL MODEMS





CELLULAR PRODUCTS



INDUSTRIAL MODEMS

INDUSTRIAL AUTOMATION | SMART GRID | SMART METERING

Rugged cellular modems for Industrial IoT applications offering the latest, future-proof connectivity. These can be ordered with LTE Cat.1, Cat.M, Cat.NB module and is backwards compatible with EGPRS (2G).

Offering an extremely long lifetime and easy deployment. It is the perfect upgrade for your existing 2G/3G modems.

Our industrial modems provide transparent RS485 Modbus communication, Modbus TCP, Mbus, Digital inputs and more for various industrial IoT applications like industrial automation, Scada/PLC communication, vending machines, smart metering, factory or building automation, and more.

These PLC connected external devices are ideal and cost-effective choices for an industrial system. It is the perfect solution for monitoring transparent or Modbus TCP/RTU communication, collect data and send data to the data center with transparent mode.

Our universal, independent, external modems can be attached to any RS485 MODBUS or Mbus devices externally.

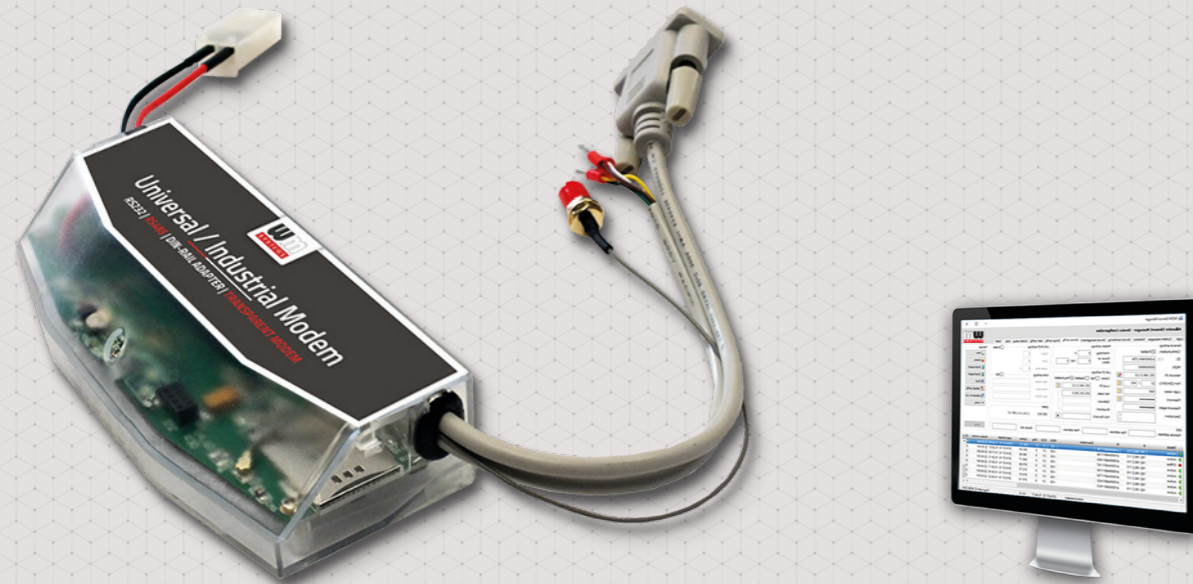
We recommend these products for professional purposes that require high availability and reliability - as production, manufacturing, industrial services and maintenance.



PRODUCTS / INDUSTRIAL MODEMS



Universal cellular modem for industrial automation with RS232 and RS485 cable. Available for LTE Cat.1, 2G, 3G, 4G, LTE Cat.M and Cat.NB networks.



ONLINE MANAGEMENT QoS & ANALYTICS REMOTE FW UPDATES CENTRAL CONTROL

HARDWARE

Mobile	Order options: ■ 4G LTE Cat.1 with 2G or 2G/3G "fallback" ■ LTE Cat.M / NB with 2G "fallback"
Powering	~100-230V AC ±15%, 50-60Hz ±5% (AC power supplied via pigtail connector) - optional DC
SIM	mini SIM (2FF)
Antenna connectors	1 external Antenna connector (SMA, 50 Ohm)
Ports	■ RS232 (D-SUB9 / RJ12) ■ RS485 (2-wire / 4-wire / RJ12)
Status LEDs	3 status LEDs
Housing / Protection rating	Plastic (ABS) casing / IP51
Mount and Fastening	External modem, mountable by a DIN-rail adapter (order option)
Operating Temperature	from -40°C to +70°C
Dimensions / Weight	162 x 66 x 35mm / 108gr.

SOFTWARE

Operation system / User interface	Embedded, realtime operation system / Configuration software
Communication	IEC 62056-21 protocol, transparent communication. CSDData call (2G)
Security	Watchdog, LastGASP, supercapacitor (order option)
Management platform	Device Manager® software (firmware refresh, configuration, QoS, reboot) - order option

INDUSTRIAL RS485 MODEM



NETWORK

4G LTE Cat.1 / 3G / 2G
LTE Cat.M / Cat.NB / 2G
mini SIM (2FF)

CONNECTIVITY

AC power input (optional DC)
RS232
RS485

DESIGN

Design & connectivity meets the industry standards
Plastic, IP51 enclosure
DIN-rail adapter
External, compact modem

FEATURES

Supercapacitor option
IEC 62056-21 transparent communication, CSD option
Embedded OS
Device Manager platform

COMPATIBILITY

- Universal meter connection (external modem, installable to any meter)



PROTOCOL

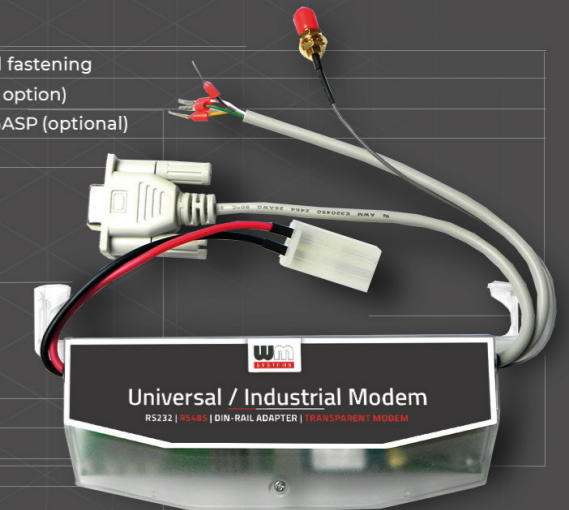
- ⇒ Transparent / IEC 62056-21

FEATURES

- ✓ Optional DIN-rail fastening
- ✓ AC powered (DC option)
- ✓ Supercap / LastGASP (optional)
- ✓ Device Manager

PORTS/PHYSICAL CONNECTORS

- :: RS232 (D-SUB9 / RJ12)
- :: RS485 (2- or 4-wire / RJ12)



PRODUCTS / INDUSTRIAL MODEMS



External transparent modem for universal meter connection. Available for LTE Cat.1 / Cat.M / 2G networks with 450MHz support.



ONLINE MANAGEMENT QoS & ANALYTICS REMOTE FW UPDATES CENTRAL CONTROL

WM-E8S MODEM



NETWORK

4G LTE Cat.1 / 450MHz / 2G
LTE Cat.M / Cat.NB / 2G
mini SIM (2FF)

CONNECTIVITY

RS232
RS485 (2 or 4-wire)
CL (current loop)
2 Digital Inputs
Mbus

DESIGN

Industrial, robust design
Universal modem, compatible
with any meter type
IP52 enclosure, sealable
DIN-rail mount (built-in)

FEATURES

Surge protection
Supercapacitor option
Transparent communication
Embedded OS
Device Manager platform

HARDWARE

Mobile	Order options: ■ 4G LTE Cat.1 with 2G or 2G/3G "fallback" ■ LTE Cat.M / NB with 2G "fallback"
Powering	85..300V AC, 43-63Hz / 100..385V DC
SIM	mini SIM (2FF)
Antenna connectors	1 external Antenna connector (SMA, 50 Ohm)
Ports	■ RJ45 (RS232 and RS485: 2 or 4-wire) Terminal block: alternative RS485 port (optional), CL (current loop) / (2 digital inputs) / Mbus master for max. 4 slaves (optional)
Status LEDs	6 status LEDs
Housing / Mount and Fastening	Plastic (ABS) casing / IP52 - built-in 35mm DIN-rail mount
Operating Temperature	from -35°C to +55°C
Dimensions / Weight	150 x 150 x 58mm / 460 gr. (without terminal cover: 150 x 130 x 58mm / 410 gr.)

SOFTWARE

Operation system / User interface	Embedded, realtime operation system / Configuration software
Protocols	IEC 62056-21 protocol, transparent communication
Security	Watchdog, LastGASP, supercapacitor (order option), surge protection (up to 4kV)
Management platform	Device Manager® software (firmware refresh, configuration, QoS, reboot) - order option

COMPATIBILITY

- Universal meter connection, Mbus meter option



PROTOCOL

⇒ Transparent / IEC1107

FEATURES

- ✓ TLS encryption
- ✓ AC powered (DC option)
- ✓ Supercap / LastGASP
- ✓ Device Manager
- ✓ Surge protection
- ✓ Tamper switch
- ✓ IP52, sealable enclosure
- ✓ 35mm DIN-rail mount

PORTS/PHYSICAL CONNECTORS

- :: RS232 and RS485 (RJ45)
- :: RS485 alternative
- :: Mbus (optional)
- :: 2 Digital Inputs
- :: CL (Current Loop)



PRODUCTS / INDUSTRIAL MODEMS



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



ONLINE MANAGEMENT QoS & ANALYTICS REMOTE FW UPDATES CENTRAL CONTROL

M2M PRO4 MODEM



NETWORK

4G LTE Cat.4 / 3G / 2G
mini SIM (2FF)

CONNECTIVITY

RS232
RS485
micro-USB

DESIGN

Industrial, robust design
IEC 61107 meter protocol compatibility
IP51 enclosure, sealable
DIN-rail mount (built-in)

FEATURES

microSD card
Utility meter reading
Transparent communication
OpenWrt / WebGUI
Device Manager platform

HARDWARE

Mobile	LTE Cat.4 / 3G / 2G
Powering	100..230V AC / alternative 5V DC (on micro-USB)
SIM	mini SIM (2FF)
Antenna connectors	2 external Antenna connector (SMA, 50 Ohm)
Ports	▪ RS232 port (RJ45) ▪ RS485 port (RJ45 and terminal block connector) ▪ micro-USB
Status LEDs	9 connectivity status LEDs, 4 network signal strength LEDs
Housing / Protection rating	Plastic (ABS) casing / IP51
Mount and Fastening	built-in 35mm DIN-rail mount
Operating Temperature	from -30°C to +55°C
Dimensions / Weight	150 x 150 x 58mm / 245 gr. (without terminal cover: 150 x 130 x 58mm / 185 gr.)

SOFTWARE

Operation system / User interface	OpenWrt® with Linux kernel v4.94 / LuCi® web user interface, UCI command line
Protocols	DHCP, DynDNS, IPv4/IPv6, FTP, NTP, HTTP(S), SSHv2, VPN, ser2net, TR-069
Security	Watchdog, firewall, supercapacitor/LastGASP
Data acquisition	Connection with up to 31 RS485 Modbus meters / It is also suitable for independent data collection and periodical data upload on TCP/IP, FTP, etc.
Management platform	Device Manager® software (firmware refresh, configuration, QoS, reboot) - order option



FEATURES

- ✓ IP51, sealable
- ✓ DIN-rail mount
- ✓ OpenWRT
- ✓ Firewall
- ✓ VPN
- ✓ WebGUI
- ✓ Device Manager



PORTS/PHYSICAL CONNECTORS

- :: RS232/RS485
- :: Up to 31 meter connection
- :: RS232/RS485 (RJ45)
- :: Micro USB
- :: AC power / DC (USB)



PROTOCOL

- ⇄ HTTP
- ⇄ FTP
- ⇄ NTP
- ⇄ Ser2net
- ⇄ IEC 61107



CELLULAR PRODUCTS



DEVICE MANAGEMENT

DEVICE MONITORING | CONFIGURATION | SECURE FIRMWARE UPDATES | ALARMS, EVENTS, REPORTS

The remote management and maintenance of an IIoT solution can be a real challenge. Improve the network availability and operational efficiency of your fleet!

The remote management and maintenance of an IIoT solution can be a real challenge. Device Manager is a central management application for our cellular routers, metering modems, switches and transmitters. Improve the network availability and operational efficiency of your fleet!

Device Manager is a solution for remote device and gateway management which allows faster deployment and guarantees the secure and proper functioning of IoT devices after they have been deployed.

Our remote device management offers state-of-the-art management functionalities including rapid device onboarding with bulk provisioning, easy administration, in-depth visibility of device status, its performance metrics and security issues, logical groupings of devices into hierarchical structures for mass software and firmware updates.

The Microsoft® Windows® based application hosted on-premise for high security and continuous remote management of IoT devices (routers, modems, IoT switches, etc.). Ideal for enterprise or government deployments with strict ICT policies.

Optimized for Large Scale Enterprise Deployments

Full-fledged monitoring solution, by design optimized for enterprise device management – with features highly appreciated by our utility clients and telco partners. For example, it automatically imports user access control and permissions from Microsoft® Active Directory® for authentication.

Designed to allow easy addition of new communication servers it provides maximum scalability.

Most industrial IoT deployments involve a huge number of devices. Large scale operations like these have to be optimized in order to allow faster time-to-market. The time spent on the deployment of each device adds up.

Our devices can be ordered with the Device Manager application pre-configured, so as soon as they are connected they are available in the remote management platform. Deployment time can be reduced from 15-20 minutes per device to 1-2 minutes.

PRODUCTS / DEVICE MANAGER



Our Device Manager solution is designed to streamline remote management and maintenance of our devices, ensuring fast and secure deployment and optimal device performance throughout their lifecycle.



Equipped with cutting-edge management features, such as rapid device onboarding with bulk provisioning, easy administration and comprehensive visibility of device status and performance metrics, our remote device management offers unmatched support for large-scale enterprise device management.



Device Manager is a Microsoft® Windows® based, central management application for our cellular routers, metering modems, data concentrators, IoT switches and transmitters.

ONLINE MANAGEMENT

QoS & ANALYTICS

REMOTE FW UPDATES

CENTRAL CONTROL

DEVICE MANAGER



FEATURES

- Remote Management
- Device Configuration
- Managing Remote Operations
- QoS Monitoring
- Alarms, events, reports

SOFTWARE

- Microsoft Windows® client- and server application with database
- Microsoft Active Directory® compatible
- Security: AES encryption, TLS certificate keys

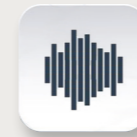
DESIGN

- Scalability
- Full-fledged monitoring
- Quick optimization of device operation properties
- Easy firmware deployment

SUPPORTED

- M2M Routers
- M2M Industrial 2 Routers
- M2M PRO4 Router DCUs
- WM-E metering modems
- WM-i data logger

HOSTED ON-PREMISE FOR HIGH-SECURITY



The Device Manager delivers exceptional data protection and security for sensitive equipment and information. This solution is specifically optimized for extensive enterprise deployments and is highly valued by our utility clients and telecom partners. Ideal for enterprise or government deployments with strict ICT policies.

OPTIMIZED FOR LARGE SCALE ENTERPRISE DEPLOYMENTS



Our Device Manager significantly reduces the time necessary to do bulk FW updates, decreasing it from 15-20 minutes per device to a mere 1-2 minutes.

This efficiency boost enables involved businesses to concentrate on growth and innovation, maximizing their operational effectiveness.

Improve the network availability, management and operational efficiency of your device fleet remotely!



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