

Cellular modem specifically designed for Itron® ACE6000, ACE8000, SL7000 and EM600 (E620) electricity meters

Cellular modem designed specifically for the remote automatic meter reading of Itron® ACE6000, ACE8000, SL7000 and EM600 (E620 type) electricity meters through its RS232 or RS485 (RJ45) connector. By using the device, you can save time and money as it is no longer necessary the on-site, manual reading of meters.

In collaboration to provide state-of-the-art cellular modems for its customers in Europe, WM Systems was selected as one of the OEM suppliers of Itron.



The product's case was designed to fit under the enclosure of the meter and it connects through an RJ45 data connector.

As part of an AMR / AMI solution this modem provides a stable, transparent connection to the meter through the HES can pull the consumption data from the meter.

The modem provides a transparent data link to the HES, through the LTE cellular network. The modem can send data by CSDData call (2G) also.

This is an ideal solution for remote readout of registers and consumption data of connected electricity meters. The modem can be snapped into the meter's terminal cover.

The device is configurable with the WM Term® software and remotely manageable with the Device Manager® software (order option).

MAIN FEATURES

- Cellular module options: LTE Cat.4 / 3G / 2G, LTE Cat.1 / 2G with CSD and LTE Cat.M / NB with 450MHz support
- mini SIM (2FF type, push-insert) / eSIM (chip SIM) - order option
- The modem can be assembled into the meter's enclosure and fastened securely (sealed and separated from meter)
- DC power supply from the meter
- RS232 or RS485 transparent data connection (RJ45) by order
- Compatible with Itron® ACE6000, ACE8000, SL7000 (3W) and EM600(E620) electricity meters
- Supercapacitor option (LastGASP SMS: from power outage)
- „Pull” data sending (for HES request)
- IEC 62056-21 protocol, transparent data transmission, TLS option
- WM Term® application (mass configuration, FW refresh)
- Device Manager® software (secure remote configuration, & FW updates, modem pushed vital signal monitoring in the NMS)



APPLICATION

- UTILITY COMPANIES
- SMART METERING
- METERING DATA TRANSMISSION TO HES
- INDUSTRIAL MEASUREMENT



DESIGN AND OUTFIT

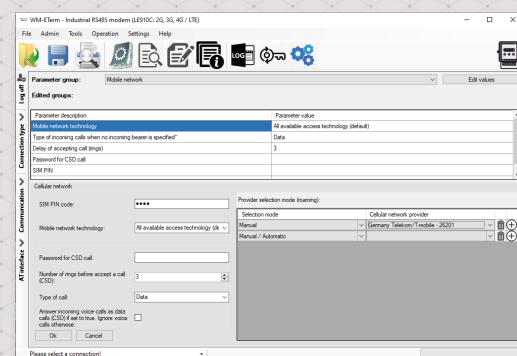
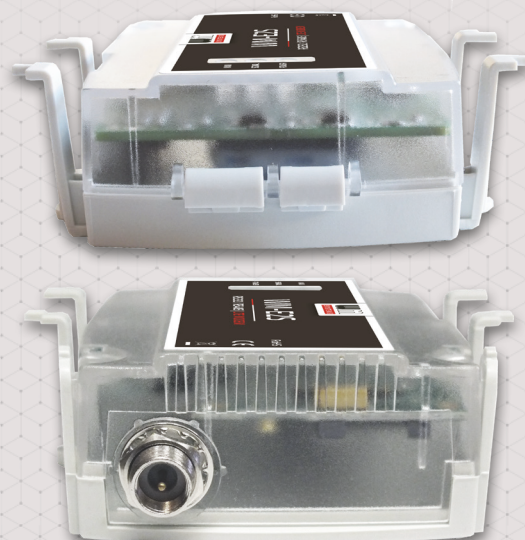
- The modem is installable into the meter enclosure
- RS232 or RS485 interface connection (RJ45) - it can be ordered with fixed connection or free-to-jumper outfit
- DC power supply by meter (via RJ45 connector)
- SMA antenna connector outfit
- RJ45 cable (for meter connection / configuration)

OPERATION & COMPATIBILITY

- Compatibility with Itron® ACE6000, ACE8000, SL7000 and EM600(E620) meters
- IEC 62056-21 protocol, transparent data transmission
- „Pull“ data sending (for HES request), CSData call (2G)
- Immediate LastGASP SMS notification (from power loss)
- DCD control

ACCESSORIES (ORDER OPTION)

- USB Dongle for modem configuration
- LTE antenna (SMA, 50 Ohm)
- Supercapacitor for Last GASP notification
- TLS encryption, RTC backup battery
- WM Term® software (mass fw updates, reconfiguration)
- You can manage the device by Device Manager® software



WM-E2S®		LTE Cat.4	LTE Cat.1	LTE Cat.M / Cat.NB		
Power Voltage / Nominal Frequency		· 8-16V DC +5%/-5% (via RJ45 interface)				
Power Consumption / Current		· Min: 20mA · Max: 120mA / Max. consumption: 12W @ 10V				
Communication module	Cellular technology	· LTE Cat.4 / 3G / 2G, CSD		· LTE Cat.M / Cat.NB	· LTE Cat.M / Cat.NB / 450MHz	
	Internet module	· Quectel EC200A-EU		· Quectel BC95-M2	· Quectel BC95-M4	
	Bands / Frequency (MHz)	· LTE Cat.4: B1(2100) / B3(1800) / B5(850) / B7(2600) / B8(900) / B20(800) / B28(700) / B38(2600) / B40(2300) / B41(2500) · 3G: B1(2100) / B5(850) / B8(900) · 2G: B3(1800) / B8(900)		· LTE Cat.1: B1(2100) / B3(1800) / B7(2600) / B8(900) / B20(800) · 2G: 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) / B31(450) / B66(1700) / B72(450) / B73(450) / 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) / B28(700) / B66(1700) / B71(600) / B85(700)	
	Speed (DL/UL)	· LTE: 150/50 Mbps · WCDMA: 21/5.76 Mbps · EDGE: 384/384 kbps · 2G: 85.6/85.6 kbps		· LTE Cat.M: 588/1119 kbps · LTE Cat.NB2: 127/158.5 kbps · LTE Cat.NB1: 32/70 kbps	· LTE Cat.M: 588/1119 kbps · LTE Cat.NB2: 127/158.5 kbps · LTE Cat.NB1: 32/70 kbps	
	SIM card slot	· mini SIM card slot (2FF type, push-insert SIM) / eSIM (chip SIM) - order option				
	Antenna connector	· External antenna connector (SMA, 50 Ohm)				
	Compatibility	Meter type	· Itron® EM600 (E620), ACE6000, ACE8000 type and ACE SL7000 (3W type) electricity meters			
Interfaces	Connectors	· RJ45 (RS232 / RS485 compatible - jumperable) - between 300..115 200 baud meter connection · Power supplied by meter (8-16V DC power)				
Operation	Protocol / Transmitting	· EN 62056-21, Mode C - 300/1200/2400/4800/9600 baud, auto., serial data speed · "Pull" data sending · CSData call (2G)				
	Control	· DCD Control				
	Configuration	· WM Term® free configuration software (local/remote single or mass parameter configuration, firmware update) · Device Manager software - order option (secure remote configuration, secure firmware updates, modem pushed vital signal monitoring in the NMS platform)				
Security	Indication	· 3 status LEDs				
	Watchdog	· Auto-recovery and restart on network loss or freeze				
	Supercapacitor / LastGASP	· Supercapacitor presence (for Last GASP immediate SMS notification from power outages) - order option / in case of full power exhausting, the charging requires 2-5 minutes to				
	Encryption	· TLS encryption (order option) · RTC backup battery (order option)				
Certifications	Secure access	· Configuration password, Syslog, Remote access over TCP and CSD				
	FOTA	· Secure FOTA updates for 5 years				
	Standards	· CE, RoE-DA, EU CRA ready, RoHS · Health & Safety, LVD, MPE, EMC, Climate, IP rating				
Environment	Operating / Storage	· Operation: between -40°C and +70°C at 5-95% rel.humidity, non-condensing · Storage: between -40°C and +85°C at 5-95% rel.humidity, non-condensing				
Construction	Enclosure	· IP31 plastic transparent case, fits to meter (mountable inside the E-meter terminal cover)				
	Dimension / Weight	· 108 x 87 x 30mm · 73gr				

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