

## Cellular modem specifically designed for Itron® ACE6000, ACE8000 and ACE SL7000 electricity meters

### UPGRADE THE MODEMS NOT THE SMART METERS!

All around the world mobile operators are shutting down 2G/3G networks in order to give way to 5G. Companies that operate smart meters with 2G/3G connectivity must plan the migration to the latest 4G LTE network which is well-positioned to dominate smart metering communication technologies in the upcoming years. The migration from GSM / UMTS to LTE has many advantages, for example, a shorter readout time due to the high-speed network with low latency.

Utilities have two options for migration: replace the meters or upgrade the modems! The 1st option comes with a high CAPEX, while the 2nd option is a future-proof solution that reduces TCO.

This cellular modem represent a future-proof migration solution to the LTE network with the same functionality, on higher data speed. Configuration and firmware updates can be done remotely, minimizing the need for costly site visits. As part of an AMR/AMI solution, the modem provides a stable, transparent connection to the meter through which the HES can pull consumption data from the meter.

Our cellular modem works smoothly and is fully compatible with Itron® ACE6000, ACE8000 and SL7000 electricity meters. The case was designed to fit under the terminal cover of the meter and is fully compliant with Itron standards. It connects to the meter through its RS232 or RS485 connector. The modem can send data by CSDData call (2G) also. It can be mounted externally on a DIN-rail. It is fully configurable by our powerful and easy-to-use WM-E Term® software. The ideal solution for remote readout of registers and consumption data of the connected electricity meters.



### MAIN FEATURES

- Module order options:
  - LTE Cat.1 module with 2G or 3G/2G „fallback” feature
  - LTE Cat.M / Cat.NB module with 2G „fallback” feature option
- It can be assembled into the meter's enclosure and fastened securely (sealed and separated from meter)
- Compatible with the Itron® ACE6000, ACE8000 and SL7000 (3W) electricity meters
- DC power supply from the meter
- RS232 / RS485 transparent data connection (RJ45)
- „Pull” data sending (for HES request), CSDData call
- Immediate alarm- and SMS notification
- Supercapacitor (against power outages)
- Remote & safe firmware updates

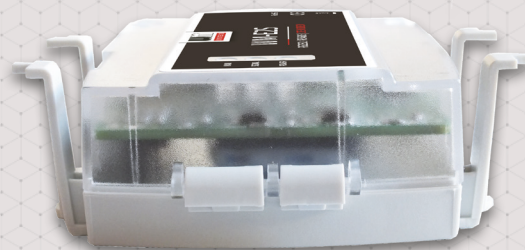
### APPLICATION

- 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
- Supercapacitor for Last GASP notification
- SMA or FME antenna connector outfit (by order request)

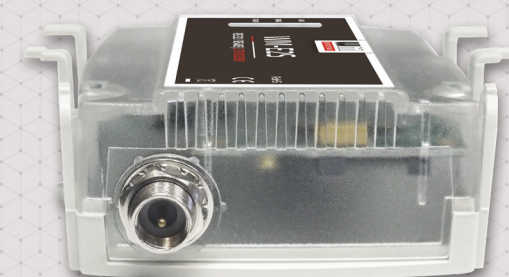


## COMPATIBILITY

- Itron® ACE6000, ACE8000 and ACE SL7000 meters

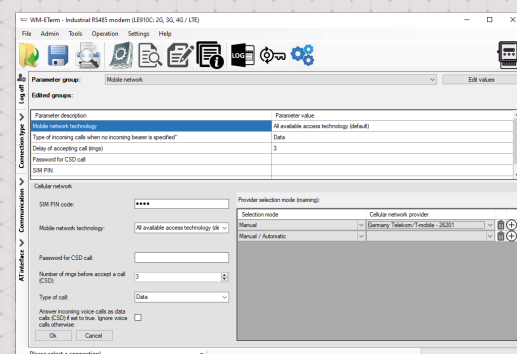
## OPERATION

- IEC 62056-21 protocol, transparent data transmission
- „Pull“ data sending (for HES request)
- CSD data call (2G)
- Immediate SMS notification, DCD control



## ACCESSORIES (ORDER OPTION)

- RJ45 cable (for meter connection / configuration)
- Optional SMA / FME antenna (50 Ohm) - upon request
- DIN-rail adapter - for external modem installation
- WM-E Term® software (mass fw updates, actualization of settings)
- You can manage the device by Device Manager® software



WM-E2S®		LTE Cat.1		LTE Cat.M / Cat.NB		
Power Voltage / Nominal Frequency		-8-12V DC +5%/-5% (via RJ45 interface)				
Power Consumption / Current		-40mA (Cat.NB), 100mA (2G/3G), 200mA (LTE Cat.M), 330mA (LTE) @ 10 VDC / Max. consumption: 2W				
Communication module	Cellular technology	-LTE Cat.1 - 3G/2G "fallback"	-LTE Cat.1 - 2G "fallback"	-LTE Cat.M / Cat.NB	-LTE Cat.M / Cat.NB	-LTE Cat.M / Cat.NB - 2G "fallback"
	Internet module	-Telit LE910CI-EUX	-Telit LE910SI-EA	-Telit ME910CI-EI	-Telit ME910CI-WI	-Telit ME910CI-WW
	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)	-LTE-FDD: B1(2100) / B3(1800) / B5(800) / B7(2600) / B8(900) / B20(800) / B28(700) -LTE-TDD: B38(2600) / B40(2300) / B41(2500) -2G: B3(1800) / B8(900)	-LTE M1 & NB1: 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) -2G: B2(1900) / B3(1800) / B5(850) / B8(900)	-LTE: B1(2100) / B2(1900) / B3(1800) / B4(1700) / B5(850) / B8(900) / B12(700) / B13(700) / B14(700) / B18(800) / B19(800) / B20(800) / B25(1900) / B26(850) / B27(800) / B28(700) / B66(1700) / B71(600) / B85(700) -2G: B2(1900) / B3(1800) / B5(850) / B8(900)
	Speed (DL/UL)	-LTE Cat.1: 10/5 Mbps -HSPA+: 42 Mbps -GPRS: 80/40 kbps	-LTE Cat.1: 10/5 Mbps -GPRS: 80/40 kbps	-LTE M1 UL/DL: 375/300 kbps -LTE NB1 UL/DL: 20-250/250 kbps	-LTE Cat.M: 1 Mbps/588 kbps -LTE Cat.NB: 160/120 kbps	-LTE Cat.M: 1 Mbps/588 kbps -LTE Cat.NB: 160/120 kbps -2G (EGPRS): 210/264 kbps
	SIM card slot	- mini SIM card slot (2FF type)				
	Antenna connector	- External antenna connector (SMA / FME, 50 Ohm)				
	Compatibility	Meter type	- Itron® ACE6000, ACE8000 type and ACE SL7000 (3W type) electricity meters			
Interfaces	Connectors	- RJ45 (RS232 / RS485 compatible) data connection - jumperable - Power supplied by meter (10V DC power)				
	Protocol / Transmitting	- EN 62056-21, Mode C - 300/1200/2400/4800/9600 baud, auto., serial data speed - „Pull“ data sending - CSD data call (2G)				
Operation	Notification	- Immediate alarm notification (in case of power outage) - DCD Control				
	Configuration	- WM-E Term® tool (local/mass parameter configuration, local/mass firmware updates) - AT commands - Device Manager software (order option)				
	Indication	- 3 status LEDs				
	RTC Backup Battery*	- Power outage <= 1 hour - After 1 hour the RTC will be supplied from the meter				
Environment	Supercapacitor	- Supercapacitor (for Last GASP SMS notification from power outages) / in case of full power exhausting, the charging requires 2-5 minutes to operate)				
	Operating / Storage	- from -40°C to +70°C at 95% rel.humidity / - from -40°C to +85°C at 95% rel.humidity				
Construction	Enclosure	- IP21 plastic transparent case, fits to meter				
	Dimension / Weight	- 108 x 87 x 30mm - 73gr				



The presented images on the datasheet are for illustration purposes only. The details on the data sheet are for general information purposes only. WM Systems LLC cannot be held liable for erroneous information on the datasheet. The announced information are subject to change without notice. For more details, please contact us.