

WM-E2S PME-PMI **WM** SYSTEMS

Cellular modem specifically designed for PME-PMI 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.

Our company develops cellular modems that work smoothly and are fully compatible with 3-phase PME-PMI electricity meters.

Our cellular modems 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. This external modem can be mounted on DIN-rail and connected to the meter through an RJ45 cable. The modem can be configured to "push" the read out the data (current consumption, event log, load profile) from the connected meter and send it to the HES periodically via Internet (by using an APN) at the pre-programmed intervals. Data sending can be also triggered by an alarm (e.g. power outage, cover removal event).

The modem can be accessed remotely through the cellular network. The modem can also read or modify certain parameters of the meter remotely via WM-E Term[®] configuration software.



MAIN FEATURES

- Cellular module options:
 - LTE Cat.4 / 3G / 2G or LTE Cat.1 with 2G „fallback“
 - LTE Cat.M / Cat.NB with 2G „fallback“
- External modem in a compact design (separated from the meter)
- It can be fastened securely by its DIN-rail adapter
- DC power supply from the meter
- RS232 meter connection (RJ45)
- Compatibility with PME-PMI[®] electricity meters (Itron[®] ACE6000, Landis+Gyr[®] ZMG416, Enedis[®] NOI CPT-36E type meters)
- IEC 62056-21 protocol, transparent mode, CSData call
- Optional „push“ mode (FTP, IEC or SMS triggered)
- Optional TLS encryption
- Supercapacitor option (for power outage), LastGASP notification
- Remote & safe firmware updates, WM-E Term[®] configuration tool
- Device Manager[®] software (order option)

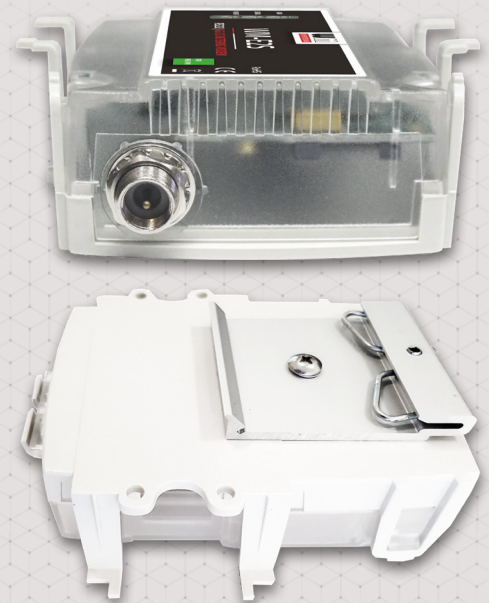
APPLICATION

- UTILITY COMPANIES
- SMART METERING
- INDUSTRIAL MEASUREMENT



DESIGN AND OUTFIT

- External modem, compact design (separated from meter)
- It can be fastened securely by its DIN-rail adapter
- RS232 interface (RJ45 connection for meter connection, meter configuration)
- DC power by meter
- External FME or SMA antenna interface (50 Ohm)
- Compatibility with the PME-PMI® meters (Itron® ACE6000, Landis+Gyr® ZMG416, Enedis® NOI CPT-36E type meters)

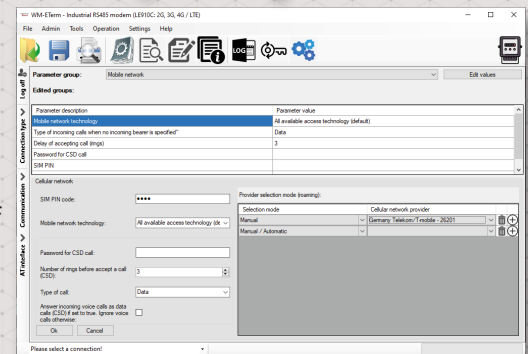


OPERATION

- IEC 62056-21 protocol, transparent data transmission
- „Push” mode (FTP or IEC sending, SMS triggered)
- CSDData call, TLS encryption (optional)
- Immediate alarm SMS notification (LastGASP power loss)

ACCESSORIES (ORDER OPTIONS)

- RJ45 cable (1m long for configuration / meter connection)
- USB Dongle for modem configuration
- External FME / SMA antenna (50 Ohm)
- 35mm DIN-rail adapter (by anodized aluminum with spring steel wire)
- Supercapacitor (for LastGASP SMS notification in case of power outage, status changes)
- WM-E Term® software (mass FW updates, actualization of settings)
- You can manage the device by Device Manager® software



WM-E2S PME-PMI®		LTE Cat.4	LTE Cat.1	LTE Cat.M / NB
Power	Voltage	• 8-16V DC +5%/-5% (via RJ45 interface)		
	Current/ Consumption	• 40mA (Cat.NB), 100mA (2G), 180mA (3G), 200mA (LTE Cat.M), 330mA (LTE) @ 10 VDC / Max. consumption: 3.3W		
Communication module	Cellular technology	• LTE Cat.4 / 3G / 2G	• LTE Cat.1 with 2G "fallback"	• LTE Cat.M / Cat.NB with 2G "fallback"
	Internet module	• Quectel EC200A-EU	• Quectel EC915N-EU	• Quectel BC95-M3
	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) / B5(850) / 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) / B66(1700) / 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) / B78(700) • 2G: B2(1900) / B3(1800) / B5(850) / B8(900)
	Speed (DL/UL)	• LTE: 150/50 Mbps • WCDMA: 21/5.76 Mbps • EDGE: 384/384 kbps • 2G: 85.6/85.6 kbps	• LTE: 10/5 Mbps • EDGE: 236.8/236.8 kbps • 2G: 85.6/85.6 kbps	• LTE Cat.M: 588/119 kbps • LTE Cat.NB2: 127/158.5 kbps • LTE Cat.NB1: 32/70 kbps • EDGE: 296/236.8 kbps • GPRS: 107/85.6 kbps
	SIM card slot	• mini SIM card (2FF type, push-insert SIM)		
	Antenna connector	• External antenna connector (SMA or FME, 50 Ohm - by order)		
Compatibility	Meter type	• PME-PMI® electricity meters (Itron® ACE6000, Landis+Gyr® ZMG416, Enedis® NOI CPT-36E meter types)		
Interfaces	Connectors	• RS232 interface (RJ45), transparent communication • Power supplied by meter (8-16V DC power, 10V DC as normal)		
	Protocol / Transmitting	• EN 62056-21, Mode C - 300-115200 baud, auto. 9600 baud, serial data speed • „Pull” mode, transparent data sending • CSDData call • Optional TLS encryption		
Operation	Notification	• Immediate alarm SMS notification (in case of power outage) - order option		
	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* Supercapacitor	• Power outage <= 1 hour • After 1 hour the RTC will be supplied from the meter • Supercapacitor (for Last GASP SMS notification from power outages) - order option		
Environment	Operating / Storage	• -40°C to +70°C at 95% rel.humidity • -40°C to +85°C at 95% rel.humidity		
	Design	• External modem, compact design (separated from meter)		
Construction	Enclosure	• Assembled into non-conductive plastic enclosure • IP31 protection		
	Fastening	• Fastened by the assembled Hammond 35mm DIN-rail adapter (anodized aluminum with spring steel wire, 1427DIN standard) for mounting		
	Dimension / Weight	• 108 x 88 x 38mm (with DIN-rail adapter) • 103gr		



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