WM-E2SL

WM SYSTEMS

Cellular modems for Landis+Gyr® E350, E450, E550 electricity meters

Cellular modem designed specifically for the remote automatic meter reading of Landis+Gyr® E350, E450, E550 (type ZxD 3xx, ZxD 4xx, ZxG 3xx, ZxG 4xx) electricity meters.

The device can be ordered with various cellular module types. 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 Landis+Gyr.

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 the modem provides a stable, transparent connection to the meter through which the HES can pull the consumption data from the meter.
The modem can send data by CSData call (2G) also.

This is an ideal solution for remote readout of registers and consumption data of the connected electricity meters.

The modem is configurable with the WM-E Term® software.

MAIN FEATURES

- Module order options:
  - 2G
  - LTE Cat.1 with 2G or 3G/2G „fallback" feature
  - LTE Cat.M / Cat.NB / 450MHz with optional 2G „fallback"
- It fits perfectly under the terminal cover of the meter and fastened securely (sealed and separated from meter)
- Design & connectivity meets with meter standards
- Compatibility with Landis+Gyr® Zxx 3xx, Zxx 4xx type electricity meters (E350, E450, E550 models)
- DC power supply from the meter
- RS232 transparent data connection (RJ45)
- „Pull" data sending (for HES request), CSData call
- Immediate alarm- and SMS notification
- Supercapacitor (for Last GASP SMS notification)
- Self-recovery: embedded watchdog, self recover from the faults
- Remote & safe firmware updates
- WM-E Term® configuration tool (mass FW updates, configuration)
- Device Manager® software (order option)

APPLICATION

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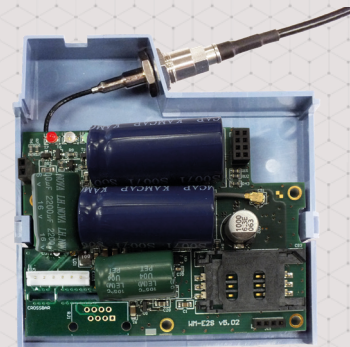- INDUSTRIAL MEASUREMENT

WM-E2SL

DESIGN AND OUTFIT

- The modem is installable into the meter enclosure
- RS232 interface connection (RJ45 connector)
- DC power supply by meter
- Supercapacitor for Last GASP notification
- SMA or FME antenna connector outfit (by order request)

COMPATIBILITY

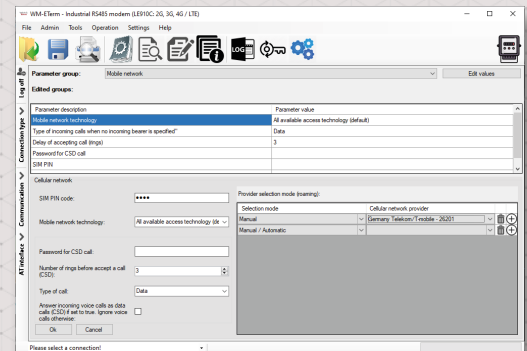- Landis+Gyr® E350, E450, E550 (ZxG3xx, ZxG4xx, ZxD3xx, ZxD4xx) type meters

OPERATION

- IEC 62056-21 protocol, transparent data transmission
- „Pull" data sending (for HES request)
- CSData call (2G)
- Immediate SMS notification

ACCESSORIES (ORDER OPTION)

- Optional SMA / FME antenna (50 Ohm) - upon request
- WM-E Term® software (mass fw updates, actualization of settings)
- You can manage the device by Device Manager® software

WM-E2SL®		2G	LTE Cat.4	LTE Cat.1		LTE Cat.M / Cat.NB	
Power Voltage		8-16V DC +5%/-5% (via RJ45 interface)					
Power 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	2G (GSM/GPRS)	LTE Cat.4 / 3G / 2G	LTE Cat.1 with 2G "fallback"	LTE Cat.1 / 3G / 2G	LTE Cat.M / Cat.NB with 2G "fallback"	LTE Cat.M / Cat.NB / 450MHz
	Internet module	Quectel M95-R	Quectel EC200A-EU	Quectel EG915N-EU	Quectel EG91-EX	Quectel BG95-M3	Quectel BG95-M4
	Bands / Frequency (MHz)	• 2G: B2(1900) / B3(1800) / B5(850) / B8(900)	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.1: B1(2100) / B3(1800) / B7(2600) / B8(900) / B20(800) / B28(700) • 3G: B1(2100) / B8(900) • 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) / B85(700)	• 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) / B31(450) / B66(1700) / B72(450) / B73(450) / B85(700)
	Speed (DL/UL)	• 2G: 85.6/85.6 kbps	• 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: 10/5 Mbps • UMTS: 42/5.76 Mbps • WCDMA: Max 384/384 kbps • EDGE: 296/236.8 kbps • GPRS: 107/85.6 kbps	• LTE Cat.M1: 588/1119 kbps • LTE Cat.NB2: 127/158.5 kbps • LTE Cat.NB1: 32/70 kbps • EDGE: 296/236.8 kbps • GPRS: 107/85.6 kbps	• LTE Cat.M1: 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)					
	Antenna connector	• External antenna connector (SMA / FME, 50 Ohm) - order option					
Compatibility	Meter type	• Landis+Gyr® E350, E450, E550 type (ZxG3xx, ZxG4xx, ZxD3xx, ZxD4xx) meters					
Interfaces	Connectors	• RJ45 (RS232 compatible) • 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)					
	Notification	• Immediate alarm notification (in case of power outage)					
	Configuration	• WM-E Term® tool (local/mass parameter configuration, local/mass firmware update) • 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					
	Supercapacitor	• Supercapacitor (for Last GASP SMS notification from power outages) / in case of full power exhausting, the charging requires 2-5 minutes to operate)					
Environment	Operating / Storage	• from -40℃ to +70℃ at 95% rel.humidity / - from -40℃ to +85℃ at 95% rel.humidity					
Construction	Enclosure	• IP21 plastic transparent case, fits to meter					
	Dimension / Weight	• 86 x 86 x 30mm (without antenna and connector) • 106gr					

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