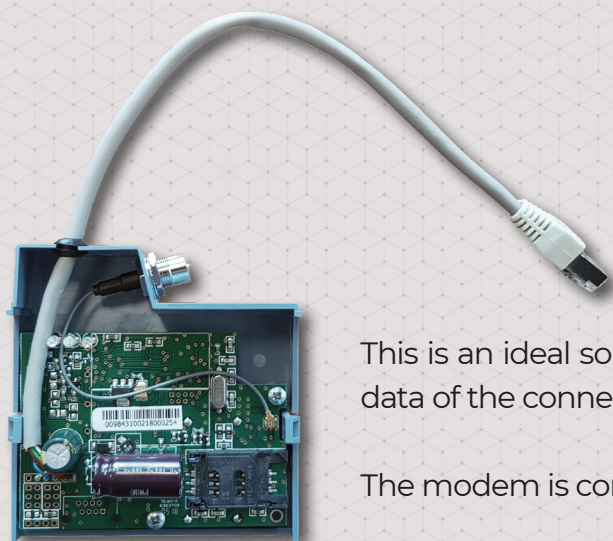# WM-E2SL

WM SYSTEMS

Cellular modems for Landis+Gyr® E350, E450, E550 electricity meters (type ZxG 3xx, ZxG 4xx) - CDMA 450 / 2G / 3G / 4G / LTE Cat.M / Cat.NB

Cellular modem designed specifically for the remote automatic meter reading of Landis+Gyr® E350, E450, E550 (type Zxx 3xx and Zxx 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 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, plus download of load profile.

The modem is configurable by our WM-E Term® software.

MAIN FEATURES

- 2G, 3G, 4G LTE Cat.1 / Cat.4, LTE Cat.M / Cat.NB wireless modules (order option) - with „fallback" feature
- 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 metrology
- RS232 transparent data connection (RJ45)
- „Pull" data sending (for HES request), CSData call
- Immediate alarm- and SMS notification
- Remote & safe firmware updates
- Downloadable WM-E Term® configuration tool
- Supercapacitor option (for Last GASP SMS notification)
- Self-recovery: embedded watchdog, self recover from the faults, ensuring normal operation of the device

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 (order option)
- SMA or FME antenna connector outfit (by order request)
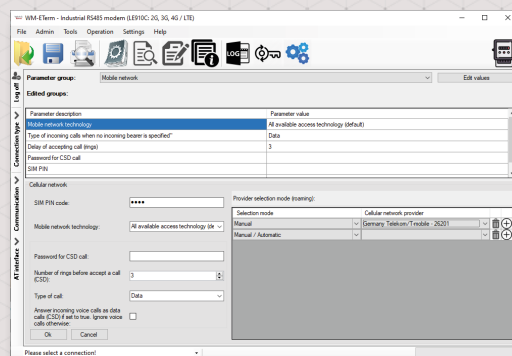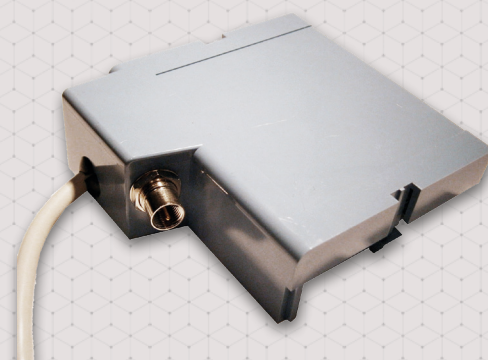
COMPATIBILITY

- Landis+Gyr® ZxG3xx, ZxG4xx, ZxD3xx, ZxD4xx (E350, E450, E550 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	3G	LTE Cat.1		LTE Cat.M / Cat.NB
Power Voltage		· 8-12V DC +15%/-15% (via RJ45 interface)				
Power Current / Consumption		· 40mA (Cat.NB), 100mA (2G/3G), 200mA (LTE Cat.M), 330mA (LTE) @ 10 VDC / Max. consumption: 2W				
Communication module	Cellular technology	· GSM/GPRS	· GSM/GPRS/EDGE, UMTS/HSPA+	· LTE Cat.1, 3G/2G "fallback"	· LTE Cat.1 4G - 3G/2G "fallback"	· NB / LTE-M
	Internet module	· Telit GE910-QUAD V3	· Telit HE910-GL	· Telit LE910C1-EUX	· Telit LE910C1-EU	· Telit ME910C1-E1
	Bands / Frequency (MHz)	· GSM/GPRS: B5(850) / B8(900) / B3(1800) / B2(1900)	· GSM/GPRS/EDGE: 850/900/1800/1900 · UMTS/HSPA: 800/850/900/ AWS1700/1900/2100	· LTE Cat.1: 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: B1(2100) / B3(1800) / B7(2600) / B8(900) / B20(800) / B28A(700) · UMTS: B1(2100) / B3(1800) / B8(900) · GSM/GPRS: B3(1800) / B8(900)	· LTE M1 & NB1: B3(1800) / B8(900) / B20(800)
	Speed (DL/UL)	· GPRS: 80/40 kbps	· HSPA Cat.8/Cat.6: 7.2/5.7 Mbps · 3G: 384/384 kbps · 2G: 236/236 kbps	· LTE Cat.1: 10/5 Mbps · HSPA+: 42 Mbps · GPRS: 80/40 kbps	· LTE FDD Cat.1 rel. 9: 10/5 Mbps · 3G: HSPA+ · 2G	· LTE M1 UL/DL: 375/300 kbps · LTE NB1 UL/DL: 20-250/250 kbps
	SIM card slot	· mini SIM card slot (2FF type)				
	Antenna connector	· External antenna connector (SMA / FME, 50 Ohm)				
Compatibility	Meter type	· Landis+Gyr® E350, E450, E550 type (ZxG3xx, ZxG4xx), ZxD3xx, ZxD4xx) meters				
Interfaces	Connectors	· RJ45 (RS232 compatible) · Power supplied by meter (10V 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	· Order option (soldered to PCB, against power outages - in case of full power exhausting, the charging requires 2-5 minutes to operate)				
Environment	Operating / Storage	· from -30℃* to +60℃ at 95% rel.humidity (*in case of using TLS: from -20℃ to +60℃) · -30℃ 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				

CE