UNIVERSAL / INDUSTRIAL MODEM

WM SYSTEMS

Universal cellular modem for industrial automation
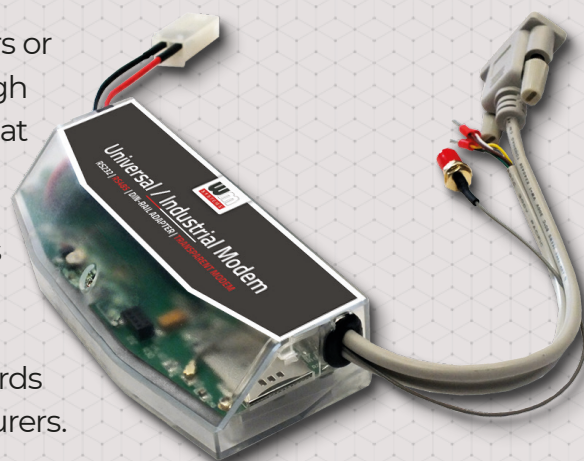
UPGRADE THE MODEMS NOT THE SMART METERS!

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.

The modem is easily mountable on DIN-rail and operates from a 230V AC external power supply.

The case design and interfaces meet the industry standards and the strict requirements of the large meter manufacturers.

This device allows us to connect all kinds of industrial measurement systems with a central server by creating a transparent data link between a local system and an IP address or HES.

MAIN FEATURES

- Wireless module order options:
  - 4G LTE Cat.1 – 2G or 2G/3G "fallback"
  - LTE Cat.M / Cat.NB with optional 2G "fallback"
- Design & connectivity meets with meter standards
- RS232 and RS485 port (connector outfit by order)
- Transparent link / IEC 62056-21 protocol
- Installable to any meter as universal, external modem
- It can be mounted on a DIN-rail (by its adapter)
- Power supply (AC) is required (optional DC can be used)
- Transparent data transfer (client and server mode)
- Supercapacitor option (for LastGASP SMS notification)
- Remote, safe firmware updates
- WM-E Term® configuration tool

APPLICATION

- UTILITY COMPANIES
- SMART METERING
- INDUSTRIAL USERS
- MEASUREMENT SYSTEMS

UNIVERSAL / INDUSTRIAL MODEM

DESIGN AND OUTFIT

- Installable to any meter as universal, external modem
- RS232 interface connector options: D-SUB9 / RJ12
- RS485 interface connector options: 2- / 4-wire / RJ12
- AC power connector (for external mains) - optional DC
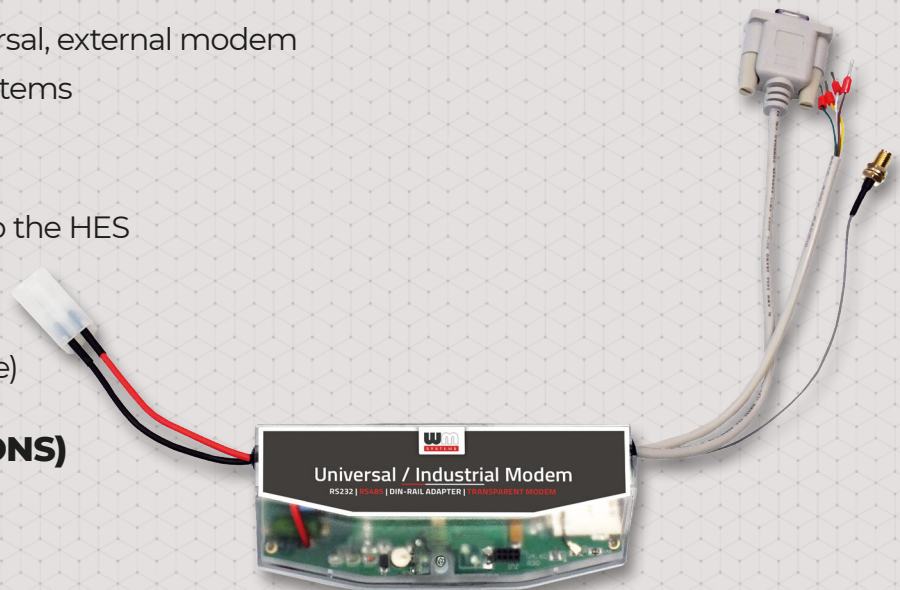- Supercapacitor option

COMPATIBILITY

- Installable to any meter as universal, external modem
- Industrial and measurement systems

OPERATION

- Transparent data transmission to the HES
- Optional CSData call (2G)
- Immediate SMS notification
  (Last GASP alert of power outage)

ACCESSORIES (ORDER OPTIONS)

- AC power connector
- SMA antenna (50 Ohm)
- DIN-rail adapter
- WM-E Term® software (mass firmware updates, reconfiguration of settings)
- You can manage the device by Device Manager® software

Universal / Industrial Modem®		LTE Cat.1		LTE Cat.M / Cat.NB		
Power Voltage / Nominal Frequency		~100-240V AC +15%/-15% , 50-60Hz +/- 5% / Optional DC power (order option) can be connected: Input Voltage: 8...28V DC				
Power Consumption / Current		· Average: 2.9W, 230VAC · Stand-by: 24mA 100V, 12mA 230V / Average: 30mA 100V, 15mA 230V / Max: 0.15A @ 230V / DC: Input Power: max 5W (peak)				
Communication module	Mobile Standards	· 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"
	Module type	· Telit LE910C1-EUX	· Telit LE910S1-EA	· Telit ME910C1-E1	· Telit ME910G1-W1	· Telit ME910G1-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)	· 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 (2FF type, push-insert SIM)				
	Antenna connector	· External antenna connector (SMA, 50 Ohm)				
Compatibility	Meter type	· Installable to any meter as universal, external modem · Industrial and measurement systems				
Interfaces	Connectors	· RS232 (DSUB-9 / or RJ12 connector) - type upon request · RS485 (2-wire/4-wire / RJ12 type connector) - type upon request · Power supplied by meter (AC power - 2-pin ferrule connector) · optional DC power input (order option)				
Operation	Protocol / Transmitting	· Transparent data transmission (Mode C - 300/1200/2400/4800/9600 baud serial bandwidth) · Optional CSD (2G) call				
	Notification	· Immediate alarm SMS notification (Last GASP for power outage)				
	Configuration	· WM-E Term® tool (local/remote single or mass parameter configuration, firmware update) · 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 (for Last GASP SMS notification of power outages)				
Construction	Temperature	· -40°C to +70°C at 95% rel.humidity · -40°C to +80°C at 95% rel.humidity				
	Enclosure	· IP21 plastic transparent casing, mountable into the meter enclosure · Optional DIN-rail mounting clips				
	Dimensions / Weight	· 162 x 66 x 30mm (without external antenna and connectors) · 98-130gr (depending on cabling and optional accessories)				

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