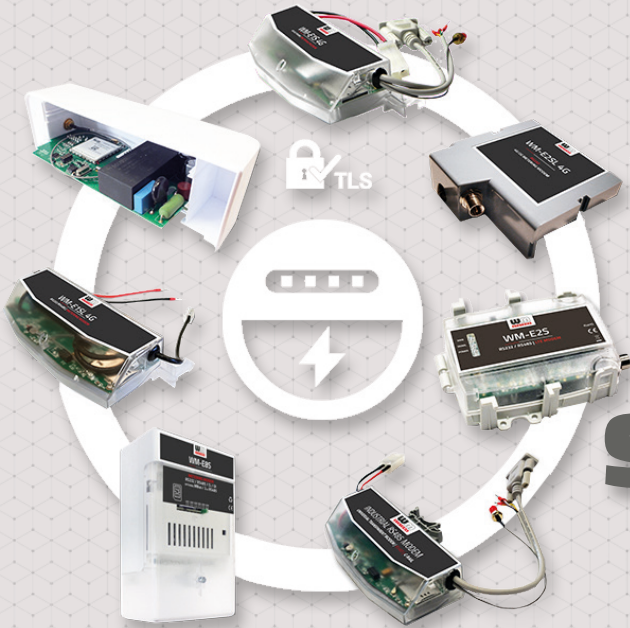


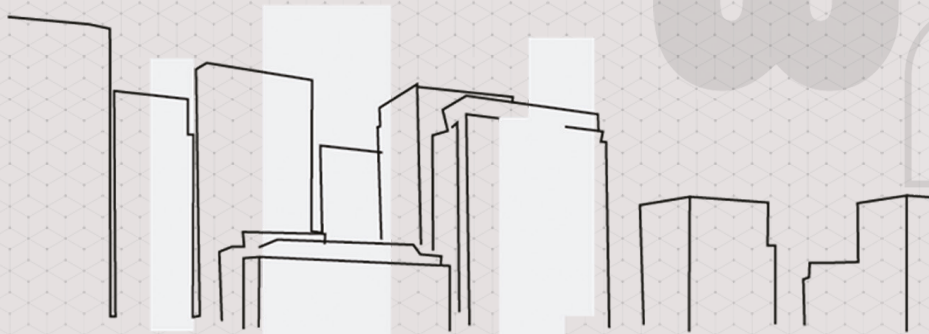


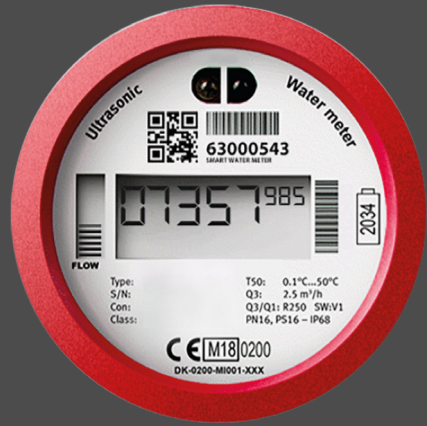
# WM SYSTEMS LLC



## PRODUCT CATALOG

## SMART METERING MODEMS





# CELLULAR PRODUCTS

## SMART METERING MODEMS

### MODEMS FOR ELECTRICITY, WATER, GAS METERING | RETROFIT MODEMS | ODM SERVICES

Smart Metering Modems offer remote meter readout via 4G LTE, LTE Cat.M cellular networks – with 2G/3G “fallback” feature. Upgrade your modem from 2G/3G to 4G LTE!

The heart of any remote meter reading solution is a modem that reads consumption data from the meters and sends it to a central server.

Our smart meter modems are designed specifically to be fully compatible with the electric meters of flagship manufacturers (Landis®, Itron®, Elster® / Honeywell®, EMH®, SAPHIR®, PME-PMI®, Ensor®).

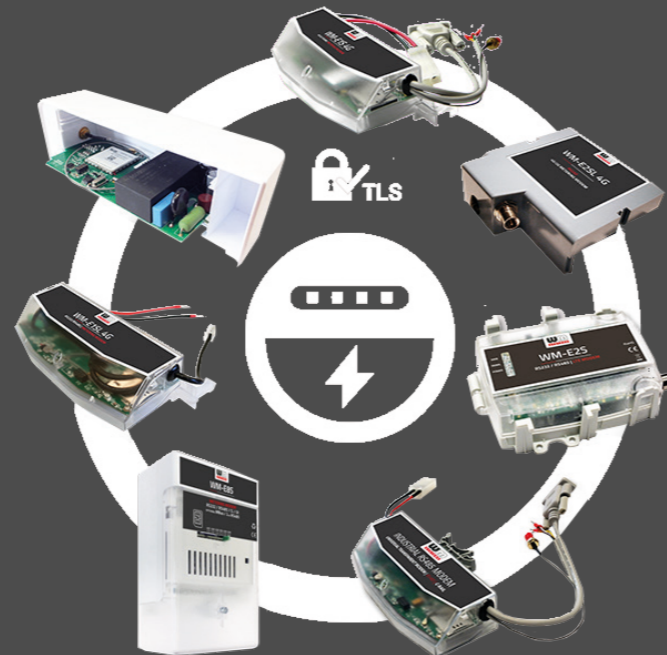
The hardware design and software satisfies the manufacturer’s requirements, the cases are designed to fit under the terminal covers, the power consumption the modem and connectivity are optimized for the specific meter etc. Smart electricity metering has never been so easy! Our modems can be integrated into any AMR/AMI solution easily.

Protect your investment! No need to change the currently used meters. Our wireless modems represent a future-proof solution to the LTE network with the same functionality. We offer our 4G modems with 2G „fallback” option, highest-level of encryption protocols (as certification-based TLS, AES) and remote management features.

The shutdown of 3G and 2G networks has put many meters at risk of obsolescence due to outdated modems. The high cost of meter replacement can be avoided by upgrading to a 4G or Cat.M retrofit smart modem. Contact us for more information on how to keep your meters operational and upgrade to the latest technology.

WM System has supplied more than 800k modems to the biggest utilities around the world to support their smart grid initiatives. We offer modems for electricity and water metering.

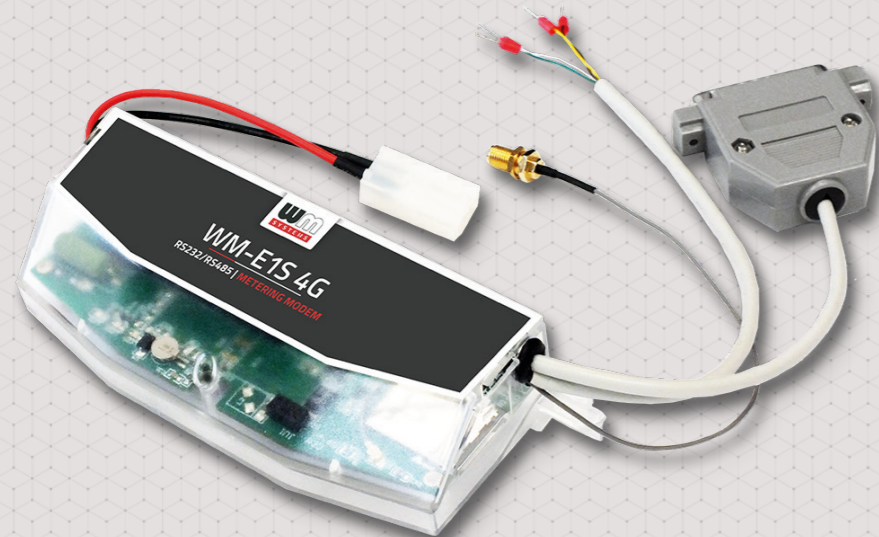
Product customization is available for our clients. Need a special protocol or port? Contact us!



# PRODUCTS / SMART METERING MODEMS



Cellular modem for Honeywell / Elster electricity meters. Available for LTE Cat.4, LTE Cat.1 / 2G / 3G, LTE Cat.4, Cat.M and Cat.NB networks



**Honeywell**



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# WM-E1S MODEM



## NETWORK

4G LTE Cat.1 / 3G / 2G  
4G LTE Cat.4 / 3G / 2G  
LTE Cat.M / Cat.NB / 2G  
mini SIM (2FF)

## CONNECTIVITY

AC power input (optional DC)  
RS232  
RS485  
2 Digital Inputs

## DESIGN

Design & connectivity meets with meter standard: Elster®, Honeywell® Alpha A1500, A1700, A1800, A1140/A1160  
Plastic, IP51 enclosure  
Installable in meter case

## FEATURES

Surge protection  
Supercapacitor option  
IEC 62056-21, "Pull" mode  
Embedded OS  
Device Manager platform

# HARDWARE

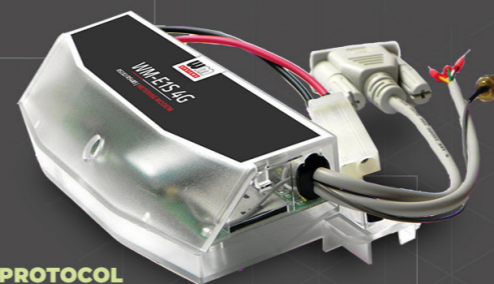
Mobile	Order options: ■ 4G LTE Cat.1 with 2G or 2G/3G "fallback" ■ 4G LTE Cat.4 / 3G / 2G ■ LTE Cat.M / Cat.NB with 2G "fallback"
Powering	~100-230V AC ±15%, 50-60Hz ±5% (AC power supplied by the meter via pigtail connector)
SIM	mini SIM (2FF)
Antenna connectors	1 external Antenna connector (SMA, 50 Ohm)
Ports	■ RS232 (D-SUB9/D-SUB25/RJ12/RJ45) ■ RS485 (2- or 4-wire/RJ12/RJ45) ■ 2 Digital Inputs
Status LEDs	3 status LEDs
Housing / Protection rating	Plastic (ABS) casing / IP51
Mount and Fastening	Installable inside the meter enclosure (by modem enclosure ears)
Operating Temperature	from -40°C to +70°C
Dimensions / Weight	162 x 66 x 30mm / 98-130 gr. (according to the chosen cabling)

# SOFTWARE

Operation system / User interface	Embedded, realtime operation system / Configuration software
Communication	IEC 62056-21 protocol, transparent data sending, „Pull“ mode CSDATA call (2G), Immediate alarm notification (power loss, input status)
Security	Watchdog, LastGASP, supercapacitor, surge protection from 4kV up to 12kV, TLS
Management platform	Device Manager® software (firmware refresh, configuration, QoS, reboot) - order option

## COMPATIBILITY

■ Elster® / Honeywell® Alpha A1500, A1700, A1800, A1140/A1160 meters



## PROTOCOL

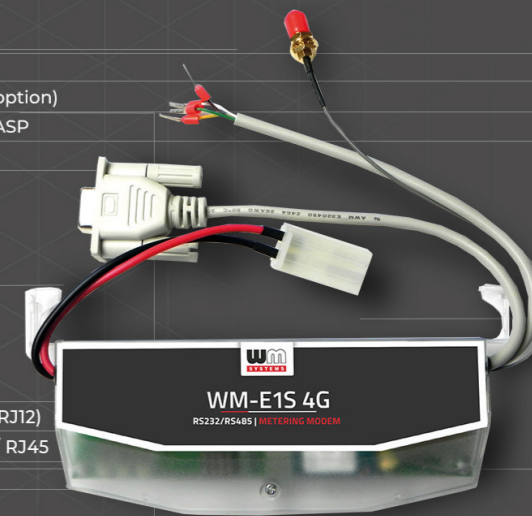
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## FEATURES

- ✓ TLS encryption
- ✓ AC powered (DC option)
- ✓ Supercap / LastGASP
- ✓ Device Manager
- ✓ Surge protection

## PORTS/PHYSICAL CONNECTORS

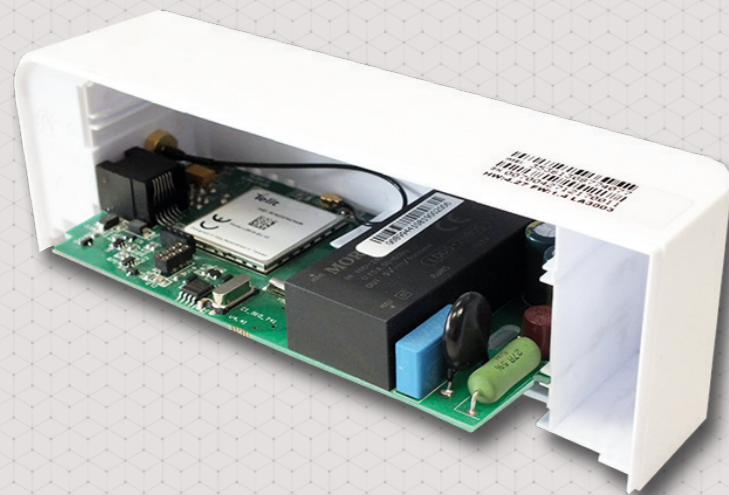
- :: RS232 (D-SUB9 / D-SUB25 / RJ12)
- :: RS485 (2- or 4-wire) / RJ12 / RJ45
- :: 2 Digital Inputs (optional)



# PRODUCTS / SMART METERING MODEMS



Cellular modem specifically designed for Honeywell AS electricity meters. Available for LTE Cat.1 / 2G / 3G, LTE Cat.4, Cat.M / Cat.NB networks.



**Honeywell**



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# WM-E3S MODEM



## NETWORK

4G LTE Cat.1 / 3G / 2G  
4G LTE Cat.4 / 3G / 2G  
LTE Cat.M / Cat.NB / 2G  
mini SIM (2FF)

## CONNECTIVITY

AC power input (internal)  
Internal serial connection  
Expansion options: ■ Customer Interface (RJ12, 6P6C) ■ MBUS interface ■ Ethernet interface ■ Relay board

## DESIGN

Design & connectivity meets with meter standard: Elster®, Honeywell® AS220/AS230/AS300, AS1440, AS3000/AS3500  
Plastic, IP21 enclosure

## FEATURES

Surge protection  
Supercapacitor option  
IEC 62056-21, HES "Pull", IEC push  
Embedded OS

# HARDWARE

Mobile	Order options: ■ 4G LTE Cat.1 with 2G or 2G/3G "fallback" ■ 4G LTE Cat.4 / 3G / 2G ■ LTE Cat.M / Cat.NB with 2G "fallback"
Powering	~100-230V AC ±15%, 50-60Hz ±5% (AC power supplied by the meter via internal connector)
SIM	mini SIM (2FF)
Antenna connectors	1 internal Antenna connector (SMA, 50 Ohm)
Expansions (order options)	■ Relay board (switch operation/tariff) ■ Customer Interface outfit (RJ12, 6P6C) ■ MBUS interface (terminal block) ■ Ethernet interface (RJ45)
Status LEDs	6 status LEDs
Housing / Protection rating	Plastic (ABS) casing / IP21
Mount and Fastening	Installable inside the meter enclosure (by modem enclosure rails)
Operating Temperature	from -25°C to +70°C
Dimensions / Weight	PCB: 124 x 55 x 35mm / 50 gr. (124 x 55 x 45mm / 90 gr. - with expansion)

# SOFTWARE

Operation system / User interface	Embedded, realtime operation system / Configuration software
Communication	IEC 62056-21 protocol Mode C, „Push“ data sending (FTP or IEC push, SMS trigger), „Pull“ data sending (for HES request), scheduled data sending or triggered by an alarm, DLMS IDIS2
Security	Watchdog, LastGASP, supercapacitor (optional), surge protection from 4kV up to 12kV
Management platform	Device Manager® software (firmware refresh, configuration, QoS, reboot) - order option

## FEATURES

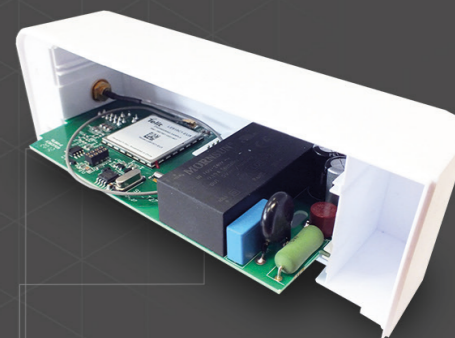
- ✓ Surge Protection
- ✓ Supercap / LastGASP
- ✓ Device Manager
- ✓ MBUS

## PROTOCOL

- ≡ Transparent
- ≡ DLMS (IEC 62056-21)

## COMPATIBILITY

- Elster® / Honeywell® AS220/AS230/ AS300, AS1400, AS3000/AS3500 meters



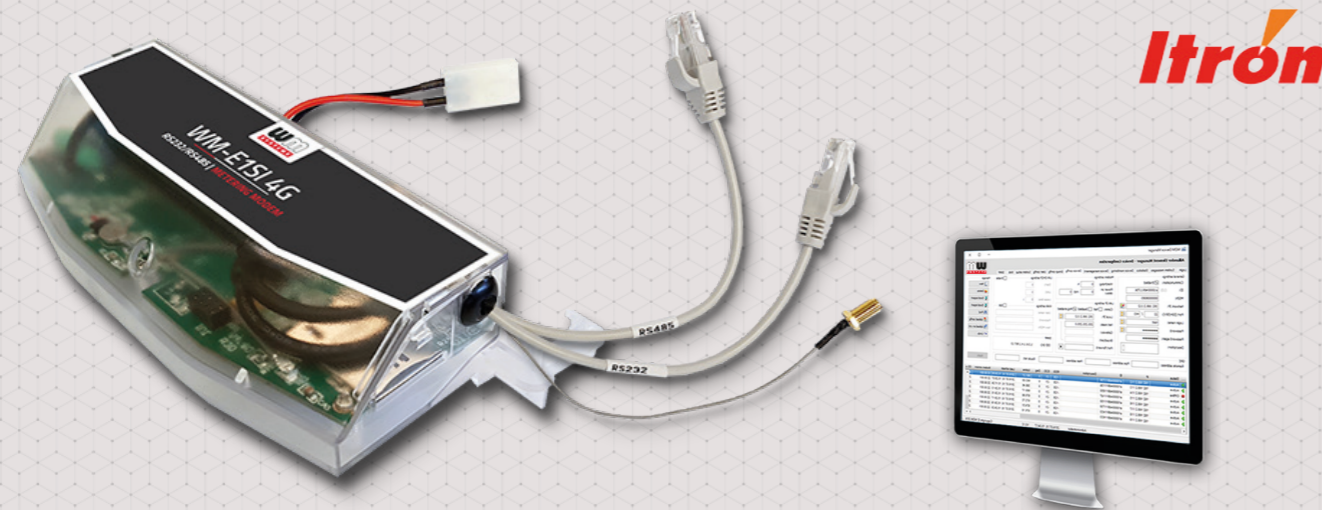
## PORTS/PHYSICAL CONNECTORS:

- :: Ethernet (optional)
- :: Mbus (optional)
- :: P1 Customer Interface (optional)
- :: Relay output / Tariff switch (optional)

# PRODUCTS / SMART METERING MODEMS



Cellular modem for Itron electricity meters. Available for LTE Cat.4, LTE Cat.1 / 2G / 3G, LTE Cat.4, Cat.M and Cat.NB networks



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# WM-E1SI MODEM



## NETWORK

4G LTE Cat.1 / 3G / 2G  
LTE Cat.M / Cat.NB / 2G  
mini SIM (2FF)

## CONNECTIVITY

AC power input (optional DC)  
RS232  
RS485

## DESIGN

Design & connectivity meets with meter standard: Itron® SL7000, EM600 (E620), ACE6000, ACE8000  
Plastic, IP51 enclosure  
Installable in meter case

## FEATURES

Surge protection  
Supercapacitor option  
IEC 62056-21, "Pull" mode  
Embedded OS  
Device Manager platform

# HARDWARE

Mobile	Order options: ■ 4G LTE Cat.4 / 3G / 2G ■ 4G LTE Cat.1 with 2G or 2G/3G "fallback" option ■ LTE Cat.M / NB with 2G "fallback"
Powering	~100-230V AC ±15%, 50-60Hz ±5% (AC power supplied by the meter via pigtail connector)
SIM	mini SIM (2FF)
Antenna connectors	1 external Antenna connector (SMA, 50 Ohm)
Ports	■ RS232 (RJ45) ■ RS485 (RJ45)
Status LEDs	3 status LEDs
Housing / Protection rating	Plastic (ABS) casing / IP51
Mount and Fastening	Installable inside the meter enclosure (by modem enclosure ears)
Operating Temperature	from -40°C to +70°C
Dimensions / Weight	162 x 66 x 30mm / 98-130 gr. (according to the chosen cabling)

# SOFTWARE

Operation system / User interface	Embedded, realtime operation system / Configuration software
Communication	IEC 62056-21 protocol, transparent data sending, „Pull" mode, CSDData call (2G)
Security	Watchdog, LastGASP, supercapacitor, surge protection from 4kV up to 12kV, TLS
Management platform	Device Manager® software (firmware refresh, configuration, QoS, reboot) - order option

## COMPATIBILITY

- Itron® SL7000, EM600 (E620), ACE6000, ACE8000 meters

## PROTOCOL

- ⇒ Transparent

## FEATURES

- ✓ TLS encryption
- ✓ AC power (DC optional)
- ✓ Supercapacitor / LastGASP
- ✓ Device Manager
- ✓ Surge protection

## PORTS/PHYSICAL CONNECTORS

- :: RS232 (RJ45)
- :: RS485 (RJ45)



# PRODUCTS / SMART METERING MODEMS



Cellular modem specifically designed for the Itron ACE6000, ACE8000 and SL7000 electricity meters. Available for 2G, LTE Cat.1 / 2G / 3G and the LTE Cat.M/Cat.NB, LTE Cat.M 450MHz networks.



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# WM-E2S MODEM



## NETWORK

2G  
4G LTE Cat.1 / 3G / 2G  
4G LTE Cat.4 / 3G / 2G  
LTE Cat.M / Cat.NB / 2G  
mini SIM (2FF)

## CONNECTIVITY

DC power input  
RS232  
RS485

## DESIGN

Design & connectivity meets with meter standard: Itron® ACE6000, ACE8000, SL7000  
Plastic, IP31 enclosure  
Installable in meter case

## FEATURES

Supercapacitor  
IEC 62056-21, transparent communication, HES "Pull", CSD  
Embedded OS  
Device Manager platform

# HARDWARE

Mobile	Order options: ■ 2G ■ 4G LTE Cat.1 with 2G or 2G/3G "fallback" ■ 4G LTE Cat.4 - 3G/2G "fallback" ■ LTE Cat.M / NB with 2G "fallback"
Powering	8-12V DC ±5% (DC power supplied by the meter via RJ45 connector)
SIM	mini SIM (2FF)
Antenna connectors	1 external Antenna connector (SMA or FME, 50 Ohm)
Ports	RS232 (RJ45) or RS485 (RJ45) - fixed connection of free-to jumper outfit can be ordered
Status LEDs	3 status LEDs
Housing / Protection rating	Plastic (ABS) casing / IP31
Mount and Fastening	Installable inside the meter enclosure (by modem enclosure ears)
Operating Temperature	from -40°C to +70°C
Dimensions / Weight	108 x 87 x 30mm / 73 gr.

# SOFTWARE

Operation system / User interface	Embedded, realtime operation system / Configuration software
Communication	IEC 62056-21 protocol, transparent communication, „Pull“ data sending (by HES request), CSData call (2G)
Security	Watchdog, LastGASP immediate alarm notification (power loss), supercapacitor, TLS
Management platform	Device Manager® software (firmware refresh, configuration, QoS, reboot) - order option

## FEATURES

- ✓ TLS encryption
- ✓ Supercap / LastGASP
- ✓ DC powered
- ✓ Device Manager



## PROTOCOL

≡ Transparent

## COMPATIBILITY

- Itron® ACE6000, ACE8000, SL7000 meters
- PME-PMI® meters



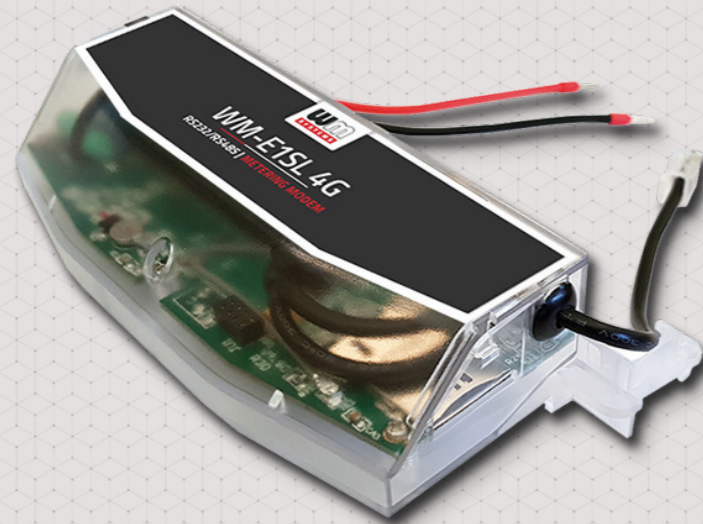
## PORTS/PHYSICAL CONNECTORS

:: RS485 / RS232 (RJ45)

# PRODUCTS / SMART METERING MODEMS



Cellular modem for Landis+Gyr E350, E450 (ZMD310, ZMD410 type) and E650 type electricity meters – for 4G LTE Cat.1 / 2G / 3G, Cat.M and Cat.NB networks



Landis+Gyr



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# WM-E1SL MODEM



## NETWORK

4G LTE Cat.1 / 3G / 2G  
LTE Cat.M / Cat.NB / 2G  
mini SIM (2FF)

## CONNECTIVITY

AC power input  
RS232  
RS485

## DESIGN

Design & connectivity meets with meter standard: Landis Gyr® E350, E450 (ZMD310, ZMD410 type), E650 family  
Plastic, IP51 enclosure  
Installable in meter case

## FEATURES

Surge protection  
Supercapacitor option  
IEC 62056-21, "Pull" mode  
Embedded OS  
Device Manager platform

# HARDWARE

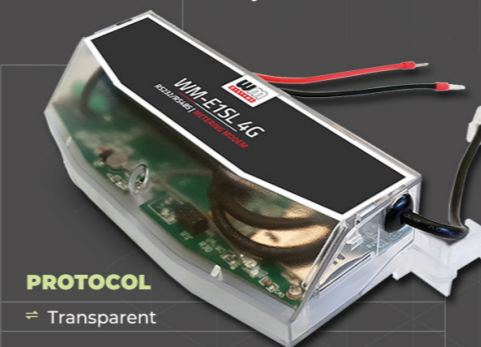
Mobile	Order options: ■ 4G LTE Cat.1 with 2G or 2G/3G "fallback" ■ LTE Cat.M / NB with 2G "fallback"
Powering	~100-230V AC ±15%, 50-60Hz ±5% (AC power supplied by the meter via pigtail connector)
SIM	mini SIM (2FF)
Antenna connectors	1 external Antenna connector (SMA, 50 Ohm)
Ports	■ RS232 (RJ12) ■ RS485 (RJ12)
Status LEDs	3 status LEDs
Housing / Protection rating	Plastic (ABS) casing / IP51
Mount and Fastening	Installable inside the meter enclosure (by modem enclosure ears)
Operating Temperature	from -40°C to +70°C
Dimensions / Weight	162 x 70 x 35mm / 108 gr.

# SOFTWARE

Operation system / User interface	Embedded, realtime operation system / Configuration software
Communication	IEC 62056-21 protocol, transparent data sending, „Pull“ mode, CSData call (2G), Scheduled data sending or triggered by an alarm, Immediate alarm notification (power loss, input status)
Security	Watchdog, LastGASP, supercapacitor, surge protection option (from 4kV to 12kV), TLS
Management platform	Device Manager® software (firmware refresh, configuration, QoS, reboot) - order option

## COMPATIBILITY

- Landis+Gyr® E350, E450 electricity meters, (ZMG and ZMD types) alternatively can be fitted to the E650 meter type



## PROTOCOL

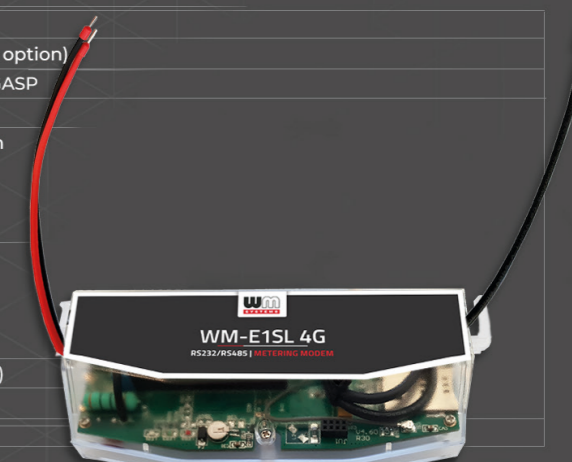
- ⇒ Transparent

## FEATURES

- ✓ TLS encryption
- ✓ AC powered (DC option)
- ✓ Supercap / LastGASP
- ✓ Device Manager
- ✓ Surge protection

## PORTS/PHYSICAL CONNECTORS

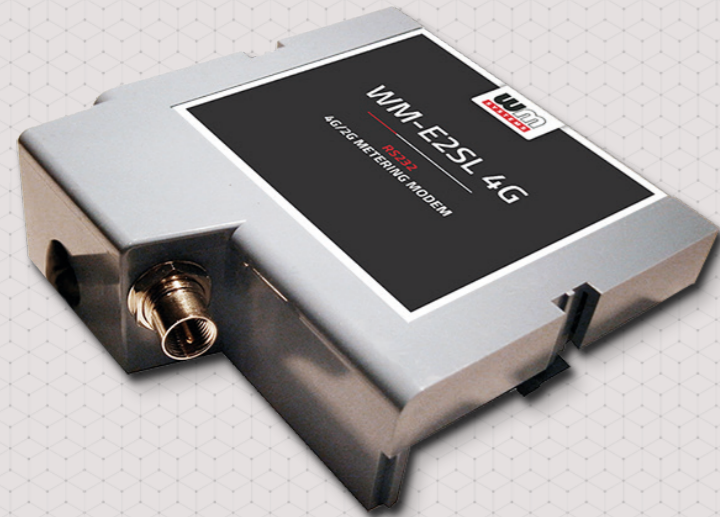
- ⇨ RS232 and/or RS485 (RJ12)



# PRODUCTS / SMART METERING MODEMS



Cellular modem for Landis+Gyr E350, E450, E550 (type Zxx 3xx and Zxx 4xx) electricity meters – for 2G, LTE Cat.1 / 2G / 3G, LTE Cat.M / Cat.NB, and LTE Cat.M 450MHz networks



Landis+Gyr



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# WM-E2SL MODEM



## NETWORK

2G  
4G LTE Cat.1 / 3G / 2G  
4G LTE Cat.4 / 3G / 2G  
LTE Cat.M / Cat.NB / 2G  
mini SIM (2FF)

## CONNECTIVITY

DC power input  
RS232

## DESIGN

Design & connectivity meets with meter standard: Landis Gyr® Zxx 3xx, Zxx 4xx meters (type E350, E450, E550)  
Plastic, IP21 enclosure  
Installable in meter case

## FEATURES

Supercapacitor  
IEC 62056-21, transparent communication, HES "pull", CSD  
Embedded OS  
Device Manager platform

# HARDWARE

Mobile	Order options: ■ 4G LTE Cat.1 with 2G or 2G/3G "fallback" ■ LTE Cat.M / NB with 2G "fallback"
Powering	8-12V DC ±15% (DC power supplied by the meter via RJ45 connector)
SIM	mini SIM (2FF)
Antenna connectors	1 external Antenna connector (SMA or FME, 50 Ohm)
Ports	RS232 (RJ45)
Status LEDs	3 status LEDs
Housing / Protection rating	Plastic (ABS) casing / IP21
Mount and Fastening	Installable inside the meter enclosure (by modem enclosure)
Operating Temperature	from -40°C to +70°C
Dimensions / Weight	86 x 86 x 28mm / 106 gr.

# SOFTWARE

Operation system / User interface	Embedded, realtime operation system / Configuration software
Communication	IEC 62056-21 protocol, transparent communication, „Pull“ data sending (by HES request), CSData call (2G)
Security	Watchdog, LastGASP immediate alarm notification (power loss), supercapacitor, TLS
Management platform	Device Manager® software (firmware refresh, configuration, QoS, reboot) - order option

## FEATURES

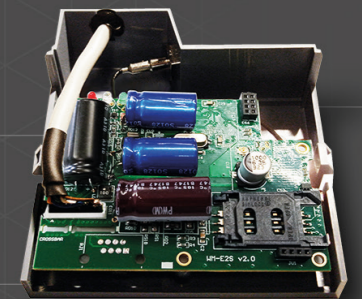
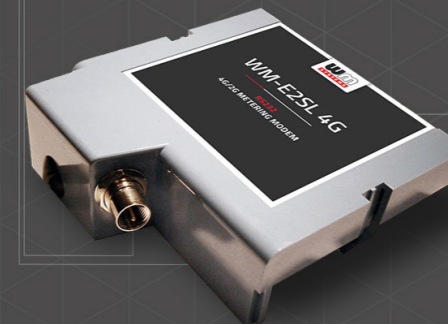
- ✓ TLS encryption
- ✓ Supercap / LastGASP
- ✓ DC powered
- ✓ Device Manager

## PROTOCOL

≅ Transparent

## COMPATIBILITY

■ Landis + Gyr® Zxx 3xx, Zxx 4xx (E350, E450, E550) electricity meters



## PORTS/PHYSICAL CONNECTORS:

:: RS232 (RJ45)



# PRODUCTS / SMART METERING MODEMS



Cellular modem specifically designed for PME-PMI meters. Available for LTE Cat.4 / 3G / 2G, LTE Cat.1 / 2G, LTE Cat.M and Cat.NB / 2G networks.



**Itron**

Landis+Gyr

PME-PMI



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# WM-E2S PME-PMI MODEM



## NETWORK

4G LTE Cat.1 / 3G / 2G  
LTE Cat.M / Cat.NB / 2G  
mini SIM (2FF)

## CONNECTIVITY

DC power input  
RS232

## DESIGN

Design & connectivity meets with the meter standard: PME-PMI® (Itron® ACE6000 and Landis+Gyr® ZMG416 )  
IP31 case, DIN-rail adapter  
External, compact modem

## FEATURES

Supercapacitor  
IEC 62056-21, transparent communication, HES "Pull"  
Embedded OS  
Device Manager platform

# HARDWARE

Mobile	Order options: ■ 4G LTE Cat.1 with 2G or 2G/3G "fallback" ■ LTE Cat.M / NB with 2G "fallback"
Powering	8-12V DC ±5% (DC power can be supplied via RJ45 connector)
SIM	mini SIM (2FF)
Antenna connectors	1 external Antenna connector (FME or SMA, 50 Ohm)
Ports	RS232 (RJ45)
Status LEDs	3 status LEDs
Housing / Protection rating	Plastic (ABS) casing / IP31
Mount and Fastening	External modem, compact design (sealed and separated from meter), DIN-rail adapter
Operating Temperature	from -40°C to +70°C
Dimensions / Weight	108 x 88 x 38mm / 103 gr. (with it's DIN-rail adapter)

# SOFTWARE

Operation system / User interface	Embedded, realtime operation system / Configuration software
Communication	IEC 62056-21 protocol, transparent communication, „Pull“ data sending (by HES request)
Security	Watchdog, LastGASP immediate alarm notification (power loss), supercapacitor, TLS
Management platform	Device Manager® software (firmware refresh, configuration, QoS, reboot) - order option

## FEATURES

- ✓ TLS encryption
- ✓ Supercap / LastGASP
- ✓ DC powered
- ✓ Device Manager
- ✓ DIN-rail mountable

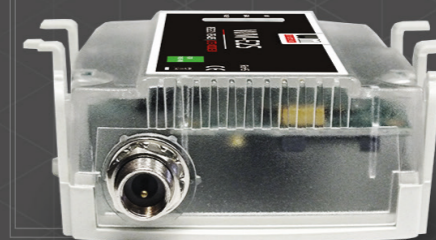


## PROTOCOL

≡ Transparent

## COMPATIBILITY

- Itron® ACE6000, ACE8000, SL7000 meters
- PME-PMI® meters



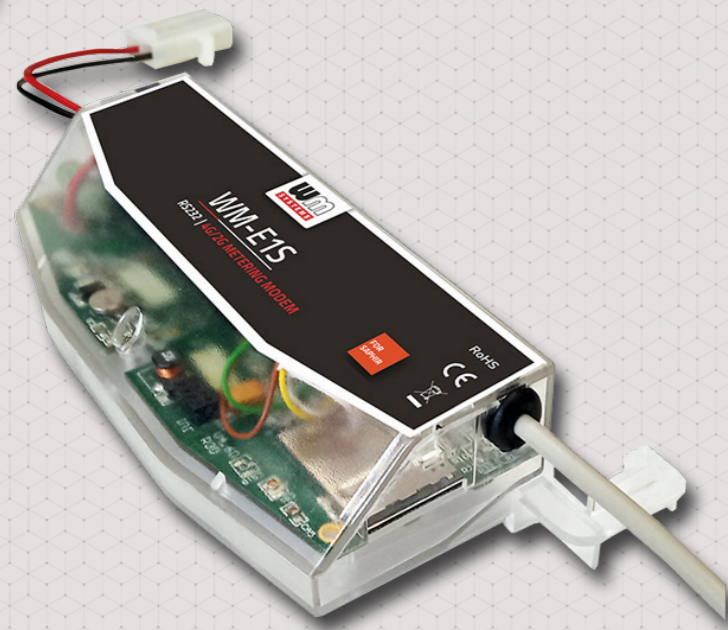
## PORTS/PHYSICAL CONNECTORS

:: RS232 (RJ45)

# PRODUCTS / SMART METERING MODEMS



Cellular modem specifically designed for SAPHIR meters. Available for LTE Cat.1 / 2G / 3G, LTE Cat.4, Cat.M / Cat.NB networks.



ENEDIS

SAPHIR

ENERDIS



ONLINE MANAGEMENT QoS & ANALYTICS REMOTE FW UPDATES CENTRAL CONTROL

## HARDWARE

Mobile	Order options: ■ 4G LTE Cat.1 with 2G or 2G/3G "fallback" ■ LTE Cat.M / NB with 2G "fallback"
Powering	~100-240V AC ±15%, 50-60Hz ±5% (can be powered from 57.7 to 100V AC phase voltage or 230/400V AC line voltage - via pigtail connector)
SIM	mini SIM (2FF)
Antenna connectors	1 external Antenna connector (SMA, 50 Ohm)
Ports	RS232 (RJ45)
Status LEDs	3 status LEDs
Housing / Protection rating	Plastic (ABS) casing / IP51
Mount and Fastening	External modem (sealed and separated from meter), mountable by a DIN-rail adapter (order option: plastic or anodized aluminum) or by ears of the modem enclosure
Operating Temperature	from -40°C to +70°C
Dimensions / Weight	162 x 70 x 35mm / 108 gr.

## SOFTWARE

Operation system / User interface	Embedded, realtime operation system / Configuration software
Communication	IEC 62056-21 protocol, transparent communication, „Push“ data sending (FTP and IEC, SMS)
Security	Watchdog, LastGASP, supercapacitor, surge protection option (from 4kV to 12kV), TLS
Management platform	Device Manager® software (firmware refresh, configuration, QoS, reboot) - order option

# WM-E1S SAPHIR MODEM



### NETWORK

4G LTE Cat.1 / 3G / 2G  
LTE Cat.M / Cat.NB / 2G  
mini SIM (2FF)

### CONNECTIVITY

AC power input  
RS232  
RS485

### DESIGN

Design & connectivity meets with meter standard: Saphir® meters (Altys®, Enedis®)  
IP51 case, DIN-rail mountable  
External, compact modem

### FEATURES

Supercapacitor option  
IEC 62056-21, transparent communication  
Embedded OS  
Device Manager platform

### COMPATIBILITY

■ Saphir® meter

### PROTOCOL

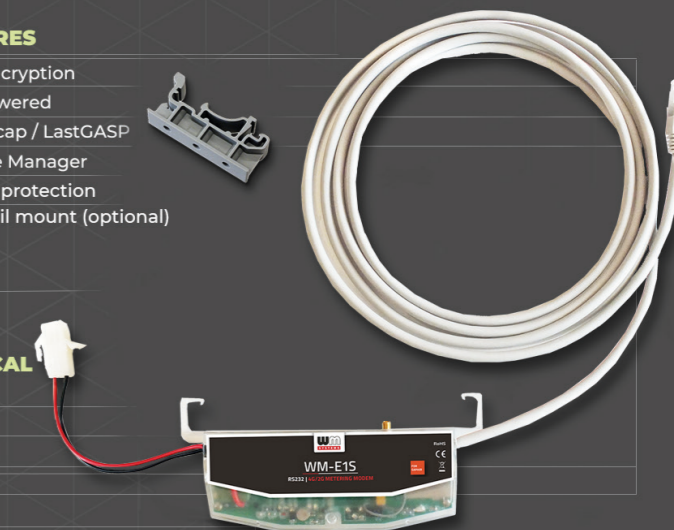
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### FEATURES

- ✓ TLS encryption
- ✓ AC powered
- ✓ Supercap / LastGASP
- ✓ Device Manager
- ✓ Surge protection
- ✓ DIN rail mount (optional)

### PORTS/PHYSICAL CONNECTORS

:: RS232 (RJ45)

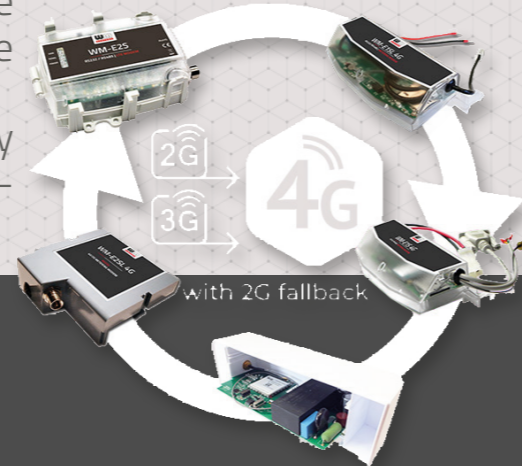


# PRODUCTS / RETROFIT METERING MODEMS



As mobile operators globally phase out 2G/3G networks in favor of 5G, utilities relying on these older technologies for their smart meter fleets face a critical decision. They must weigh the options of either purchasing new, more expensive smart meters with 4G connectivity or upgrading the modems in their existing meters. Given the substantial cost difference between these two choices, upgrading the modems often emerges as the more cost-effective and prudent decision for utilities seeking to extend the lifespan of their smart meter fleets without incurring the expense of replacing them entirely.

At WM Systems, we are uniquely positioned to help utilities capitalize on these global retrofit opportunities. Thanks to our past partnerships with some of the largest meter manufacturers, we have developed modems that are compatible with a wide range of meters, including those from Honeywell/Elster, Itron, Landis+Gyr and others. Protect your investment! No need to change the currently used meters. With our modem portfolio, we provide cost-effective upgrade solutions for utilities.



# IoT RETROFIT MODEMS



## NETWORK

LTE 4G Cat.4 / 3G / 2G  
 LTE 4G Cat1. - 2G or 3G / 2G "fallback"  
 LTE Cat.M / Cat.NB / 450 MHz with 2G "fallback"

## CONNECTIVITY

AC or DC power (by meter)  
 RS232 and/or RS485  
 Options for the WM-E1S: 2 Digital Inputs, for WM-E3S: Digital Input, Mbus, Customer Interface (6P6C), Ethernet

## DESIGN

Design & connectivity meets with the electricity meter standards  
 Plastic IP31 or IP51 case, DIN-rail adapter  
 Compact modem

## FEATURES

Snap-in modem (drop & plug, easy installation)  
 Installed meters can be used without changing the meter  
 Embedded OS  
 Supercapacitor / TLS option

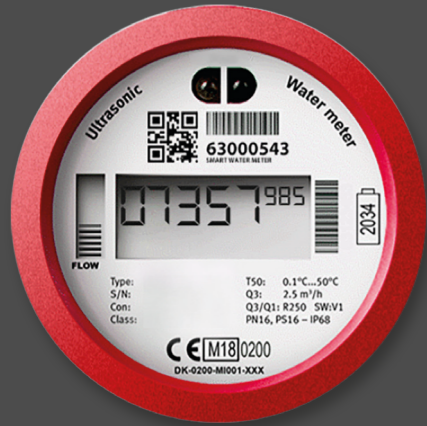
# HARDWARE

Mobile	Order options: ■ LTE 4G Cat.4 / 3G / 2G "fallback" ■ LTE 4G Cat.1 with 3G / 2G "fallback" or 2G "fallback" ■ LTE Cat.M / Cat.NB / 450MHz with 2G "fallback"
Powering	AC or DC (powered by meter) according to the meter version
SIM	mini SIM (2FF)
Antenna connector	External antenna connector (SMA or FME)
Connections	■ RS232 and/or RS485 port (outfit according to meter connection), options for the version ■ WM-E1S: 2 Digital Inputs ■ WM-E3S: Digital Input / Mbus / Customer Interface / Ethernet
Housing / Protection rating	Plastic (ABS) casing / IP31 or IP51
Mount / Fastening	Sealed and separated from meter, Installation options: ■ Inside the meter enclosure (under the terminal cover by the enclosure ears) ■ External modem (mountable by a DIN-rail adapter)

# SOFTWARE

Operation system / User interface	Embedded, realtime operation system / Configuration software
Communication	IEC 62056-21 protocol, transparent or "Pull" / „Push" communication, Scheduled data sending or triggered by an alarm, DLMS IDIS2 protocol for WM-E3S type
Security	Watchdog, LastGASP, supercapacitor, surge protection* from 4kV up to 12kV, TLS
Management platform	Device Manager® software (firmware refresh, configuration, QoS, reboot) - order option





# CELLULAR PRODUCTS

## SMART WATER METERING MODEMS DATA LOGGERS FOR WATER AND GAS METERING

Consumption water and gas metering: Automated remote Meter Readout by Pulse signal counters and MBus data with LTE Cat.M and NB-IoT data transmitting capability

The heart of the remote and smart water meter reading solution is a data logger or modem that collects, counts the incoming Pulse signals, MBus data from the connected meters and sensors. The data logger transmits the consumption data via Cat.M or NB-IoT mobile network via MQTT to the Microsoft® Azure platform of the central server / HES.

Our smart water metering devices are designed specifically to be fully compatible with the Pulse- and MBus outputs of flagship manufacturers' water meters.

The devices have battery powered long-life, independent operation with security features (TLS, etc.).

Smart water metering has never been so easy! Our devices can be integrated into any AMR/AMI solution.



# PRODUCTS / SMART WATER METERING MODEMS



Long-life battery powered, cellular IoT data logger for water and gas metering



# WM-i DATA LOGGER



## NETWORK

LTE Cat.M / Cat.NB / 450 MHz  
Nano SIM (eSIM option)

## CONNECTIVITY

2 independent Pulse inputs  
1 MBus input  
USB-C (for local configuration)

## DESIGN

IP68-protected waterproof casing for the challenging environments  
Replaceable, high-capacity batteries up to 10 years life  
Watchdog

## FEATURES

Automatic data transmission at preconfigured intervals  
Microsoft® Azure platform support (MQTT), TLS option  
"Deployment mode" for local installation (status checking)

# HARDWARE

Mobile	LTE Cat.M / Cat.NB / 450MHz
Powering	Replaceable, high-capacity batteries with up to 10 years lifetime (8'500 mAh or 19'000 mAh)
SIM	Nano SIM (eSIM option)
Antenna connectors	External antenna connector (SMA 50 Ohm) - for IP68-protected antenna (order option)
Connections	Universal input cables (for Pulse and/or MBus connection) for tests, POCs, pilots
Ports	▪ 2 independent Pulse inputs ▪ MBus input ▪ USB-C (for local configuration, installation)
Protection / Housing / Mount	IP68-protected waterproof casing / Mountable by fastening points
Operating Temperature	from -25°C to +70°C
Dimensions / Weight	▪ Top: 120 x 88 x 50mm ▪ Required space for installation: 150 x 105 x 50mm (with pedestal mount and cable outfit) / 270-315 gr (up to battery type)

# SOFTWARE

Operation system / User interface	Embedded, realtime operation system / WM-E Term® software (local config., FW updates)
Operation	Pulse signal counting / Mbus collection (in standby), data sending at configured intervals
Data transmission / Protocols	Microsoft® Azure platform support (MQTT) / NTP, TLS (option)
Security	Watchdog, Configurable alarm thresholds (min/max consumption), Tamper protection (security alarm if cover is tampered) - optional, Secure FW updates, Special "deployment mode" supports local installation (status checking)
Management platform	Microsoft® Azure platform (reconfiguration, secure firmware refresh)



### PROTOCOL

- ⇒ MQTT (Microsoft® Azure platform)
- ⇒ TLS
- ⇒ NTP

### FEATURES

- ✓ IP68-protected casing, design
- ✓ Battery life up to 10 years (order options)
- ✓ LTE Cat.M / Cat.NB, Nano SIM (eSIM option)
- ✓ Tamper protection (security alarm)
- ✓ "Deployment mode" supports local installation



### PORTS/PHYSICAL CONNECTORS

- :: 2 Pulse inputs
- :: 1 MBus input
- :: USB-C port (local configuration, installation)
- :: Antenna (SMA, 50Ω)

# PRODUCTS / SMART METERING MODEMS



Smart electricity metering data logger and Cat.M / Cat.NB transmitter



ONLINE MANAGEMENT   QoS & ANALYTICS   REMOTE FW UPDATES   CENTRAL CONTROL

## HARDWARE

Mobile	LTE Cat.M / Cat.NB / 450MHz
Powering	DC powered
SIM	micro SIM (3FF)
Antenna connectors	External antenna - waterproof lead out from the enclosure
Ports	▪ P1 interface (RJ12 to meter)   ▪ Serial (configuration) - leaded out from case
Housing / Protection rating	Plastic (ABS) casing / IP67 (waterproof), leaded sealed connectors
Mount / Fastening / LEDs	Mountable by ears of the enclosure / Status LED
Operating Temperature	from -25°C to +55°C
Dimensions / Weight	130 x 70 x 40mm (from bottom side with pedestal), 105 x 70 mm (at top) / 245 gr.

## SOFTWARE

Operation system / User interface	Embedded, realtime operation system / Configuration software
Operation	Continuous or scheduled data sending, Meter data sending modes: all data (OBIS codes, values), differential (changed data only)
Protocols	Sending protocol: MQTT or LwM2M, data format: JSON, CBOR binary
Security	Watchdog, safe local data storage (flash memory, AES-256 encryption), local storage of consumption data (up to 1 day), TLS v1.2
Management platform	Data evaluation with Azure IOT Hub, AVSystem Coiote software and the Device Manager platform

# WM-P1 DATA LOGGER MODEM



### NETWORK

LTE Cat.M / Cat.NB / 450 MHz  
micro SIM (3FF)

### CONNECTIVITY

DC power input  
P1 interface (RJ12) for meter connection

### DESIGN

Design & connectivity meets metering standards, any P1 compatible meters can be connected  
IP67 case, mountable

### FEATURES

Local storage of data  
Meter data sending:  
OBIS codes/values  
Embedded OS  
MQTT or LwM2M

### FEATURES

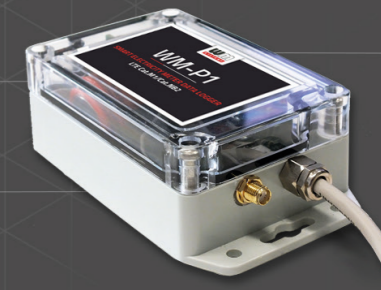
- ✓ Consumption data collection, storage
- ✓ IP67, DC powered
- ✓ LTE Cat.M1 / Cat.NB2
- ✓ Device Manager

### PROTOCOL

- ⇒ Data acquisition (OBIS codes, values)
- ⇒ LwM2M, MQTT, TCP
- ⇒ JSON, XML
- ⇒ Transparent

### PORTS/PHYSICAL CONNECTORS

- :: P1 interface (RJ12)
- :: Serial link for configuration
- :: Antenna





# CELLULAR PRODUCTS

## DEVICE MANAGEMENT

**DEVICE MONITORING | CONFIGURATION | SECURE FIRMWARE UPDATES | ALARMS, EVENTS, REPORTS**



The remote management and maintenance of an IIoT solution can be a real challenge. Improve the network availability and operational efficiency of your fleet!

The remote management and maintenance of an IIoT solution can be a real challenge. Device Manager is a central management application for our cellular routers, metering modems, switches and transmitters. Improve the network availability and operational efficiency of your fleet!

Device Manager is a solution for remote device and gateway management which allows faster deployment and guarantees the secure and proper functioning of IoT devices after they have been deployed.

Our remote device management offers state-of-the-art management functionalities including rapid device onboarding with bulk provisioning, easy administration, in-depth visibility of device status, its performance metrics and security issues, logical groupings of devices into hierarchical structures for mass software and firmware updates.

The Microsoft® Windows® based application hosted on-premise for high security and continuous remote management of IoT devices (routers, modems, IoT switches, etc.). Ideal for enterprise or government deployments with strict ICT policies.

Optimized for Large Scale Enterprise Deployments

Full-fledged monitoring solution, by design optimized for enterprise device management – with features highly appreciated by our utility clients and telco partners. For example, it automatically imports user access control and permissions from Microsoft® Active Directory® for authentication.

Designed to allow easy addition of new communication servers it provides maximum scalability.

Most industrial IoT deployments involve a huge number of devices. Large scale operations like these have to be optimized in order to allow faster time-to-market. The time spent on the deployment of each device adds up.

Our devices can be ordered with the Device Manager application pre-configured, so as soon as they are connected they are available in the remote management platform. Deployment time can be reduced from 15-20 minutes per device to 1-2 minutes.

# PRODUCTS / DEVICE MANAGER



Our Device Manager solution is designed to streamline remote management and maintenance of our devices, ensuring fast and secure deployment and optimal device performance throughout their lifecycle.

Equipped with cutting-edge management features, such rapid device onboarding with bulk provisioning, easy administration and comprehensive visibility of device status and performance metrics, our remote device management offers unmatched support for large-scale enterprise device management.

Device Manager is a Microsoft® Windows® based, central management application for our cellular routers, metering modems, data concentrators, IoT switches and transmitters.



ONLINE MANAGEMENT

QoS & ANALYTICS

REMOTE FW UPDATES

CENTRAL CONTROL

# DEVICE MANAGER



## FEATURES

- Remote Management
- Device Configuration
- Managing Remote Operations
- QoS Monitoring
- Alarms, events, reports

## SOFTWARE

- Microsoft Windows® client- and server application with database
- Microsoft Active Directory® compatible
- Security: AES encryption, TLS certificate keys

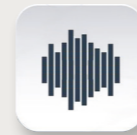
## DESIGN

- Scalability
- Full-fledged monitoring
- Quick optimization of device operation properties
- Easy firmware deployment

## SUPPORTED

- M2M Routers
- M2M Industrial Routers
- M2M PRO4 Router DCUs
- WM-E metering modems
- WM-I3 pulse counter

# HOSTED ON-PREMISE FOR HIGH-SECURITY



The Device Manager delivers exceptional data protection and security for sensitive equipment and information. This solution is specifically optimized for extensive enterprise deployments and is highly valued by our utility clients and telecom partners. Ideal for enterprise or government deployments with strict ICT policies.

# OPTIMIZED FOR LARGE SCALE ENTERPRISE DEPLOYMENTS



Our Device Manager significantly reduces the time necessary to do bulk FW updates, decreasing it from 15-20 minutes per device to a mere 1-2 minutes.

This efficiency boost enables involved businesses to concentrate on growth and innovation, maximizing their operational effectiveness.

Improve the network availability, management and operational efficiency of your device fleet remotely!





# CONTACT US

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### INTERNATIONAL SALES

EUROPE, AFRICA, ASIA, NORTH-AMERICA,  
SOUTH-AMERICA, AUSTRALIA

Inquiries related to products and services, requests for proposals,  
orders, partnership and reseller contracts, projects

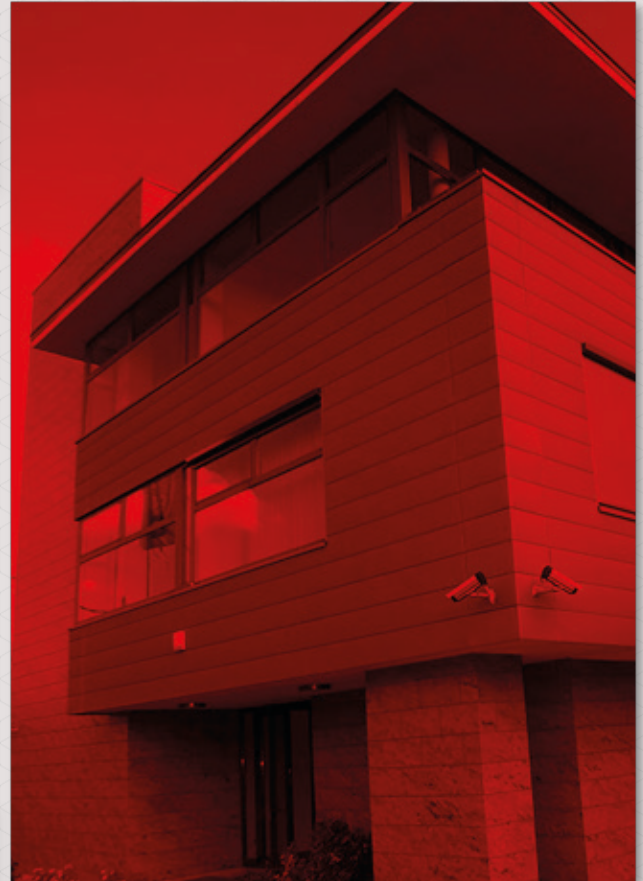
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### TECHNICAL SUPPORT

online assistance, technical support, tech demo

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