AIUNEO
aiut brand

OLAN 5M85

Efficient Utility Monitoring

IoT Data Logger & Gateway

SMART IoT HUB
FOR
UTILITIES METERING

The OLAN 5M85 is a powerful and versatile IoT hub designed for seamless wireless communication with various utility meters, including gas, water, and heat meters. It supports flexible connectivity, enabling integration with up to two pulse-output devices, such as water or gas meters.

For extended compatibility, the OLAN 5M85 connects with controllers, regulators, and other Modbus-compatible devices via RS-232/RS-485 interfaces, ensuring reliable and efficient data exchange across diverse systems. Additionally, it supports integration with dedicated AIUNEO heat meter modules via an IMR Cable interface.

The collected data is securely transmitted to an acquisition server at scheduled intervals using advanced IoT communication protocols, including NB-IoT, LTE Cat-M1, and EGPRS, ensuring robust and efficient data delivery.
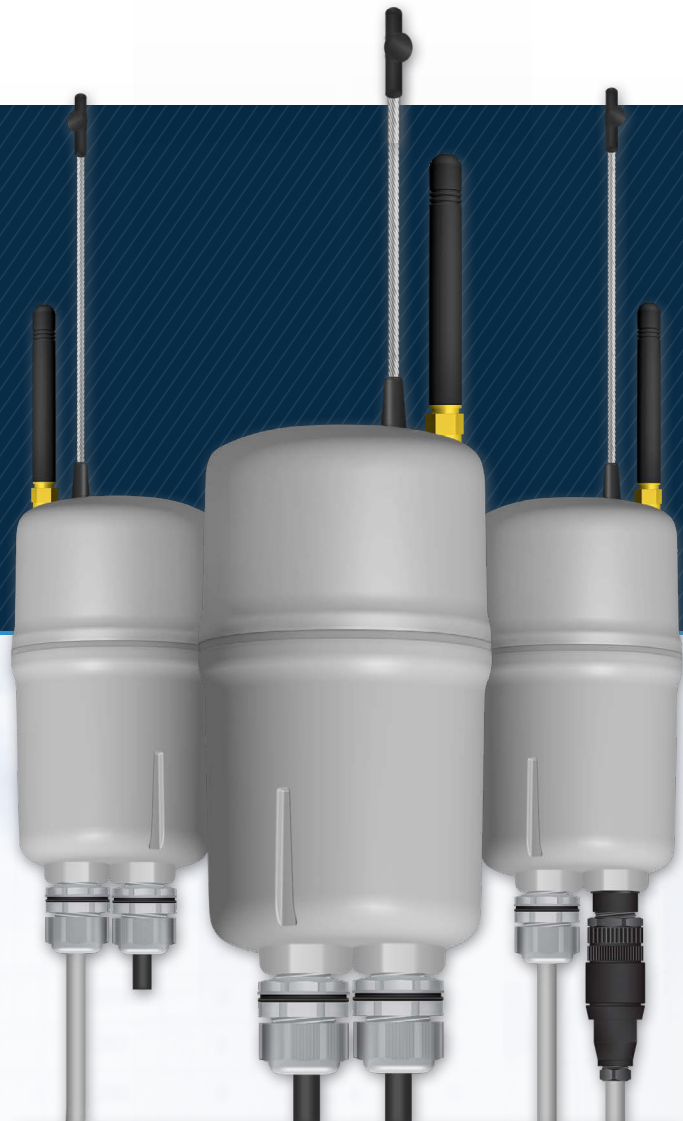
- Solution for gas, water and heat
- Mains or battery powered
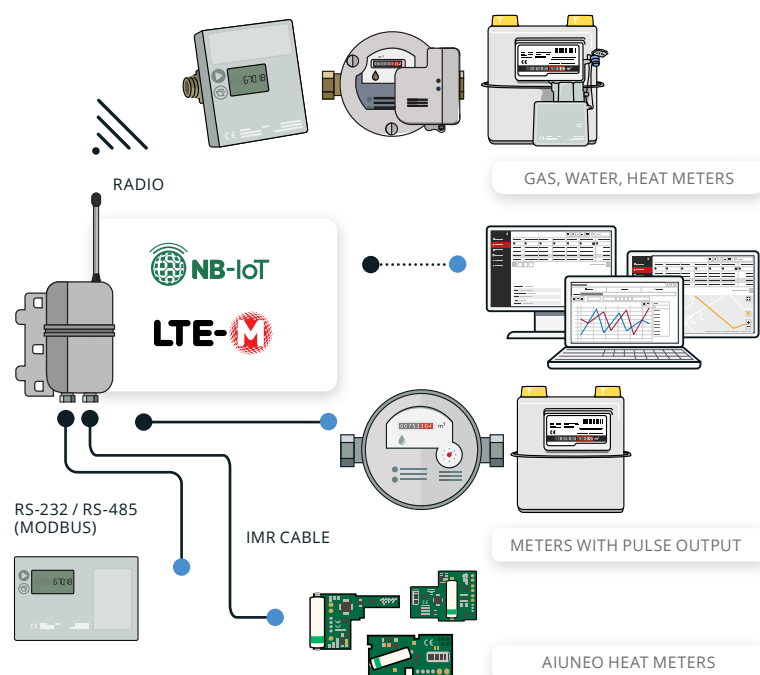- Large data archive (up to 20 years)
- Long battery life

VERSATILE DEVICE WITH SOLID HOUSING

The OLAN 5M85 is designed for both indoor and outdoor installation. Its compact, weather-resistant housing withstands water exposure and challenging environmental conditions while allowing for on-site battery replacement without affecting its tightness.

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Designed for flexibility, the OLAN 5M85 is offered in multiple configurations to meet diverse operational and installation demands.

RADIO

NB-IoT

LTE-M

RS-232 / RS-485 (MODBUS)

IMR CABLE

GAS, WATER, HEAT METERS

METERS WITH PULSE OUTPUT

AIUNEO HEAT METERS

OLAN 5M85-H101
Battery powered data logger supporting up to two meters with pulse output*

OLAN 5M85-6103
Mains-powered (230 V) data logger supporting up to two meters with pulse output*

OLAN 5M85-6102
Mains-powered (230 V) data logger with an RS-232 / RS-485 interface (M12 connector)

OLAN 5M85-H105
Battery powered data logger with IMR Cable dedicated for AIUNEO heat meter modules.

*One digital input for counter signal and one digital input for back flow signal or two digital inputs for two counters.

Radio communication
- Communication LTE Cat-M1/NB-IoT/2G:
  - LTE Cat-M1 / NB-IoT bands:
    B3 (1800 MHz), B8 (900 MHz), B20 (800 MHz)
  - 2G bands: B3 (1800 MHz), B8 (900 MHz)
  - micro SIM (3FF) or embedded SIM (MFF2)
- Radio communication:
  - frequency: 868 MHz, power: +14 dBm
  - protocol: Wireless M-Bus T1, C1, IMR radio, IMR WAN 3
  - range: up to 2000 m in open space
- External flash memory (1 MB)
- SMA connector for external antenna

Data structures
- Default data logging interval: 60 minutes
- Minute/hourly/daily/monthly readings
- Data transmission, e.g., once daily for battery-powered devices and every 15 minutes for mains-powered devices (230 VAC).
- Temperature, signal quality, metering and diagnostic parameters, battery status
- Measurement and diagnostic data from wirelessly read meters, such as volume [m³], instantaneous flow [m³/h], energy [GJ]
- Device status: allowed temperature exceeded, allowed instantaneous flow exceeded, device malfunction

*The battery life depends on the device's target configuration, environmental conditions, and user interaction with the device.

Power supply
- Mains power supply:
  - 230 V
  - Battery backup up to 7 days in case of power loss
- Battery power supply:
  - replaceable battery, 3.0 V, Li-MnO2
  - battery life: 5-10 years*
- Power consumption: 3 W

Environmental parameter
- Operating temperature: -20°C to +55°C
- Storage temperature: -40°C to +60°C
- Ingress protection:
  - IP68 for battery powered devices
  - IP44 for mains powered devices

Memory and archiving
- Flash memory capacity: 1 MB (4096 radio frames), cyclic memory
- Data archiving: up to 20 years (for hourly readings from 2 meters)

Dimensions
- Height: 250 mm (with antenna), diameter: 71,3 mm

SIGNAL INPUTS
- Required contact type: potential-free contact or open collector/open drain output
- Minimum open-state impedance: 1 MΩ
- Maximum counting input frequency: 10 Hz
- Maximum tamper (alarm) input frequency: 1 Hz
- Minimum pulse duration: 50 ms

	Wire color	Labelling	Description
OLAN 5M85-H101, OLAN 5M85-6103	Brown	GND	Ground
	White	CNT1_IN	Counter 1 input
	Blue	CNT2_IN	Counter 2 input
	Green	TMP2_IN	Tamper 2 input
	Yellow	TMP1_IN	Tamper 1 input
	Input voltage: 0 V-3,6 V		
OLAN 5M85-6102	White	GND	Ground
	Brown	B/RX	Transmitting data RS232, RS485 signal B
	Blue	A/TX	Receiving data RS232, RS485 signal A
	Maximum input voltage: 5,4 V		
OLAN 5M85-H105	**Indicator**	**Description**	
	PWR	Power +3.3V DC	
	GND	Ground	
	P	Data signal 1	
	N	Data signal 2	

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