



Multi-NRG-Gateway

SKU: 911131158

Features

- LoRa
- wM-Bus
- Modbus
- S0/D0 - input
- LTE CAT-1 (LTE-Cat-M1 or Cat-NB-IoT also possible)

Overview

The Multi-NRG-Gateway represents an innovative key component for the digital basement that acts as a central gateway system. It is specially designed to collect a variety of measurement data and sensors for consumption and to manage systems and control devices bidirectionally. Communication between the Multi-NRG-Gateway and the secure cloud platform is protected throughout to ensure the integrity and confidentiality of the data.

The Multi-NRG-Gateway has the following interfaces:

- WLAN 802.11 b/g/n
- 1x LTE CAT-1 (LTE-Cat-M1 or Cat-NB-IoT also possible)
- 1x wM-Bus
- 1x LoRa
- 1x M-Bus master
- 1x Modbus
- 1x S0 meter input
- 1x RS-232 / eHZ with 5V power supply
- 1x RS-485 / Modbus RTU
- 1x Ethernet

The MQTT protocol is used for data transmission to ensure secure data transmission.

For quick analysis and convenient visualisation of your data, you can use our IoT portal <https://pironex-iot.com/>.



Unique selling point

- All-in-one solution for metering applications

Place of use

- Indoor area
- Domestic or industrial sector in the EU

Target group

- B2B
- Developer



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Technical data

Microcontroller/processor

Processor	High-performance processor
Flash	16 MB
SRAM	512 KB
ROM	384 KB
SRAM in RTC	16 KB

Additional properties

Card slots	nanoSIM (optional eSIM also possible)
RTC	32,768kHz crystal, alarm function, countdown timer
Display elements	2x LED Ethernet (link and speed)
Control elements	2x button

Environmental conditions

Place of use	Indoors, only within the specified ambient conditions, away from direct sunlight protect
Working temperature	-40 °C to +60 °C
Storage temperature	-40 °C to +80 °C
Transport temperature	-40 °C to +80 °C
Temperature change	5 K/min (no condensation permitted)
Relative humidity	Max. 70%, condensation must be excluded
Altitude above NHN	Up to max. 2000m
Altitude above NHN (storage/transport)	Up to 3000 m above sea level
Degree of contamination	Pollution degree 1



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Interfaces

Ethernet	10BaseT/100BaseTX suitable for OPC-UA
RS485	Half duplex, up to 1 Mbps, galvanically isolated up to 4 kV transient, 560V AC voltage Suitable for Modbus RTU
RS232 for eHz	up to 250 kbps, RJ10-4p4c connector suitable for eHz
S0 counter input	galvanically isolated up to 3750 V
mBus master	in accordance with EN1434 + EN13757-2/3
LTE Cat-1	
Frequencies/Bands	Multiband support for excellent network coverage
GSM:	As LTE fallback
Cat-M1 (alternative to CAT-1)	
Frequencies/Bands	Multiband support for excellent network coverage
Cat-NB-IoT (alternative to CAT-1)	
Frequencies/bands	Multiband support for excellent network coverage
WLAN:	IEEE 802.11b/g/n
Frequencies/bands	2.4 GHz band
wireless M-Bus / OMS	Wireless M-Bus EN13757-4: 2013 standard, OMS (Open Metering System) support
Frequencies/Bands	868 MHz band
LPWAN concentrator:	Semtech LoRaWAN high-performance chip & co-processor
Frequencies/Bands	Broadband support
Reception sensitivity	very high



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Further guidelines

2014/53/EU	Radio Equipment Directive
2011/65/EU	Restriction of certain Hazardous Substances (ROHS)
2012/19/EU	Waste of Electrical and Eletronic Equipment (WEEE)
EC 1907/2006	Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Power supply

Voltage VDC	24 V \pm 30%
Reverse polarity protection	yes

Harmonised standards

ETSI EN 300 328 V2.2.2	Broadband transmission systems; data transfer equipment in the 2.4GHz band
ETSI EN 300 440 V2.1.1	Short-range radio equipment; Radio equipment in the frequency range 1GHz to 40GHz
ETSI EN 301 489-1 V2.2.3	EMC standard for radio equipment and services; Part 1: General technical requirements
ETSI EN 301 489-17	Electromagnetic compatibility (EMC) standard for radio equipment and services - Part 17: Specific conditions for wideband data transmission systems
ETSI EN 301 489-52 V1.2.1	EMC standard for radio equipment and services; Part 52: Specific conditions for cellular communication devices
EN 62311:2008	Assessment of compliance of low power electronic and electrical equipment with the basic restrictions for human exposure to electromagnetic fields (10 MHz to 300 GHz)
EN 62368:1:2014/AC:2015	Audio/video, information and communication technology equipment - Part 1: Safety requirements



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Mechanical structure

Dimensions	157 mm x 86 mm x 47 mm
Protection class Housing	IP20 (DIN EN 60529:2014-09; VDE 0470-1:2014-09)
Enclosure material	Noryl V0 1550
Resistance of the housing material to aggressive media	Cooling and hydraulic fluids
Resistance of the housing material to UV light	yes
Mounting type	Top-hat rail