HUB

Technical Datasheet



Intuitive IoT gateway





The Wattsense Hub: an intuitive IoT gateway

The Hub is an electronic device

- Created to connect all equipment from all buildings: loT sensors, meters, heating, air conditioning, air handling systems, building management systems (BMS).
- Easy and quick to install:
 accessible for all. If the building already has a BMS, the Hub connects to the main bus as the third party. If there's no BMS, a BMS network is directly created by the Hub.
- Telemetry and controls: collects data and controls equipment.

- Smart Converter:
 unifies the field communication protocols.
- Connected to your system: connect your software to the Hub thanks to the protocols BACnet Server and MQTT client.
- Powerful IoT device: combines the functionality of a gateway, a PLC, a modem, and a device edge.
- Edge computing:
 hosts user plug-ins for local automation.

Power supply:

- 12-24V DC +/-10%, 2A.
- The cable between the power supply and the Box: 2 wires (red, black), 22 AWG, minimum section: 0.35 mm².

The Hub is protected against overvoltage, undervoltage, overcurrent from the power supply with indication by LED: green LED when the power supply is compatible, red LED if it is not suitable.

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| Hardware | | | |
|-----------------------|--------------------------------------|--|--|
| CPU | 528MHz ARM Cortex A7 | | |
| Memory | 512MB RAM | | |
| Storage | 4GB Flash | | |
| Consumption | 5W | | |
| Dimension | 160 x 110 x 55 mm | | |
| Weight | 340g | | |
| Operating temperature | From 0 ° C to + 45 ° C | | |
| Humidity | 5% to 95% humidity - No condensation | | |

| Interfaces | | | |
|--------------------------------------|--------|----------------|--|
| Type of interface | Number | Operating LEDs | |
| 3G/4G Modem | 1 | Yes | |
| LoRaWAN module from 863MHz to 928MHz | 1 | Yes | |
| Ethernet RJ45 | 2 | Yes | |
| RS485 | 2 | Yes | |
| USB | 2 | Yes | |
| USB Micro | 1 | No | |
| KNX | 1 | Yes | |
| M-Bus | 1 | Yes | |
| LPB/BSB | 1 | Yes | |

Protection of communication bus against ESD, short circuit, over consumption.

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Drivers:

- BACnet IP
- BACnet IP Server
- Diematic
- KNX S and LTE
- LON FT10
- LON IP-852
- LoRaWAN 1.0 local private
- LPB
- M-Bus
- wM-Bus
- Modbus RTU
- Modbus TCP/IP
- MQTT Client

Software:

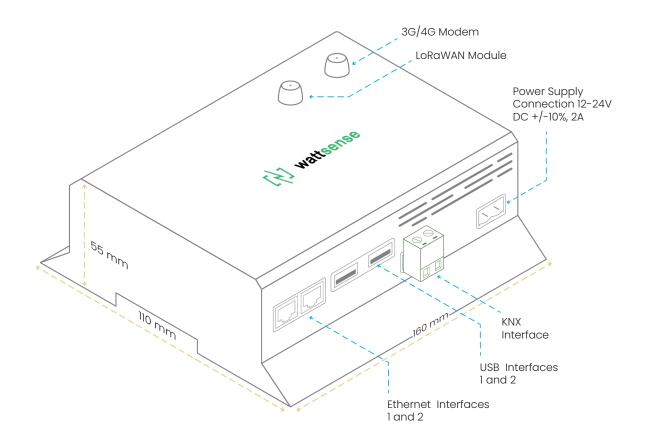
- Secured Linux Yocto distribution.
- Built-in drivers for all buses, protocols, and building equipment.
- Onboard LoRaWAN server: decodes LoRaWAN data locally directly in the Hub.
- Automatic discovery of equipment on BACnet.
- Easy configuration thanks to our Desktop management console.

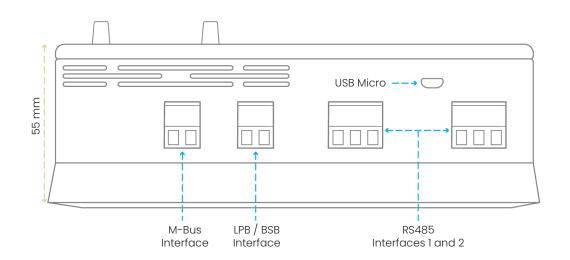
Security:

The HUB connects to your MQTT broker with the highest level of security based on SSL/TLS, with the following properties:

- Two-way authentication between Hub and server with x509 certificates.
- End-to-end encryption.
- · Message integrity checks.

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