

# 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:** IoT 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 an edge device.
- **Edge computing:** hosts user plug-ins for local automation.

## Power supply:

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

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.

Hardware	
CPU	528MHz ARM Cortex A7
Memory <sup>5</sup>	12MB RAM
Storage	4GB Flash
Consumption <sup>5</sup>	W
Dimension <sup>1</sup>	60 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	1Y	es
LoRaWAN module from 863MHz to 928MHz	1N	o
Ethernet	2Y	es
RS485 RJ452		Yes
USB	2N	o
USB Micro	1	No
KNX1		Yes
M-Bus	1Y	es
X-Bus (LPB)	1Y	es

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

## Drivers:

- BACnet IP
- BACnet IP Server
- Diematic
- KNX S et LTE
- LON FT10
- LON IP-852
- LPB
- LoRaWAN 1.0 local private - Bandes de fréquences supportées :  
AS\_923\_925, AU\_915\_928, EU\_863\_870, IN\_865\_867, US\_902\_928
- M-Bus (3UL Max.)
- Modbus RTU
- Modbus TCP/IP
- Modbus TCP/IP Server
- MQTT Client
- wM-Bus (Beta)

## 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.

