SEMS
Smart Energy Management System

SEMS Gateway

Description

The SEMS Gateway is a bridge that collects through its radio frequency modem or RS485/Modbus interface all exchanged data from SEMS terminals, pulse counters and sensors that are transferred by SEMS Bridges. The SEMS Gateway stores locally all collected measurements and communicate with a server or a remote computer through a secured IP connection, using Ethernet or Wi-Fi network, in order to offer to the customer all the services of the SEMS Live Dashboard.

Features

- Communication with Ethernet cable or Wi-Fi.
- ISM 868MHz radio frequency communication with a range up to 20km.
- 2 wires RS485/Modbus communication with galvanic isolation.
- USB communication
- Up to 255 SEMS Terminals can be connected to the RS485/Modbus interface of the SEMS Gateway.
- Up to 16Gb Compact Flash for local data storage.
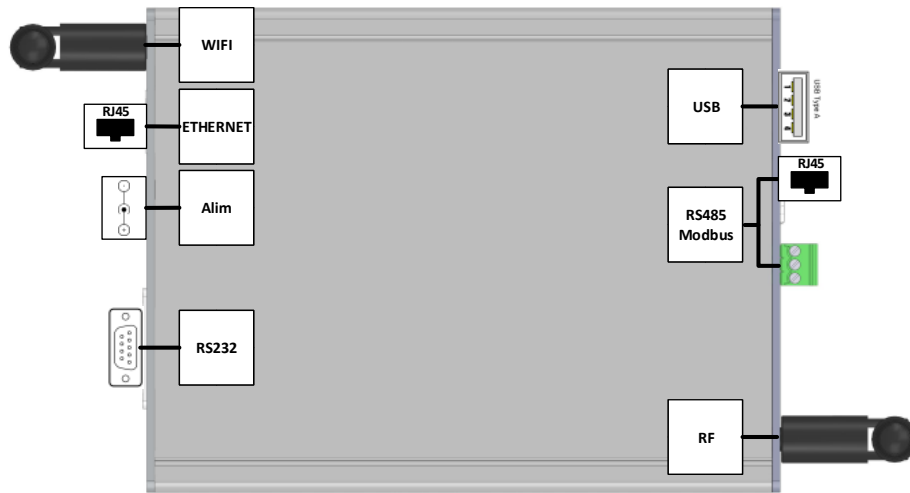- Conformance CE-compliant
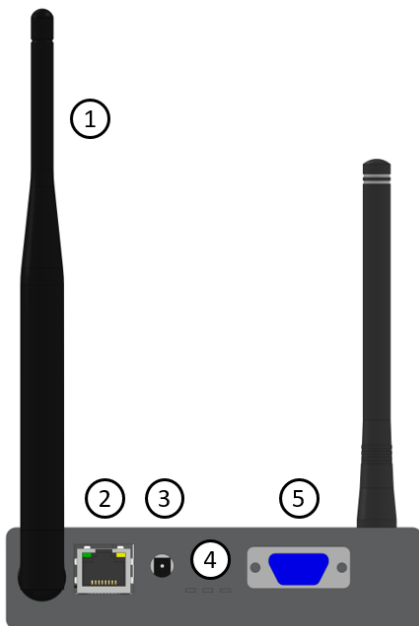
Assembly
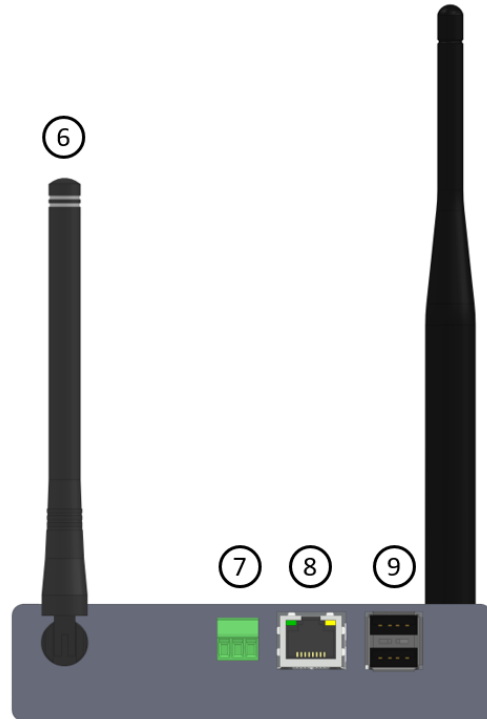
Position	Designation
1	Wi-Fi Antenna (Optional)
2	RJ45 connector for Ethernet communication
3	Power supply connector
4	Status LEDs
5	RS232 serial connector
6	RF Antenna (Optional)
7	Screw-terminal for RS485 communication
8	RJ45 connector for RS485/Modbus communication
9	USB connectors

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Connections

Technical specifications
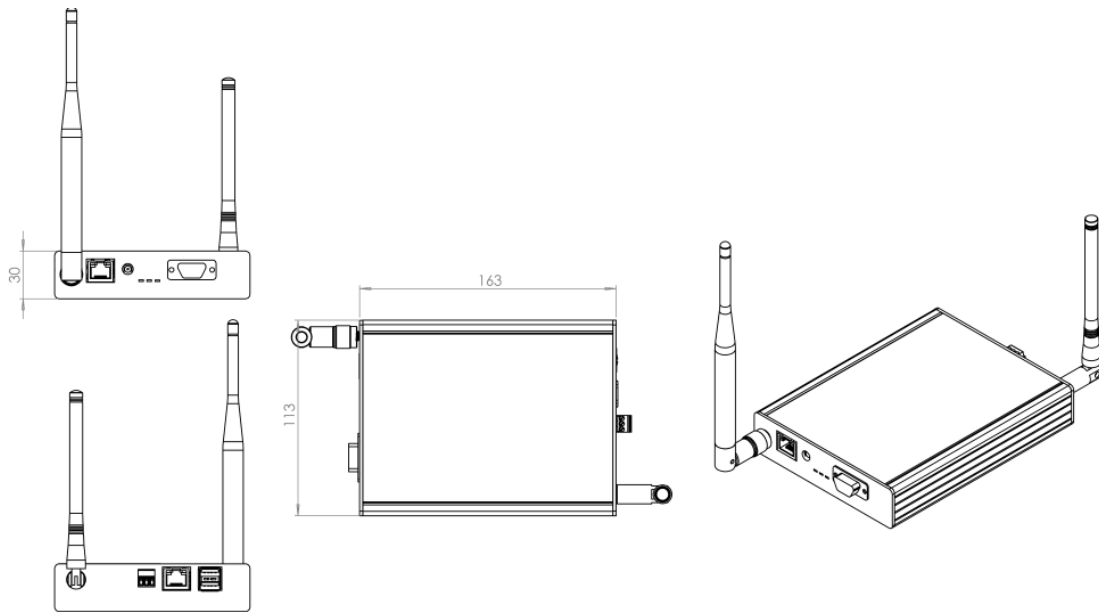
Dimensions	
W x H x D	22.6 mm x 99 mm x 111 mm

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Main specifications

Housing	Aluminum

Supply

Voltage range	7V DC to 20V DC
Max. current consumption	700mA (18V DC at 25°C)
Protection against transient overvoltage	Yes (bidirectional TVS Diode)

Network interface

Ethernet port	1
Communication speed	10/100Mbps
Connection method	8 pins RJ45
Voltage isolation	1.5kV
Wi-Fi module	1
Wi-Fi standard	802.11 a/b/g

2 wires RS485 interface with isolation galvanic

Connection method	Screw-terminal or RJ45 connector
Baud rate	Up to 500kbps
Isolation voltage	2.5kV (for 1 minute)
ESD protection performance	±15kV

Radio Frequency specifications (optional)

	Short range	Long range
Frequency	ISM 868MHz	ISM 869MHz
Transmission power	25mW / 14dBm	500Mw / 27dBm
RF signal range (line of sight)	Up to 2km	Up to 20km

USB 2.0 Interface

Ports	2
Connection method	Female A-Type
Communication speed	12Mbit/s

Ambient conditions

Ambient temperature (operation)	-20°C to 50 °C
Permissible relative humidity (operation)	10% to 95%

Standards

Conformance	CE-compliant

Directive conformity

Electromagnetic compatibility	R & TTE Directive 1999/5/EC

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