

FlatMesh Cellular Gateway

FlatMesh nodes transmit measurements from sensors to the internet via a cellular gateway. The FlatMesh gateway has two radio modems: one for the FlatMesh network and the other for cellular transmissions to the internet.

Sensor Network

Configuration: FlatMesh nodes automatically optimize communication paths to the gateway.

Protocol: Proprietary Senceive FlatMesh network protocol, IEEE 802.15.4 compliant.

Frequency Band: 2.4 GHz.

Max Transmit Power: 6.2dBm (EN 300 328 v1.8.1).

Max Antenna Gain: 4dBi. Range Up to 300m.

Max Capacity: Each gateway can accommodate up to 100 nodes.

Cellular Network

Modem: Five band UMTS/HSPA+ and quad band GSM/GPRS/EDGE.

Max Antenna Gain: +3.94dBi (850MHz), +1.81dBi (1900MHz).

Sim Cards: 3V and 1.8V.

RF Module: Gemalto PH8, FCC Identifier QIPPH8.

Internal Battery

Battery Type: Lithium Ion, rechargeable.

Nominal Voltage: 3.6V

Nominal Capacity: 8800mAh

Typical Runtime: 21 days without charging.

Operating Temperature: -20 to +60°C

Charging Temperature: 0 to +40°C

Solar Panels

Requirements vary according to the environment.

Panel Type: 12V, 20W.

Target Voltage for MPPT: 15 V.

Max Input Voltage: 32 V.

Dimensions & Materials

Dimensions including antennas: 15 x 2.7 x 5 inch (390 x 68 x 126 mm).

Weight: 2.4 lb (1.1 kg).

Housing: Die cast aluminium, with polymer lid.

Weather rating: IP67.



FlatMesh Cellular Gateway

FlatMesh USB Gateway

The USB Gateway provides direct local communications with FlatMesh nodes and connects to a PC or tablet via USB.

Sensor Communications

Configuration: FlatMesh nodes automatically optimize communication paths to the gateway.

Protocol: Proprietary Senceive FlatMesh protocol, IEEE 802.15.4 compliant.

Frequency Band: 2.4 GHz.

Max Transmit Power: 6.2dBm (EN 300 328 v1.8.1).

Max Antenna Gain: 4dBi. Range Up to 980 feet (300m).

Max Capacity: Each gateway can accommodate up to 100 nodes.

USB Interface for PC

Standard: USB 2.0

Connector: Standard A plug.

Cable Length: 39 inches (1 m).

Type of Device: Virtual COM port

Power: 5V, 500mA max from PC.

Dimensions & Materials

Size: 5 x 2.6 x 1.6 inches (125 x 66 x 41 mm).

Weight: 0.8 lb (0.35 kg).

Housing: Die cast aluminium.

Operating Temperature: -40 to 185°F (-40 to +85°C).



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