



FlatMesh Millivolt Node



FlatMesh RTD Node

FlatMesh Nodes & Gateway

FlatMesh nodes obtain readings from analog sensors, digitize them, and then transmit them via a cellular gateway to GeoCloud servers for processing and presentation. The use of nodes allows collection of measurements from a wide area and eliminates the expense and difficulty of installing and maintaining long runs of cable to centrally located data loggers.

Communications

Protocol: Proprietary Mesh Network, IEEE802.15.4 compliant.

Frequency: 2400-2485 MHz ISM Band.

Max Transmit power: 6.5 dBm.

Max Antenna Gain: 2.2 dBi.

Range: 980 feet (300m) point to point. Can be extended when nodes act as repeaters.

Gateway to Internet: Cellular.

Battery Life & Housings

Battery Life: 19000 mAh battery provides 12-15 years with 20 to 30 minute reporting intervals, including when acting as a repeater.

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

Weatherproofing: IP68 at 1m for 24 hours.

Required Connector: M12 female screw-in connector on sensor cable.

Housing: Die cast Aluminum.

Weight: 1.25 lb. (0.57 kg).

Dimensions: 3.5 x 3.8 x 2.4 inches (90 x 96 x 60 mm).

FlatMesh Millivolt Node

The FlatMesh Millivolt Node offers compatibility with a wide variety of resistive bridge sensors including pressure sensors, foil strain gauges, torque sensors, load cells, load pins, moisture sensing, and conductivity sensors.

Capacity: 1 mV sensor with thermistor.

Excitation: 5.0V \pm 0.1V, 150mA max.

Range: \pm 0.625V (\pm 125mV/V).

Resolution: 74.5nV (14.9nV/V).

Repeatability: \pm 2.5 μ V (\pm 0.5 μ V/V).

FlatMesh RTD Node

The FlatMesh RTD Node offers precision temperature monitoring using a variety of sensors.

Capacity: 1 RTD / PT100 sensor.

Excitation: Constant current.

Range: -40 to +185°F (-40 to + 85°C).

Resolution: < 0.01°C.

Accuracy: < 0.1°C.

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