



FlatMesh Analog Interface Node



The 4-channel Analog Interface Node extends FlatMesh connectivity to a wide range of analog instruments, supporting 4–20 mA, 0–10 V, and thermistor inputs.

It uses an integrated mesh radio transceiver to report measurements through Senceive's FlatMesh wireless communications network to a FlatMesh Gateway.

Key Features

- Four concurrently configurable analog channels (mix of current/voltage/thermistor).
- Per-channel selectable sensor excitation: 5V / 12V / 24V
- Internal, user-serviceable batteries enabling multi-year autonomy
- Waterproof to IP66/67
- Versatile mounting options
- NFC compatibility, enabling on the spot adjustments to the node

Ideal for many applications including:

- Understanding water levels in standpipes and reservoirs with vented pressure transducers
- Monitoring movements and displacement across surface cracks or joints with electrical crackmeters
- Settlement gauges for monitoring vertical displacement in embankments, tunnels or other civil structures
- Measuring pore water pressure with piezometers
- Structural monitoring utilising bi-axial tilt sensors to measure angular changes



FlatMesh Analog Interface Node

Physical Specifications

Parameter	Value
Dimensions (excluding antenna and bracket)	246 x 137 x 88 mm
Dimensions (including antenna and bracket)	246 x 303 x 106 mm
Total Mass	836 g without batteries 1090 g with 2 batteries 1346 g with 4 batteries
Housing Material	Polycarbonate
Protection	IP66 and IP67
Mounting Options	Pole mount, wall mount
Operating Temperature Range	-40°C to +85°C

Internal Batteries

Parameter	Value
Battery Type	Primary lithium-thionyl chloride (Li-SOCl2) with Hybrid Pulse Capacitor (HPC)
Nominal Voltage	3.6 V
Nominal Capacity	19 Ah
Cable and Connector	75 mm 22AWG UL1007 onto JST-PAP-02V-S
User Serviceable	Yes
Quantity	2 or 4 required
Battery Life (based on 4 batteries)	
Reporting Rate	
30 mins	>5 years
6 hr	>8 years



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FlatMesh Radio Specifications

Parameter	Value
Communication Type	Proprietary FlatMesh v3 Mesh Networking Protocols IEEE 802.15.4 compliant
Frequency Band	2400 – 2485 MHz ISM Band
Maximum Transmit Power (EN 300 328 v2.2.2)	6.5 dBm
Maximum Permitted Antenna Gain	4 dBm
Range	Range Up to 300 m depending on the environment
RF Module	Senceive F3N_NF

Analog Sensor Interface

Parameter	Value
Connector	M12 Female 8-pole A-coded Screw clamp or crimp
Output voltage (DC)	5/12/24V
Output current	200mA @ 5V, 500mA @ 12V, 250mA @ 24V
Voltage Input	Range: 0-10V DC Accuracy: 0.1% FS
Current Loop	Range: 0-20mA Accuracy: 0.1% FS
Thermistor (NTC)	Type: 3kΩ NTC Resolution: 0.05°C Accuracy: ±0.2% Range: -40°C to +85°C

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Certifications

- CE, FCC



Ordering Information

Model	Description
F3N1-AIN	FlatMesh Analog Interface Node (excluding batteries)
F3N1-AIN-S	FlatMesh Analog Interface Node (including standard batteries)
FS-DINAIN-SENCN	Sensor Connector for Digital & Analog Interface Sensor (1 per sensor)
FS-AIN-SENSPL	Sensor Connector splitter (required when connecting more than 2 sensors)
SP-C03168-2	Replacement batteries (2 pack)
FF-MP-DINAIN-PM	Pole Mount (with jubilee clip) for Digital & Analog Interface Sensor
FF-MP-DINAIN-WM	Wall Mount for Digital & Analog Interface Sensor
FF-MP-DINAIN-WMK	Magnetic Wall Mount for Digital & Analog Interface Sensor
FX-C-5M FX-C-2M FX-C-1M	N-type Antenna Extender (5 m) N-type Antenna Extender (2 m) N-type Antenna Extender (1 m)
FA-MK-CB	N-type Antenna Bracket for 6.35 screw/tie wrap/jubilee clip
FA-MK-CBM	N-type Antenna Bracket with magnets