Product Data Sheet: FlatMesh Nano +

The FlatMesh Nano + is an extremely high precision and exceptionally stable three axis tilt sensor which reports its measurements through Senceive's FlatMesh wireless communications network to a FlatMesh Gateway.

It has been successfully applied in many applications, including those measuring:

- Tunnel distortion
- Tunnel heave/settlement
- Embankment slippage
- Structural movement
- Rail track heave/settlement
- Rail track bed cant and twist

Key Features

- Integrated triaxial tilt sensor
- Extremely low noise performance
- Low profile and discreet
- Resolution of 0.0001° (0.0018mm/m) and repeatability of ±0.0005° (±0.009mm/m)
- Operational in any orientation
- Integrated long life battery
- 5 year battery life, including when acting as a relay node within the mesh communications network
- Integrated temperature sensor
- Versatile mounting options
- Waterproof to IP67 / IP68

CONTACT US

For information on our award-winning wireless asset condition monitoring solutions, call: **+44(0)20 7731 8269** email: **info@senceive.com** visit: **senceive.com**

Physical Specifications

Parameter	Value
Diameter	58mm
Height	45mm
Total Mass	110g
Housing Material	Polycarbonate and Aluminium
Protection (BS EN 60529: 1992 + A2: 2013)	IP67 IP68 at 2m for 24 hours
Mounting Options	Magnetic, screws, gluing, or clamping
Operating Temperature Range	-40°C to +85°C

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 v1.8.1)	6.5dBm
Range	Up to 300m depending on the environment Consult with Senceive for your application
RF Module	Senceive FM3Node

Tilt Sensor Specifications

Parameter	Value
Resolution	0.0001° (0.00175mm/m)
Repeatability	±0.0005° (±0.0087mm/m)
Range	±90°

Internal Battery

Parameter	Value
Battery Type	Lithium Thionyl Chloride
Nominal Voltage	3.6V
Nominal Capacity	4400mAh
Typical Battery Life	4 – 5 years at 20-30 minute reporting intervals, including when acting as a relay node Consult with Senceive for your application

Certifications

- Tested to conformity with all the essential requirements of the Radio Equipment Directive 2014/53/EU and RoHS Directive 2011/65/EU

- FCC Grant of Equipment Authorization: FCC ID 2AMFBFM3NT

Ordering Information and Accessories

Model	Description
FM3NT-30	**FlatMesh Nano Plus**
FF-GS30	**Direct gluing plate** - Single use direct gluing to structures
FF-MK30	**Magnetic mounting kit** - Perfect for steel or cast iron structures
FF-T2P30	**Two Part Mount** - Track bed, screwing, gluing
FF-M8S30	**M8 Stud Mount** - Threaded prism mounts
FF-C30	**Clamp Mount** - Stakes, Scaffolding, handrails
FF-FL30	**Flange Mount** - Screwing or bolting directly to a structure - Fits FlatMesh Beam Kit FF-BK-xxxx