

WiSenMeshWAN: Interface Node Analog Wireless Monitoring System



This internally powered sensor node allows intergration connection with analog sensors to detect the voltage readout. With selectable input ranges (0 to 5.0 V) that can be read with very high accuracy ($\pm 0.05\%$ FS) and resolution (0.18mV).

The nodes automatically power and sample the connected devices at a required intervals and collate the analog voltage data.

The node has a single channel for sensor input (upto 5 VDC), an integrated internal temperature sensor and wireless mesh radio transmitter via the external antenna.

The battery lifespan is up to 5 years at hourly readings.

WiSenMeshWAN nodes communicate via bespoke encrypted mesh radio technology can be up to 1.5km from each other or the SmartGateway. The sensors mesh together and automatically form a network relaying data off each other (up to 6 sub mesh levels of data hop) and back to a central data hub called a SmartGateway which contains the data logging functions, radio mesh control systems and external communication to the WiSen cloud based datacentre or local hosted system.

Features

- WiSenMeshWAN Node
- Analog Interface
- 1-channel input device
- Intelligent node/repeater
- 1 second to 1 hour variable readings
- End user configurable
- IP66
- Battery life up to 5 years



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- when it has to be **right**

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WiSenMeshWAN: Interface Node Analog

BASICS

Battery Power	1 xER34615 Battery
Accuracy Stop Voltage	2.7VDC
Mesh Stop Voltage	2.1VDC
Battery Connection	Standard Aluminium Battery Holder
Working Current (DC)	Max. 210mA
Local Storage	Min. 450 Messages
L x W x H	100mm x 100mm x 60mm
Weight	0.60kg
Cable Gland	1 x EMC-CMA12 for external sensor connection
Wire Connection	Spring type wiring terminal

EXTERNAL CONNECTED SENSOR

	3rd party device, Maximum cable length 1m	
	Signal Output Range (0 to Vcc_Out)	Power Input Voltage (Vcc_Out) @max. 100mA
Sensor Type	0-1.8V	1.8V±0.05V
	0-2.5V	2.5V±0.05V
	0-3.3V	3.3V±0.05V
	0-5.0V	5.0V±0.05V
No. of Inputs	1 Channel	
Sensor Connection	Type of 3 wires: V+, Line, GND.	
Accuracy	0.05% F.S.	
Resolution	0.18mV	

STANDARD SYSTEM PARAMETER

Temperature	Range: -40 ~ 85°C, Accuracy: ±1°C, Precision: 0.1°C
Voltage	Accuracy: ±0.1V

WIRELESS SENSOR NETWORK INTERFACE

Protocol	WiSenMeshWAN® proprietary radio encryption
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INDUSTRIAL STANDARD

Casing and Painting Materials	Aluminium-Alloy & Epoxy Polyester Powder Coating
IP Rating	IP66
Operating Temperature	-40 ~ +85°C
Certificates	CE, FCC, ACMA, RCM