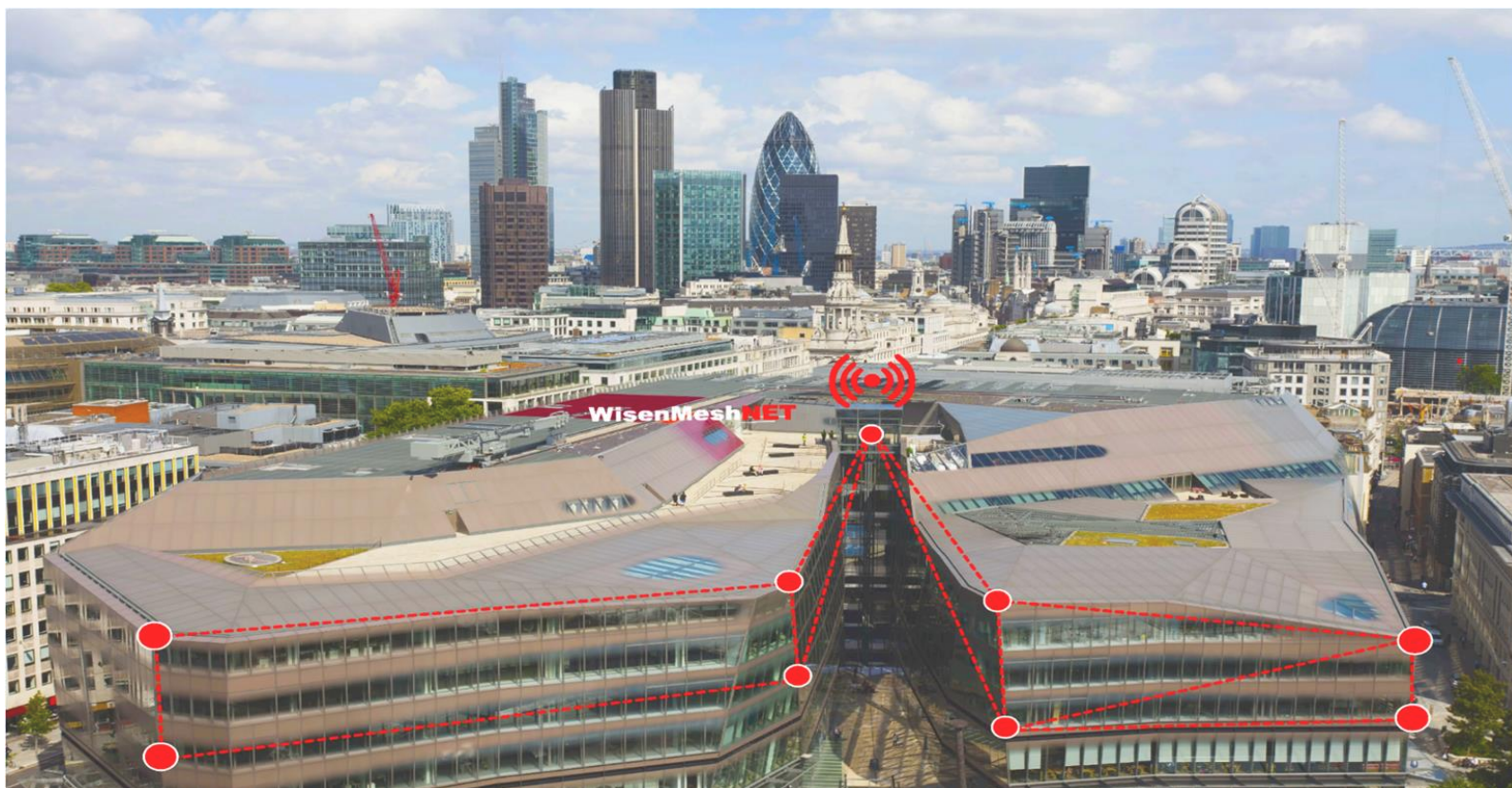


# WiSenMeshNET: SmartGateway & Mini Wireless Monitoring System



## SMARTGATEWAY MINI

WiSenMeshNET SmartGateway Mini is a mini-USB SmartGateway for WiSenMeshNET sensor nodes. It manages the scheduling of the connected sensors and reads data from the node and transmits it to the local data server over USB connection. Locally stored data can be pushed to the Wisen cloud or imported immediately to 3<sup>rd</sup> party monitoring software. The SmartGateway Mini is directly powered from the USB connection.

## FEATURES

- WiSenMeshNET control unit
- USB A connector
- Designed for offline/local PC connectivity
- No need for external power



## SMART GATEWAY

WiSenMeshNET SmartGateway is a connection gateway and edge computing data hub for WiSenMeshNET nodes. It manages the scheduling of the connected sensors and reads data from the nodes and transmits it to the WiSen data cloud server using the integrated modem. In case of communication failure, data is buffered locally until the communication is restored. The SmartGateway has an internal battery which can last up to 6.5 months, but it can also be powered externally.

## FEATURES

- Onboard SD memory card
- COM interface
- Digital interface
- Integrated radio
- Internal battery life upto 6.5 months
- External DC solutions
- Central WiSenMeshNET data hub
- Over the Air Programmable
- Auto APN Recognition for Sim Cards





Protocol	WiSenMeshNET® proprietary radio encryption	WiSenMeshNET® proprietary radio encryption
Radio Frequency	2.4GHz System	2.4GHz System
ISM Radio Band	2.405 – 2.480GHz	2.405 – 2.480GHz
Maximum Transmit Power	3.0dBm (Typically 1.5dBm)	3.0dBm (Typically 1.5dBm)
Receive Sensitivity	-102dBm (Min)	-102dBm (Min)
Maximum Antenna Gain	10dBi (Default 5dBi)	10dBi (Default 5dBi)
Bandwidth	500kHz	500kHz
Transmission Speed	250kb/s	250kb/s
Radio Program Types	<b>Mesh</b> <b>Star</b>	<b>Mesh</b> <b>Star</b>
Reading/Sampling Interval	Mesh = 4 seconds to 24 hours Star = 1 to 3600 seconds	Mesh = 4 seconds to 24 hours Star = 1 to 3600 seconds
Number of Mesh Hops (Standard Mesh Radio Program)	10 Hops	10 Hops
Radio Range	<b>Mesh Topology</b> Rural (Line of Sight) = 300m per hop Urban (Line of Sight) = 150m per hop Tunnels (Line of Sight) = 75-100m per hop  <b>Star Topology</b> Rural (Line of Sight) = 300m Urban (Line of Sight) = 150m Tunnels (Line of Sight) = 75-100m	<b>Mesh Topology</b> Rural (Line of Sight) = 300m per hop Urban (Line of Sight) = 150m per hop Tunnels (Line of Sight) = 75-100m per hop  <b>Star Topology</b> Rural (Line of Sight) = 300m Urban (Line of Sight) = 150m Tunnels (Line of Sight) = 75-100m
Maximum Network Size (Per Gateway)	Typically, 180 Nodes <b>Mesh</b> 50 Nodes <b>Star</b>	Typically, 180 Nodes <b>Mesh</b> 50 Nodes <b>Star</b>

#### SERVICE INSPECTOR

	Every 3 Years by Manufacture (or inspected by arranged methods)	Every 3 Years by Manufacture (or inspected by arranged methods)
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#### CERTIFICATION

Regional Conformity	UKCA	UKCA
Network Rail	PADS Number: -	PADS Number: 0055/162721
London Underground	Reg Number: -	Reg Number: 3224

#### ACCESSORIES

Radio Antennas	
WA029-00002	WiSenMeshNET Whip Mesh Antenna (+5dBi/195mm)
WA029-00039	WiSenMeshNET Whip Mesh Antenna (+10dBi/395mm)

GSM/Wi-Fi Antennas	
WA029-00029	WiSen GSM Paddle Antenna 2G/3G/4G
WA029-00033	WiSen GSM Omni Antenna 2G/3G/4G with 50m Coaxial Cable Extension

Power Supply	
WW001-00073	WiSen Solar Charge Controller Unit with 10W Solar Panel-M101
WW001-00074	WiSen 10.8V Non-Rechargeable Battery Enclosure-M001
WL034-00054 / WL034-00076	WiSen Gateway 110-240v AC to 12v DC@3.0A Outdoor Power Adaptor (0.8m) or (5.0m)
WM028-00192	WiSen Fixing Bracket for High-Gain or 50m GSM Antenna
WB016-00016	3.6V ER34615 19Ahr D Cell Lithium Battery

Daughterboard Module Options	
WW002-0062	WiSen GSM 4G connection board EMEA
WW002-0054	WiSen Wi-Fi Module
WW002-0055	WiSen Ethernet Module
WW002-0090	WiSen RS485 Module

Mounting	
WM028-00153	WiSen Standoff Mounting for Enclosures*
WM028-00186	WiSen Flat Mounting Plates with U Clamps for Enclosures*
WM028-00148	WiSen 0.4m Tower Bracket for Enclosures
WM028-00150	WiSen 1.0m Tower Bracket for Enclosures
WM028-00230	WiSen L-Shaped Bracket with U Clamp for Tower Bracket
*Compatible with magnet fixings for non-intrusive installations	