SynapSense® Wireless Mesh (WM) Gateway

specifications

The WM gateway shall be a wireless network-to-Ethernet bridge designed to collect and consolidate data captured from wireless mesh nodes or metered hardware and then send data to remote server.

technical information

Dimensions:	139mm L x 133.35mm W x 41.402mm H (5.5" L x 5.25" W x 1.63" H)
Maximum Weight:	.2268Kg (8 oz.)
Mounting:	Cable tie or optional WM Gateway Mounting Shelf

key features and benefits

Data Aggregation	Collects, consolidates, and relays data from and manages the wireless mesh node network
Wireless Mesh Network	Serves as the consolidation point for node data within an innovative wireless mesh network made up of multiple nodes that "talk" to each other to share environmental monitoring data across the data center
Simple Deployment	Allows for simple placement near existing AC outlets and Ethernet ports to avoid complex cabling installations, minimizing time, labor, and material costs.
Auto Adjusting Receiver Sensitivity	Adjusts receiver sensitivity to compensate for powerful ambient radio noise from other devices like Wi-Fi, enabling radios to communicate with each other in harsh RF environments
Channel Black-listing	Identifies and avoids radio frequencies that have high levels of RF noise, speeding up data transfer and conserving battery life
Smart-Over-the-Air (SMOTA) Firmware Update	Uses wireless network to transmit hardware firmware updates directly to node without need for physical intervention for simplicity of updates*
SmartZone™ Software DCIM Suite Integration	Captures environmental data that is utilized by SynapSoft® Cooling Software, part of the SmartZone™ Solutions portfolio, for real-time monitoring and display, management, and automated documentation
Data Retention	Designed to buffer, retain and resend data in the event that the data center Ethernet connection is lost, thereby increasing the resiliency of the data center by avoiding loss of critical data
IPv6	Supports IPv4 and IPv6
128-bit and 256-bit Network Encryption	Encrypts data over the network using a unique 256-bit or 128-bit key to ensure security
Single IP Address Scalability	Allows interconnect ability of up to 400 nodes on a single wireless mesh network gateway thru one single IP address, reducing the need for separate IP ports, IP capital costs, and management overhead

* Performing a firmware upgrade is a specialized process which must involve technical support or a qualified reseller.

Wireless Mesh Gateway	
Gateway:	100-1156-001
Gateway mounting shelf:	67-0811-003

Wireless Mesh Nodes	
Pressure Node™:	99-0331-001
ThermaNode™:	99-0501-001
ThermaNode™ EZ (measures temperature):	99-0944-001
ThermaNode™ EZ-H (measures temperature and humidity):	99-0944-010
Constellation Node™:	99-0348-003

SynapSoft® Software	
Software Fee Modbus Driver:	SWFee-I-MB
Software Fee BACnet Driver:	SWFee-I-BN
Software Fee SNMP Driver:	SWFee-I-SN
Environmental Monitoring License:	99-0794-001

applications

SynapSense® Cooling Optimization, part of the SmartZone™ Solutions portfolio, is a turn-key wireless monitoring and cooling control solution for data centers that uses intelligent software, leading edge wireless nodes, and professional services to optimize cooling, increasing current capacity and reducing costs to deliver tangible ROI.

The SynapSense® Wireless Mesh Gateway collects node data from wireless devices via a wireless mesh network and gateway the data via the Ethernet to the server. The gateway collects and processes the raw data. Once processed, the generated information is presented to the user via the Web Console.

SynapSense® Wireless Mesh Gateway can be mounted with cable ties, adhesive, or with the WM Gateway Shelf product. Gateways require Ethernet and external power and should be located near both AC outlets and an Ethernet port. Use the Gateway Shelf for easy mounting to a wall or post.

Specifications

Specifications	Description
Power Requirements	• 5.0 VDC (±5%) via supplied power adapter requiring 90-264 VAC (50~60Hz) • Power consumption 5.4 watts
Regulatory Information	• FCC Part 15, Class A, Subpart C, 15.247 • Industry Canada
Environmental	• 32ºF to 140ºF (0ºC to 60ºC) • 5% to 90% no-condensing humidity • Indoor use only
Radio	IEEE 802.15.4 compliant radio
RF Data Range	Typical data center environment: 50 feet (15m); Max 260 feet (80m) open air, line of sight
Software Requirements	Requires SynapSoft® Version 6.7 or higher
Browser	Windows Internet Explorer 9.x or higher*, Mozilla Firefox** 11.x or higher, or Google Chrome 17*** or higher
Ethernet	10baseT – 100baseT

*Microsoft, Windows, and Internet Explorer are all registered trademarks of Microsoft Corporation in the United States and/or other countries.

** Mozilla and Firefox are registered trademarks of Mozilla Foundation.

*** Google Chrome is a trademark of Google, Inc.

Dimensions

3.900   5.500
[99.06] [139.7]

1.624 1.753
[41.25][44.53]

5.250 [133.35]
5.453 [138.50]
5.619 [142.72]
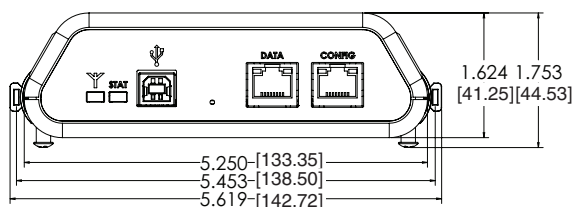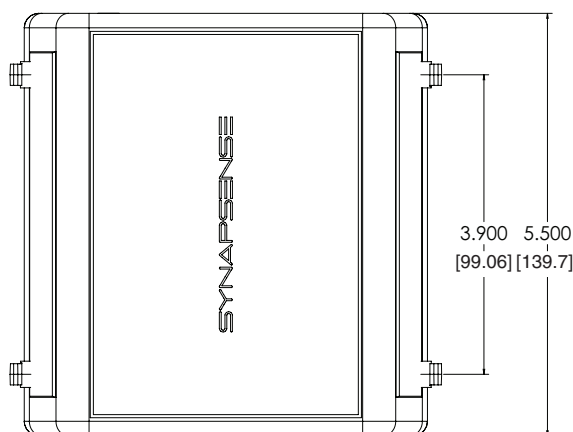
Dimensions are in inches. [Dimensions in brackets are metric.]

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