

# SmartStruxure™ Lite Solution

## MPM Series Wireless Manager

SmartStruxure™ Compatible

Site and zone managers providing 100% wireless integrated control solutions for HVAC, lighting, and metering, as well as remote management via StruxureWare™ Building Expert.



Get Control. Get Efficient. Get Value.



# SmartStruxure Lite solution Wireless Manager Features



Multi-Purpose Management devices (MPM) enable the control, monitoring, and management of entire sites via StruxureWare Building Expert. They can also be used for wired and wireless zone control in larger buildings.

## Control features

- Wireless control of EnOcean end-devices (optional, 49 points per MPM)
- Wireless control of ZigBee Pro end-devices (optional, 30 peripherals per MPM)
- Programmable via StruxureWare Building Expert
- Points visible through BACnet®, EcoStruxure® Web Services (EWS) and oBIX®
- Real-time response to scripting/graphical programming

## Applications

The MPMP-GW has an aesthetic look, similar to a router, allowing for in-room deployment. It supports control and gateway functionality for wireless peripherals for the following applications:

- HVAC room and zone control (actuators, thermostats, sensors)
- Lighting room and zone control (switches, relays, sensors)
- Access (ikeycard readers and occupancy sensors)
- Wireless meters and sub-meters

## Networking Between Units

- Wireless: ZigBee Pro wireless mesh network (self-forming/healing, 25 nodes per network)
- Wired: Daisy chain
- IP/Ethernet: Ethernet port

## Embedded gateway

- EnOcean (wireless) to BACnet IP/oBIX/EWS
- ZigBee Pro (wireless) to BACnet IP/oBIX/EWS
- Modbus to BACnet IP/oBIX/EWS

## StruxureWare Building Expert

All MPM models have an embedded web server hosting Building Expert, a web-based intelligent building management system that allows complete configuration and management of small sites. Building Expert offers dashboards, maps, graphical programming, scripting, scheduling, trend logging and more. It is the perfect mini-iBMS for small and medium buildings. It can also be integrated with other SmartStruxure solutions.

## Accessories

- Replacement ZigBee Pro antenna
- Replacement EnOcean antenna for 868MHz and 902 MHz (315 MHz not available)
- Antenna cable extension



## AT A GLANCE

### Networking

- Ethernet connector for BACnet Ethernet/IP
- 802.15.4 wireless mesh (25 nodes/network)
- Wired serial bus for daisy chain (CANbus)

### Third-party interoperability

- BACnet, EWS, oBIX, FTP
- EnOcean (wireless)
- ZigBee Pro (wireless)
- CANbus

### Inputs/Outputs

- EnOcean (wireless): 49 devices
- ZigBee Pro (wireless): 30 peripherals

### Other

- Real-time clock
- 400MHz processor
- 64MB of RAM
- 4GB of Flash for local storage
- StruxureWare Building Expert

### Accessories

- ZigBee and EnOcean antenna
- Antenna cable extension

# SmartStruxure Lite solution Wireless Manager Specifications

## Specifications

### Power

#### Voltage

24VAC;  $\pm 15\%$ ; 50/60HZ

24VDC  $\pm 10\%$

#### Typical consumption

5 VA + Output (VAC), 1.6 W + Output (VDC)

#### Battery

CR1220 3v Lithium Coin Cell Battery

### General

#### Processor

ARM9 32-bit, 400MHz

#### Memory

64MB flash

#### Storage

4GB flash for local storage

#### Real-time clock

Battery backed (10,000 hours)

#### Communication

ZigBee Pro, EnOcean, BACnet

CANbus (125-500 Kbps)

Ethernet (10/100 Mbps)

### Enclosure

#### Material

Rigid ABS

#### Dimensions

116mm (4.57in) x 191mm (7.52in)

#### Rating

UL94V0-5VB

#### Mounting

Din-rail, wall or ceiling mount

### Environmental

#### Operating Temperature

0°C (32°F) to 60°C (140°F)

#### Storage Temperature

-20°C (-4°F) to 60°C (140°F)

#### Relative Humidity

0 to 90% non-condensing

### EnOcean (optional)

#### Frequency

315MHz, 868MHz, or 902MHz

#### Receiver Sensitivity

-95dBm

#### Conducted Output Power

5dBm

#### Range

Recommended: 45ft/15m

Line of sight: 100ft/30m

#### Antenna

External whip, RP SMA 0dBi

### ZigBee Pro (optional)

#### Frequency

2400 – 2483.5MHz, 16RF channels

#### Data rate/Mod.type

250Kbps

#### Receiver Sensitivity

-101dBm/-105dBm (amplified)

#### Nominal Output Power

8dBm/18dBm (amplified)

#### Range

Recommended to MPM: 150ft/50m

Line of sight to MPM: 300ft/100m

Recommended to peripherals: 50ft/17m

Line of sight to peripherals: 100ft/30m

#### Antenna

External whip, RP SMA 2.5dbi

### StruxureWare™ Building Expert

#### Software type

Embedded web interface

#### Local installation

Not necessary

#### Browser compatibility

Firefox ESR

Internet Explorer 10 (only)

Google Chrome

Safari (Mac only)

### Agency approvals

Energy Management Equipment, UL 916, Fourth Edition, December 23, 1998, rev. December 17, 2007

CSA Standard for Signal Equipment

C22.2 No. 205-M1983 (R2004)

CFR47 FCC Part15, Subpart B:2009

ICES-003: Issue 4 (2004)

CE:

Japanese Radio Law

RoHS

### Disclaimer

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

**NOTE: All MPM-GW models produced as of June 2016 no longer include the battery. The battery has been replaced with a Super Cap.**

## Disclaimer

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- this device may not cause harmful interference
- this device must accept any interference received, including interference that may cause undesired operation.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- this device may not cause interference
- this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- l'appareil ne doit pas produire de brouillage
- l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Changes or modifications not approved by the manufacturer could void the user's authority to operate the equipment.

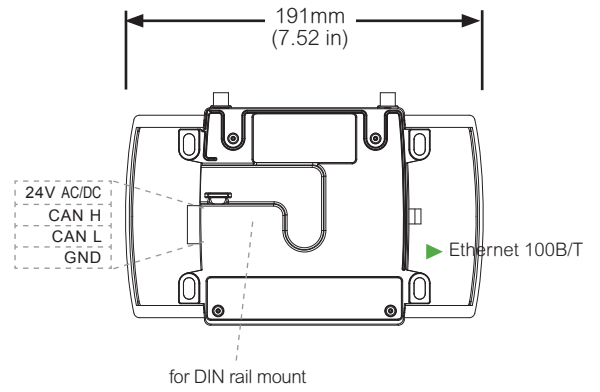
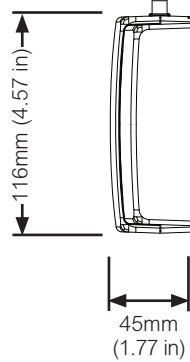
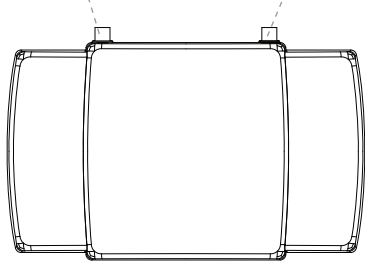
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm during normal operation. This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.



# SmartStruxure Lite solution Wireless Manager and Antenna

ZigBee Pro (optional)  
(Pink striped antenna for 2.4GHz)

EnOcean (optional)  
(Green striped antenna for 315MHz)  
(Gray striped antenna for 868MHz)  
(Yellow striped antenna for 902MHz)



Replacement Antenna



Cable Extension

## Ordering information

Part numbers	Manager		EnOcean*			ZigBee Pro	I/O		VAV		
	Building Expert	StruxureWare integration	315 MHz	868 MHz	902 MHz	High power	6 inputs	6 outputs	Modbus	Flow sensor	Actuator
MPM-NW-000-5045	x	x									
MPM-GW-C00-5045	x	x	x								
MPM-GW-D00-5045	x	x		x							
MPM-GW-E00-5045	x	x			x						
MPM-GW-CI0-5045	x	x	x			x					
MPM-GW-DI0-5045	x	x		x		x					
MPM-GW-EI0-5045	x	x			x	x					
MPM-GW-OI0-5045	x	x				x					

Accessories	EnOcean Antenna		ZigBee Antenna	Cable Extension
	868 MHz	902 MHz	Antenna	
MPM-ACC-ANT-0I0			x	
MPM-ACC-ANT-D00	x			
MPM-ACC-ANT-E00		x		
MPM-RAEC-5045				x

\*EnOcean: Contact EnOcean for the latest information about the frequency in your country.  
 315MHz: Americas, Hong Kong, India, Japan, Thailand, Taiwan  
 868MHz: Europe, China, Malaysia, Singapore, Vietnam, New Zealand  
 902MHz: USA has transitioned to 902 MHz in 2013. Other countries may do so as well.

MPM-NW-000-5045

Unlike MPM-GW models, the MPM-NW-000-5045 comes with dark casing. This model is only used as a gateway with CANbus networking capabilities. It has no wireless communication capabilities.