

# NET/X™ WIRELESS BACKPLATES



for use with Net/X™ Network Thermostats

**WBM-1a** for GE11-NX and HP21-NX Thermostats

**WBM-1** for ALL Net/X Thermostats (shipping Jan 2009)

## GENERAL DESCRIPTION

The WBM-1a and WBM-1 wireless communicating backplates are designed to replace the passive backplates of Net/X™ thermostats. Based on state-of-the-art wireless mesh network technology, the backplates work seamlessly with the WCM-1, Wireless Coordinator Module. The integrated RF transceiver offers unmatched performance in a 2.4GHz IEEE 802.15.4 module. With a tested outdoor line-of-site range of 1,000 feet from thermostat to thermostat, the WBM-1 series supplies the power and reliability needed for practically any building. In addition, each thermostat's RF transceiver acts as a repeater, allowing networks of virtually any size and range.

Works for both new construction and hard to reach retrofit applications.



## Standard Features

- Interchangeable with passive Net/X thermostat backplates
- Standard HVAC thermostat connections match all Net/X thermostats
- Standard Net/X remote sensor connections
- Single Push Button for Link Coordination with WCM-1
- Link LED with link quality indicator
- Powered from HVAC equipment with standard HVAC cabling
- Integrated F antenna
- IEEE 802.15.4 mesh network compliant
- 2.4GHz spread spectrum technology
- FCC Certified on all 16 channels
- FCC Part 15.247 Class B agency approval
- Industry Canada (IC) approval

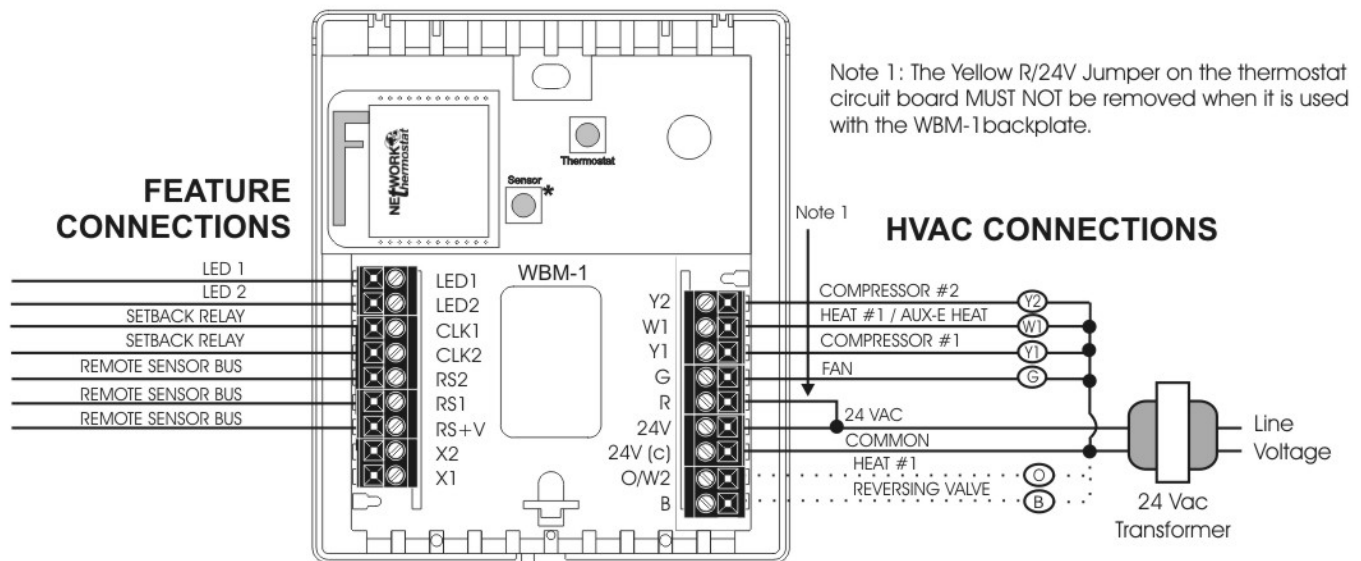
Note: Specifications subject to change without notice.

# SPECIFICATIONS

Rated Voltage : 20 to 30Vac, DC 24 nominal  
 Rated Power : 18dBm  
 L.O.S Range: 1,000 feet  
 Indoor Range: up to 200 feet  
 Frequency Range: 2.4GHz, spread spectrum  
 Antenna Type: Integrated F  
 Certifications: FCC and IC

Dimensions : 4.5" H x 4" W x 1" D (including thermostat)  
 Equipment Terminations : R-switching volt., W1- Heat 1/Aux Heat/E Heat, Y1-compressor stage 1,G-fan, O/B-reversing valve cool/heat, LED1-light, LED2-light, Y2-compressor stage 2  
 Power Terminations : 24V - power, 24V(c) - power common  
 Communication Terminations : X1, X2  
 Sensor Terminations : RS+V - sensor power, RS1 - comm(+), RS2 - comm(-)  
 Setback Terminations : CLK1, CLK2 dry contact closure

## WIRELESS BACKPLATE CONNECTIONS



## OUTPUT TERMINAL FUNCTIONS

**LED1** Free light for status or function indication  
**LED2** Free light for status or function indication  
**CLK1** Dry contact closure input for setback  
**CLK2** Dry contact closure input for setback  
**RS2** Remote indoor, outdoor and/or wet  
**RS1** location sensor  
**RS+V** Power for remote sensors  
**X2** No Connection  
**X1** XBUS Communications  
 (internal connection to wireless module)

\* Future Wireless Remote Sensor Feature

**Y2** GE - Cooling #2  
 HP - Compressor 2nd stage operation  
**W1** GE - Heating #1  
 HP - Auxiliary Heat as 2nd stage heat or Emergency Heat  
**Y1** GE - Cooling #1  
 HP - Compressor 1st stage operationHeat  
**G** Fan  
**R** Independent Switching Voltage from HVAC equip  
**24V** 24Vac  
**24V(c)** 24Vac Common  
**O/W2** GE - Heat #2  
 HP - Cooling Mode Reversing Valve  
**B** HP - Heating Mode Reversing Valve