

CAN2GO Room controller

Building automation's **missing link**



BACnet, EnOcean and ZigBee.
Controller, gateway and BACnet IP server.
All in one device.

Overview

Networking

- > Ethernet connector for BACnet IP connectivity
- > 802.15.4 wireless mesh
- > Wired serial bus for chain links

Third party interoperability

- > BACnet
- > EnOcean
- > Zigbee

Inputs/Outputs

- > Inputs: 6 universal
- > Outputs: 4 relay, 2 analog
- > Wireless I/O: unlimited

Other

- > Real-time clock

Introduction

A flexible line of controllers that allows facility managers, contractors and OEM manufacturers to deploy integrated solutions for HVAC, lighting, and more, quickly and efficiently linking multiple devices based many standard protocols.

They are all interoperable with any BACnet compliant building management system.

Control features

- > Programmability with real-time scripting.
- > Control of wired end-devices (6 inputs and 6 outputs).
- > Wireless bidirectional control of EnOcean end-devices (optional).
- > Wireless bidirectional control of ZigBee end-devices (optional).

Applications

Supports any HVAC & lighting application including:

- > Room or Zone controller
- > Unitary equipment such as rooftop HVAC units, Air Handling Units, heat pumps and dehumidification units
- > Mechanical rooms and equipment closets

Embedded gateway

- > Bidirectional EnOcean to BACnet IP gateway - integrates EnOcean end-devices as BACnet objects (optional).
- > Bidirectional ZigBee to BACnet IP gateway - integrates ZigBee end-devices as BACnet objects (optional).

Embedded BACnet IP server providing IP web interface

- > The controller hosts a complete BACnet IP building automation web-based interface.
- > Connecting the Ethernet port of one or more controllers to a LAN will make the entire building automation system manageable from a web-browser.
- > No extra software or server required.

Networking between controllers

- > Wireless - ZigBee wireless mesh network (self-forming/healing).
- > Wired - chain-link connections.
- > IP/Ethernet - Ethernet port.



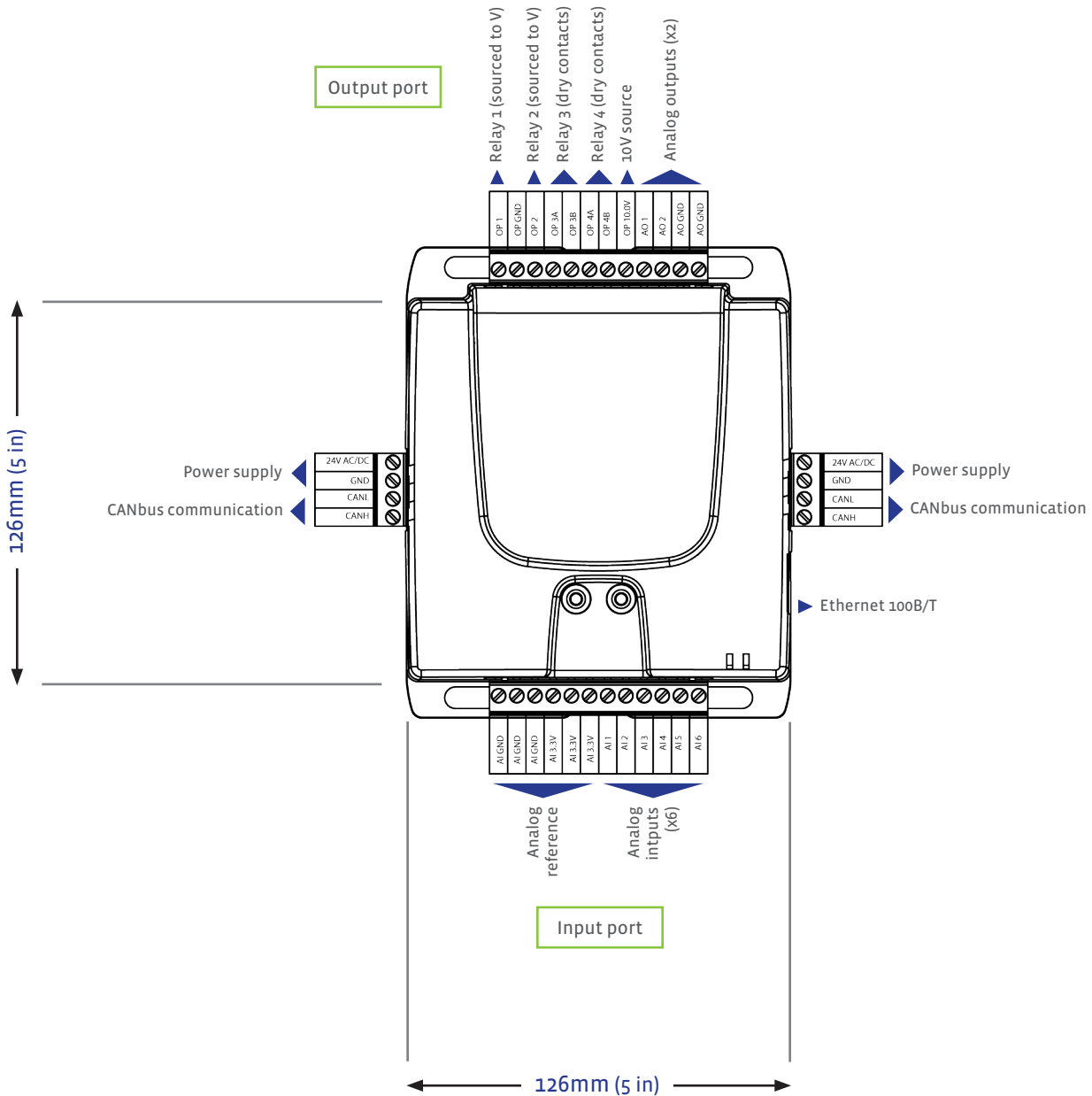
Specifications CAN2GO Room controller

POWER	
Voltage	- 24VAC; ± 15%; 50/60HZ; Class 2. - 24VDC ± 10%
Protection	1A fuse
Typical Consumption	- 3 VA + Output (VAC) - 1.2W + Output (VDC)
GENERAL	
Processor	ARM 32-bit
Memory	64Mb RAM
Storage	1Gb Flash (2Gb optional)
Real-time clock	Battery backed (10,000 hours)
Communication	- Zigbee, EnOcean, BACnet - CANbus (125-500 Kbps) - Ethernet (10/100 Mbps)
ENCLOSURE	
Material	Rigid ABS
Dimensions	126mm (5 in) X 126mm (5 in)
Rating	UL940-5VA
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
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)	

INPUTS	
Quantity	6
Voltage	0-10 volt
Current	4-20mA with 249 Ω external resistor
Resistance	1 kΩ to 100 kΩ
Resolution	14-bit
OUTPUTS	
Analog (x2)	0-12V, nominal 50 mA max each, 12-bit resolution
Relay (x4)	24V, 1.1 Amp per relay
SOFTWARE	
Type	Embedded web interface
Local installation	None necessary
PDA/Smartphone compatible	Yes
Browser compatibility	Firefox
ENOCHEAN TRANSCEIVER	
Frequency	315.0 MHz or 868.3 MHz
Data rate / Modulation type	125 kbps or 120 kbps / ASK
Receiver Sensitivity	-95dBm
Conducted Output Power	5dBm
Range	Up to 300m open air / Up to 30m in building
ZIGBEE TRANSCEIVER	
Frequency	2400 – 2483.5 MHz, 16 RF channels
Data rate / Modulation type	250 Kbps
Receiver Sensitivity	-101dBm / -105dBm (amplified)
Nominal Output Power	8dBm / 18dBm (amplified)
Encryption	AES 128 bit



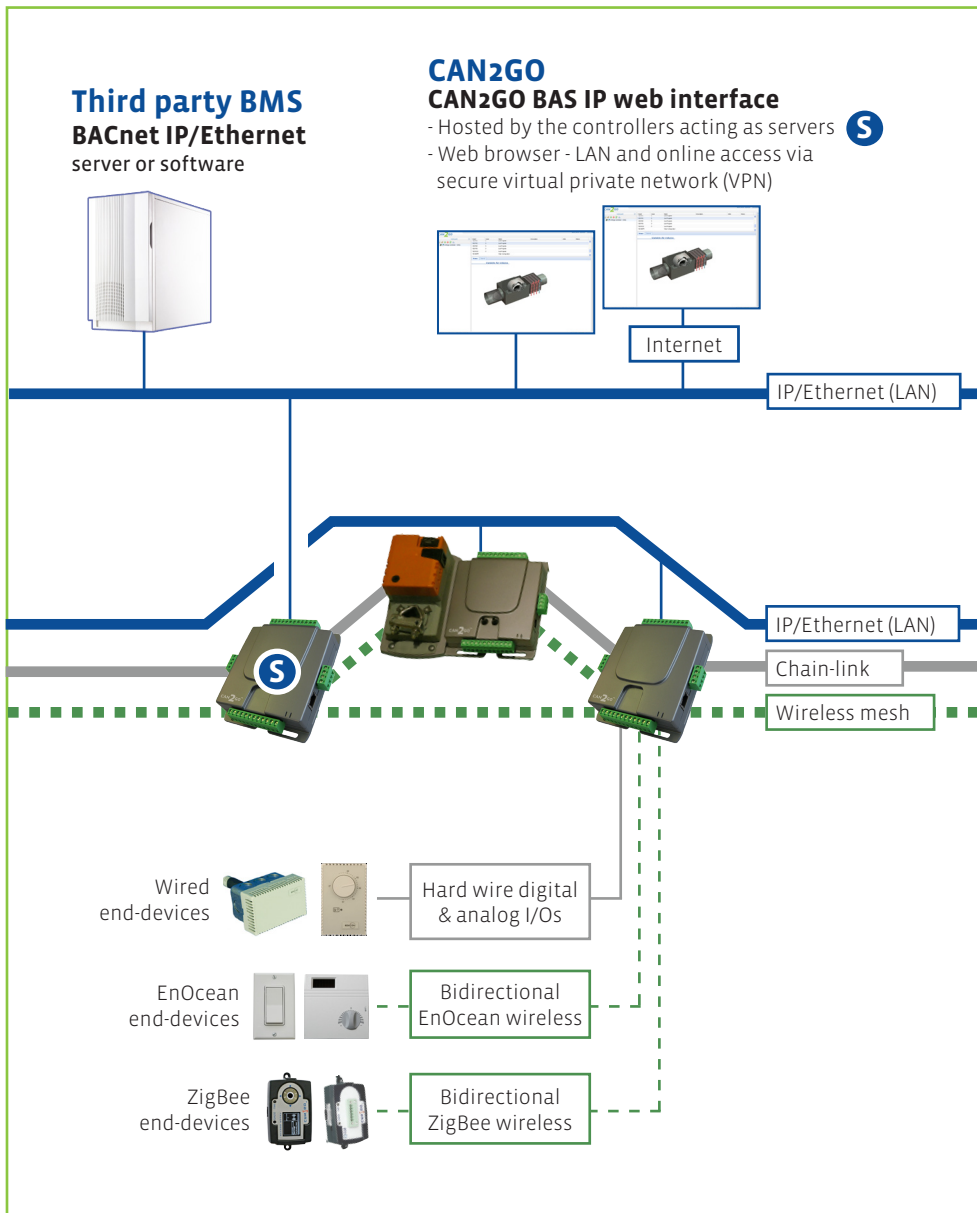
Dimensions & Wiring CAN2GO Room controller





CAN2GO System architecture

CAN2GO can be used as a stand-alone programmable controller with a front-end interface, and as an extension to third party BACnet IP/Ethernet building automation systems.



Interface level

CAN2GO IP web interface
Connect one controller to the LAN to access the building automation IP web interface; offering local programmability of controllers, trending, scheduling, etc.

No software, no server, no license. Everything is hosted by the CAN2GO controllers.

Controller level

Server
CAN2GO controllers have embedded servers hosting a BAS IP web interface.

Gateway
The conversion of end-devices into BACnet objects is performed by the controllers. CAN2GO controllers have EnOcean to BACnet and ZigBee to BACnet embedded gateways.

End device level

Select one type of end-device or combine several.

CAN2GO controllers can manage EnOcean, ZigBee and wired end-devices at the same time.

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