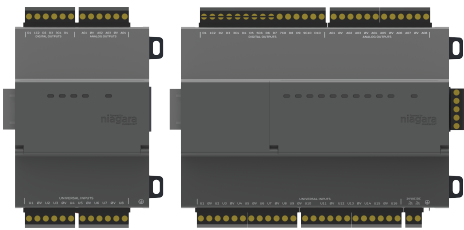# EC-BOS-8 IO Modules

Overview

The EC-BOS-8 IO-R modules are part of the EC-Net portfolio of hardware, software and tools designed for remote monitoring and control applications that enables end-to-end automation and device-to-enterprise integration. The IO-R modules allow the EC-BOS-8 to interface directly with simple non-intelligent inputs and outputs remotely located up to 4,000 feet from the EC-BOS-8. The connection is established via an industry-standard RS-485 multi-drop communications bus. Multiple IO-R devices can be utilized on a single EC-BOS-8, providing 250 + IO points on a single EC-BOS-8.

Features & Benefits

- Direct pin out replacement of NDIO IO-16 and IO-34 modules
- Remote connection to EC-BOS-8 over RS485
- Remote monitoring of input devices
- Basic control applications

Model Selection

Example: IO-R-34

Series	Number of points
IO-R	**-16**: 16-Point IO Module
	-34: 34-Point IO Module

Product Specifications

General

Universal inputs	IO-R-16: 8 inputs
	IO-R-34: 16 inputs
	Type 3 (10K) thermistors
	0-100KΩ
	0-10VDC
	0-20mA with external resistor
Relay outputs	IO-R-16: 4 (Form-A contacts, 24VAC @ 0.5 amp rated)
	IO-R-34: 10 (Form-A contacts, 24VAC @ 0.5 amp rated)
Analog outputs	IO-R-16: 4 (0-10VDC)
	IO-R-34: 8 (0-10VDC)
Power	IO-R-16: powered from IO-R-34
	IO-R-34: powered from a 24VAC/DC source (can power up to 4 IO-R-16 modules)
Connection	Connected to EC-BOS-8 remotely over a shielded RS-485 bus

Mounting and Dimensions

Mounting Options	- EN50022 standard 7.5 mm x 35 mm DIN rail
	- Panel mounting
Dimensions	IO-R-16: 82.5mm (w) x 116mm (h) x 61mm (d) (3.25 in x 4.5 in x 2.4 in) - see Figure 1
	IO-R-34: 162mm (w) x 116mm (h) x 61mm (d) (6.8 in x 4.5 in x 2.4 in) - see Figure 2

Environmental Specifications

Operating Temperature	-20 to 60°C
Storage Temperature	-40 to 85°C
Humidity	5% to 95% — Non-condensing
Shipping & Vibration	ASTM D4169, Assurance Level II
MTTF	10 years+

Operating Systems

EC-Net 4	4.3 or later

Expandability

Maximum Expansion	IO-R-34: 8
	IO-R-16: 16
	Power: One IO-R-34 can power four IO-R-16 modules
Common Configurations	Maximum configuration for 2 panels: see Figure 3 (shown with maximum of 4 IO-R-16s per IO-R-34).
	Maximum configuration for 4 panels: see Figure 4.
	Maximum configuration for 8 panels: see Figure 5.

Agency Certifications

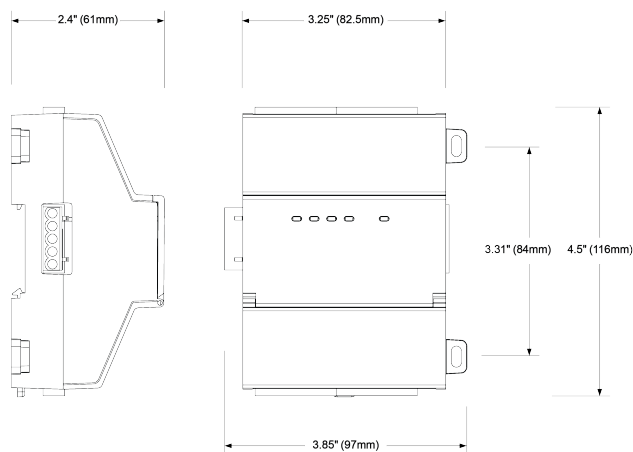|	
Certifications	UL 916
	C-UL
	CE EN 61326-1:2013
	RCM
	FCC part 15, class b
	RoHS2
	REACH
	WEEE
	China ROHS
	Open Energy Management Class 2

Dimensions

Figure 1: IO-R-16 dimensions

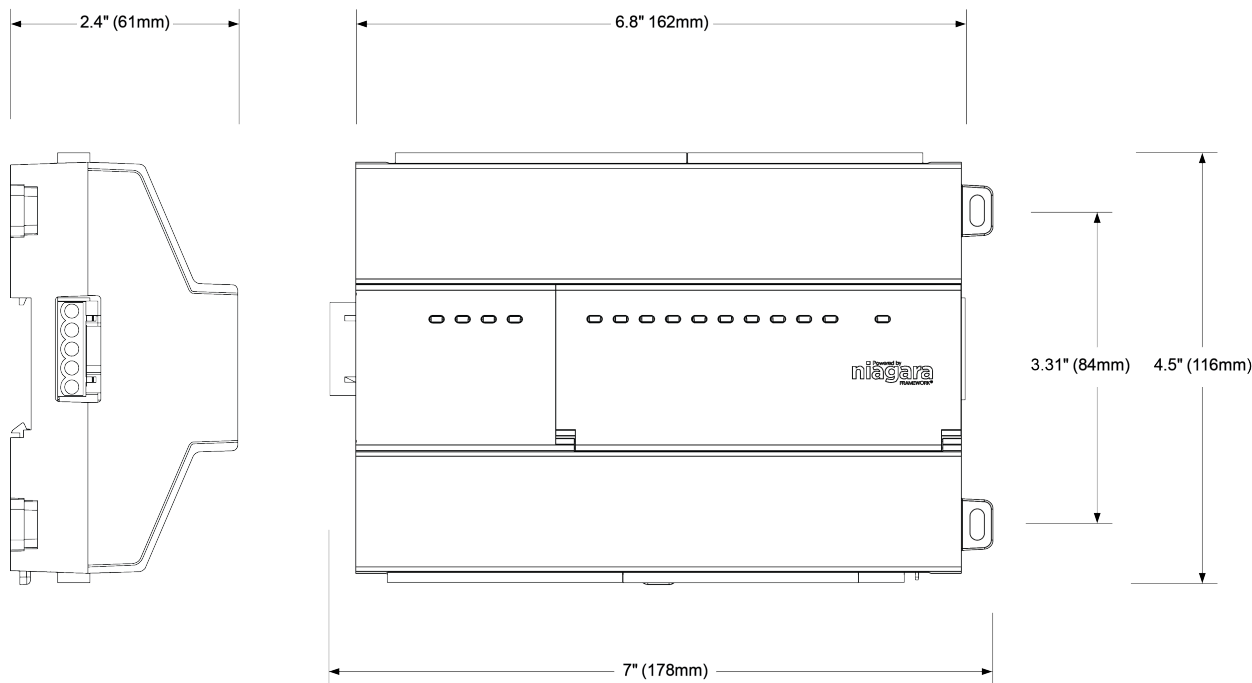Figure 2: IO-R-34 dimensions

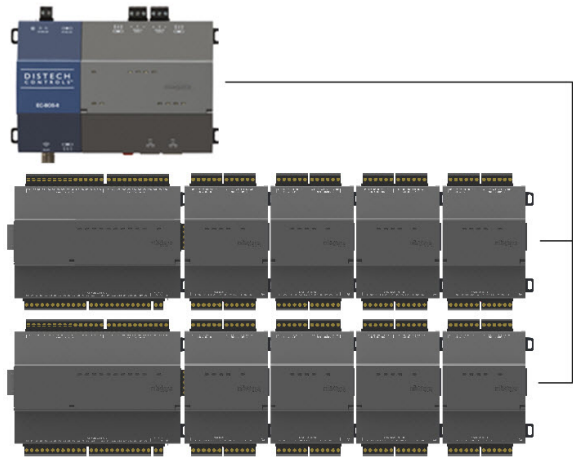# Maximum Configuration

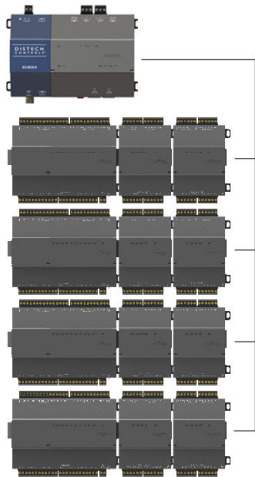*Figure 3:* Maximum configuration for 2 panels with maximum of 4 IO-R-16s per IO-R-34

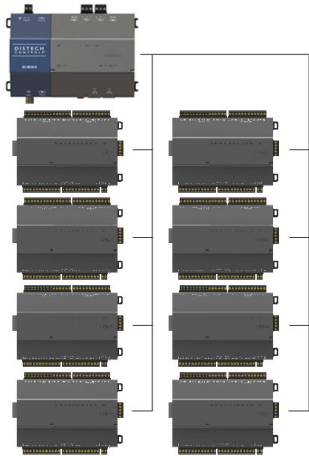*Figure 4:* Maximum configuration for 4 panels

Figure 5: Maximum configuration for 8 panels

EC-BOS-8 IO Modules_SP_12_EN