# EC-BOS-8

Multi-Protocol Web Building Controller

## Overview

The EC-BOS-8 is a compact, embedded controller and server platform for connecting multiple and diverse devices and sub-systems. With Internet connectivity and Webserving capability, the EC-BOS-8 provides integrated control, supervision, data logging, alarming, scheduling and network management. It streams data and graphical displays to a standard Web browser via an Ethernet or wireless LAN, or remotely over the Internet.

The EC-BOS-8 operates with EC-Net™ web-based building management platform powered by the Niagara Framework®.

The EC-BOS-8 can also run EC-Net Access for managing access control systems.

## Features & Benefits

- Scalable licensing model and modular hardware make the EC-BOS-8 suitable for installation in small buildings, as well as large multi-unit campuses when combined with EC-Net Supervisor
- Integrates many communication protocols and automation systems including HVAC, lighting, energy, fire & smoke, physical access, video and industrial/processing
- Two on-board isolated RS-485 ports for connecting to various common networks, e.g. BACnet MS/TP, Modbus RTU, Wiegand access control devices
- Option modules for additional physical network connections, e.g. LonWorks© FTT-10A, RS-232, RS-485, and Wiegand access readers
- USB type A port for station backup and restore functions

# Model Selection

To order a fully functional EC-BOS-8, the following three components are required: EC-BOS-8, Core Software, Software Maintenance Agreement (SMA). If ordering a demo core, an SMA is not required. Refer to the EC-Net Selection Tool to calculate the required components.

## EC-BOS-8 Series

**Example:** EC-BOS-8 *with Worldwide WiFi*

| Series | WiFi Setting[1] |
|---|---|
| **EC-BOS-8**: EC-BOS-8 includes two isolated RS485 ports, two 10/100MB Ethernet ports and USB Backup & Restore. | **With US WiFi:** US WiFi setting for enabling WiFi on EC-BOS-8 units installed in the US.<br>**With Worldwide WiFi**: Worldwide WiFi setting for enabling WiFi on EC-BOS-8 units installed anywhere in the world except the US.<br>**With Permanently Disabled WiFi**: WiFi setting for permanently disabling WiFi on EC-BOS-8 units. |

1.Refer to the EC-BOS-8 Global Shipping Guide for more information.

## EC-BOS-8 Core Software

**Example:** EC-BOS-8 Core - *100 Devices/5000 Points*

| Series | Devices/Points[1] |
|---|---|
| **EC-BOS-8 Core**: EC-BOS-8 core software. Includes standard open drivers. Requires EC-Net 4.1 or higher. Software Maintenance Agreement (SMA) must be purchased in conjunction with core software. | **5 Devices/250 Points**: Supports up to 5 devices and 250 points.<br>**10 Devices/500 Points**: Supports up to 10 devices and 500 points.<br>**25 Devices/1250 Points**: Supports up to 25 devices and 1250 points.<br>**100 Devices/5000 Points**: Supports up to 100 devices and 5000 points.<br>**200 Devices/10000 Points**: Supports up to 200 devices and 10000 points. |
| **EC-BOS-8 Core – Demo:** EC-BOS-8 core software. Includes all available drivers. Supports up to 500 devices and 25000 points. Runs on EC-Net 4.1 or higher. Note: This license expires annually, and its renewal is covered by the EC-Net Support Fee. | **N/A** |

1. Devices/Points cannot be added to the Demo version (EC-BOS-8 Core – Demo) of the EC-BOS-8 core software.

For more information regarding the EC-Net drivers currently offered by Distech Controls, refer to the EC-Net Drivers Reference Guide.

## EC-BOS-8 Software Maintenance Agreement

Software maintenance is required when purchasing an EC-BOS-8. The minimum initial software maintenance plan is 18 months. Optional 3- or 5-year maintenance may be substituted.

If Maintenance coverage is not purchased for any period, the price of Maintenance for the next period for which it is purchased will be (a) the Maintenance fee for the period(s) for which Maintenance was not purchased, up to a maximum of 5 years; and (b) the Maintenance fee for the next year.

These software maintenance plans are ordered separately according to the EC-BOS-8 model chosen. See the price list for more details. Take advantage of the Asset Manager online tool to receive notifications about SMA expirations and Enterprise SMA to align all SMA expiration dates to a single one for the entire system.

**Example**: EC-BOS-8 (100 Device Core) *3 year SMA*

| Series | Software Maintenance Agreement |
|---|---|
| **EC-BOS-8 (5 Device Core)**<br>**EC-BOS-8 (10 Device Core)**<br>**EC-BOS-8 (25 Device Core)**<br>**EC-BOS-8 (100 Device Core)**<br>**EC-BOS-8 (200 Device Core)** | **18 month SMA**: Initial 18-month software maintenance agreement. Must be purchased in conjunction with initial core software. Optional 3 or 5 year maintenance may be substituted.<br>**1 year SMA**: 1-year software maintenance agreement (includes new and interim releases).<br>**3 year SMA**: 3-year software maintenance agreement (includes new and interim releases).<br>**5 year SMA**: 5-year software maintenance agreement (includes new and interim releases). |

## EC-BOS-8 Device Integration Pack

**Example:** EC-BOS-8 Device Integration Pack - 25

| Series | Devices/Points |
|---|---|
| **EC-BOS-8 Device Integration Pack**: EC-BOS-8 device integration pack purchased in conjunction with initial core software. | **10**: Adds support for additional 10 devices and 500 points to core software.<br>**25**: Adds support for additional 25 devices and 1250 points to core software.<br>**50**: Adds support for additional 50 devices and 2500 points to core software. |

## EC-BOS-8 Device Upgrade Pack

**Example**: EC-BOS-8 Device Upgrade Pack - 25

| Series | Devices/Points |
|---|---|
| **EC-BOS-8 Device Upgrade Pack**: EC-BOS-8 device upgrade pack purchased any time after initial core software purchase. | **10**: Adds support for additional 10 devices and 500 points to core software.<br>**25**: Adds support for additional 25 devices and 1250 points to core software.<br>**50**: Adds support for additional 50 devices and 2500 points to core software. |

## EC-BOS-8 Software Option

**Example**: EC-BOS-8 EC-Net Access Pack

| Option | Description |
|---|---|
| **EC-BOS-8 EC-Net Access Pack** | Enables EC-BOS-8 to run EC-Net Access (minimum 2.4.45/EC-Net 4 4.7.110). Includes licensing for 32 readers. |

## EC-BOS-8 Hardware Accessory

**Example**: EC-BOS-8 *Wall Plug Module*

| Accessory | Description |
|---|---|
| **EC-BOS-8 Wall Plug Module** | 100-240VAC, 50/60 Hz. Wall Adapter – Connects to the 2.5mm barrel plug 24V input on the EC-BOS-8 and includes US, EU, UK, and AU style plugs. |
| **EC-BOS-8 WLAN Antenna Cable Extension** | Extension cable and bracket for EC-BOS-8 WLAN antenna. |

## EC-BOS-8 Add-on Modules

**Example**: *IO-R-16*

| Add-on Module | Description |
|---|---|
| **EC-NPB8-LON** | EC-BOS-8 - Add-on single port LON FTT10A module. |
| **EC-NPB8-2X-485** | EC-BOS-8 - Add-on dual port RS-485 module. |
| **EC-NPB8-232** | EC-BOS-8 - Add-on single port RS-232 module. |
| **IO-R-16** | 16 Point IO Module. Powered by IO-R-34. Connected to the EC-BOS-8 remotely over RS485. |
| **IO-R-34** | 34 Point IO Module. Powered by 24VAC/DC. Capable of powering (4) IO-R-16 modules. Connected to the EC-BOS-8 remotely over RS485. |
| **EC-Net Access Remote Reader** | Remote reader module - 2 card reader inputs, 4 supervised inputs, 2 digital inputs, 2 form C (SPDT) relay outputs. |
| **EC-Net Access Remote IO** | Remote I/O module - 8 supervised inputs, 2 digital inputs, 8 form C (SPDT) relay outputs. |

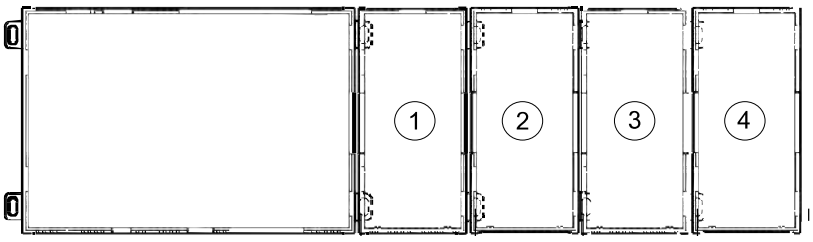
# Expansion Modules

| Modules | Description | Maximum Expansion Modules Supported |
|---|---|---|
| **EC-NPB8-LON** | EC-BOS-8 - Add-on single port LON FTT10A module. | 4 |
| **EC-NPB8-2X-485** | EC-BOS-8 - Add-on dual port RS-485 module. | 2 |
| **EC-NPB8-232** | EC-BOS-8 - Add-on single port RS-232 module. | 4 |
| **IO-R-16** | 16 Point IO Module | 16[1] |
| **IO-R-34** | 34 Point IO Module | 8[1] |
| **EC-Net Access Remote Reader** | Remote reader module | 16 (each or combined) |
| **EC-Net Access Remote IO** | Remote I/O module | |

1. For detailed information about maximum number of modules supported and maximum combinations, refer to the EC-BOS-8 I/O Modules datasheet.

**Maximum Combinations** (*see figure below*):

| Expansion 1 | Expansion 2 | Expansion 3 | Expansion 4 |
|---|---|---|---|
| EC-NPB8-232<br>OR<br>EC-NPB8-LON | EC-NPB8-232<br>OR<br>EC-NPB8-LON | EC-NPB8-232<br>OR<br>EC-NPB8-LON | EC-NPB8-232<br>OR<br>EC-NPB8-LON |
| EC-NPB8-2X-485 | EC-NPB8-232<br>OR<br>EC-NPB8-LON | EC-NPB8-232<br>OR<br>EC-NPB8-LON | EC-NPB8-232<br>OR<br>EC-NPB8-LON |
| EC-NPB8-2X-485 | EC-NPB8-2X-485 | EC-NPB8-232<br>OR<br>EC-NPB8-LON | |



# Product Specifications

## Platform

| | |
|---|---|
| Processor | TI AM3352 1000MHz ARM® Cortex™-A8 |
| Memory | 1GB DDR3 SDRAM |
| | - Removable micro-SD card with 4GB flash total storage/2GB user storage |
| | - Real-time clock |
| | - Batteryless |
| | - Secure boot |

## Communications

| | |
|---|---|
| Wi-Fi | Client or WAP |
| Wi-Fi Communication Protocol | IEEE802.11a/b/g/n |
| | IEEE802.11n HT20 @ 2.4GHz |
| | IEEE802.11n HT20/HT40 @ 5GHz |
| Configurable radio | Off, WAP, or Client |
| Client Authentication Method | WPAPSK/WPA2PSK supported |
| USB type A connector | Back-up and restore support |
| RS-485 | 2 isolated RS-485 with selectable bias and termination |
| Ethernet | 2 10/100MB Ethernet ports |
| BACnet Listing | BTL, B-BC listed with version 4.4.93 or later |

## Power Supply

| | |
|---|---|
| Voltage | 24VAC/DC power supply |
| Consumption | 24VA (24VAC); 24W (24VDC) |

## Environmental

| | |
|---|---|
| Operating Temperature | -20 to 60ºC (-4 to 140 ºF) |
| Storage Temperature | -40 to 85ºC (-40 to 185 ºF) |
| Relative Humidity | 5% to 95% - Non condensing |
| Shipping and Vibration | ASTM D4169, Assurance Level II |
| MTTF | 10 years+ |

## Operating Systems

| | |
|---|---|
| EC-Net 4 | 4.1 or later |
| EC-Net Access | 2.4.45 or later |

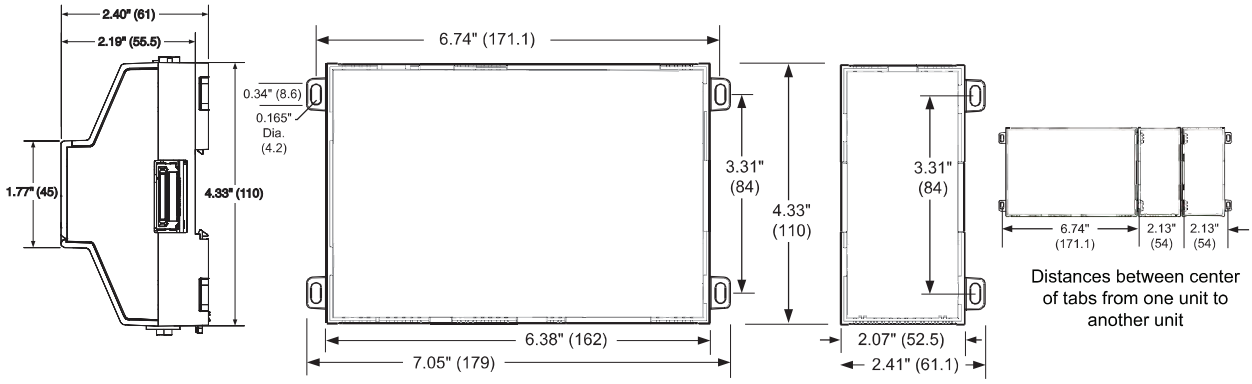
## EC-Net Access Licensing Quantities

| | |
|---|---|
| Card Readers | 32 |
| Access Rights | 250 |
| Schedules | 100 |
| Access Zones | 50 |
| Simultaneous Users | 10 |
| Personnel | 20,000 |
| Area Controllers | N/A |

## Standards and Regulations

| | |
|---|---|
| UL | UL 916<br>C-UL listed to Canadian Standards Associations (CSA) C22.2 No. 205-M1983 "Signal Equipment" |
| | UL 864, 10th Edition, UUKL Listed Smoke Control Equipment[1] (UUKL model only) |
| CE | EN 61326-1 |
| FCC | Part 15 Subpart B, Class B, Part 15 Subpart C |
| R&TTE Compliance | 1999/5/EC R&TTE Directive |
| Other compliances | CCC, SRRC, RSS, RoHS |

1. For detailed specifications regarding the EC-BOS-8 UUKL model, refer to the Distech Controls UUKL Smoke Control Design Guide (UUKL Design Guide_UG_10_EN) and Distech Controls UUKL Smoke Control Application Guide (UUKL Application Guide_UG_10_EN).

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