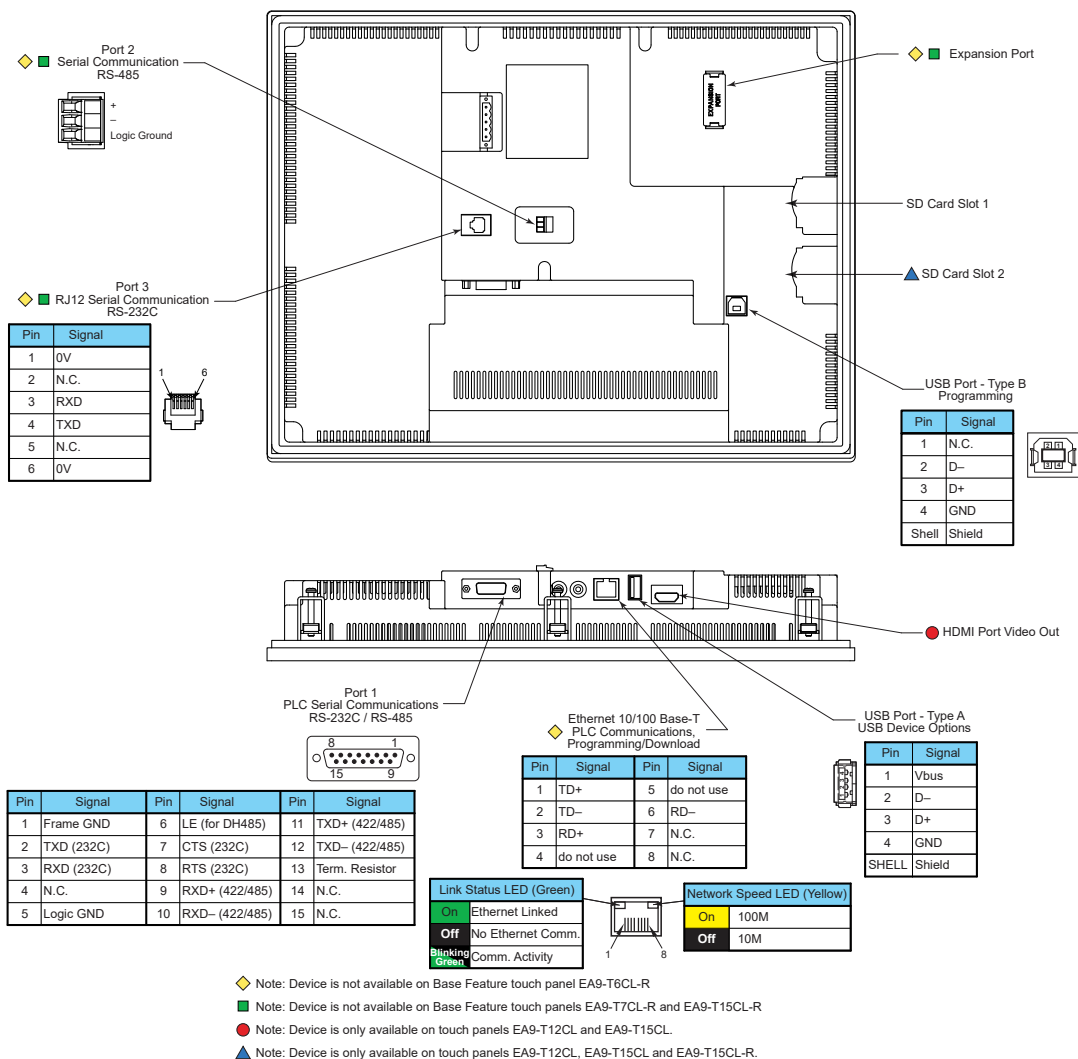


# C-more Communication Ports



## Ethernet Port

The Ethernet port has several uses:

- Download program to panel
- Communicate to PLCs/PCs
- Send e-mail
- Access FTP server
- Act as a Webserver (Secure HTTPs)
- Remote Internet access

The Ethernet port has an RJ-45 8-wire modular connector with green and yellow LEDs.

- The yellow LED indicates network speed – off for a 10 Mbps connection and illuminated for a 100 Mbps connection.
- The green LED indicates link status and illuminates when a link is established.

Note: EA6-T6CL-R does not include an Ethernet port, and does not have these capabilities.

## Expansion Port

The expansion port supports the EA-ECOM module to provide a second Ethernet Port for all full featured models.

## USB Port B

Program **C-more** via the USB programming port. It's fast and easy, with no baud rate settings, parity, or stop bits to worry about. We stock standard USB cables for your convenience. USB Port B can be used to upload or download projects to and from a PC.

## USB Port A

The Universal Serial Bus (USB) Port A is a standard feature on all models and can be used to connect various USB HID (Human Input Device) devices to the panel, such as the following:

- USB flash drives ([USB-FLASH](#))
- USB keyboards
- USB barcode scanners
- USB card scanners

**C-more** can log data to the USB flash drive as well as load projects to the panel from the pen drive. You can also back up project files and panel firmware.

## Sound Interface (Audio Line Out)

When attached to an amplifier and speaker(s), **C-more** can play warning sounds or pre-recorded messages such as: "conveyor is jammed". **C-more** supports WAV type files. The output is stereo.

## Serial Port

**Port 1** - Connect to your serial controller network via Port 1. Port 1 is a 15-pin port that supports RS-232 or RS-422/485.

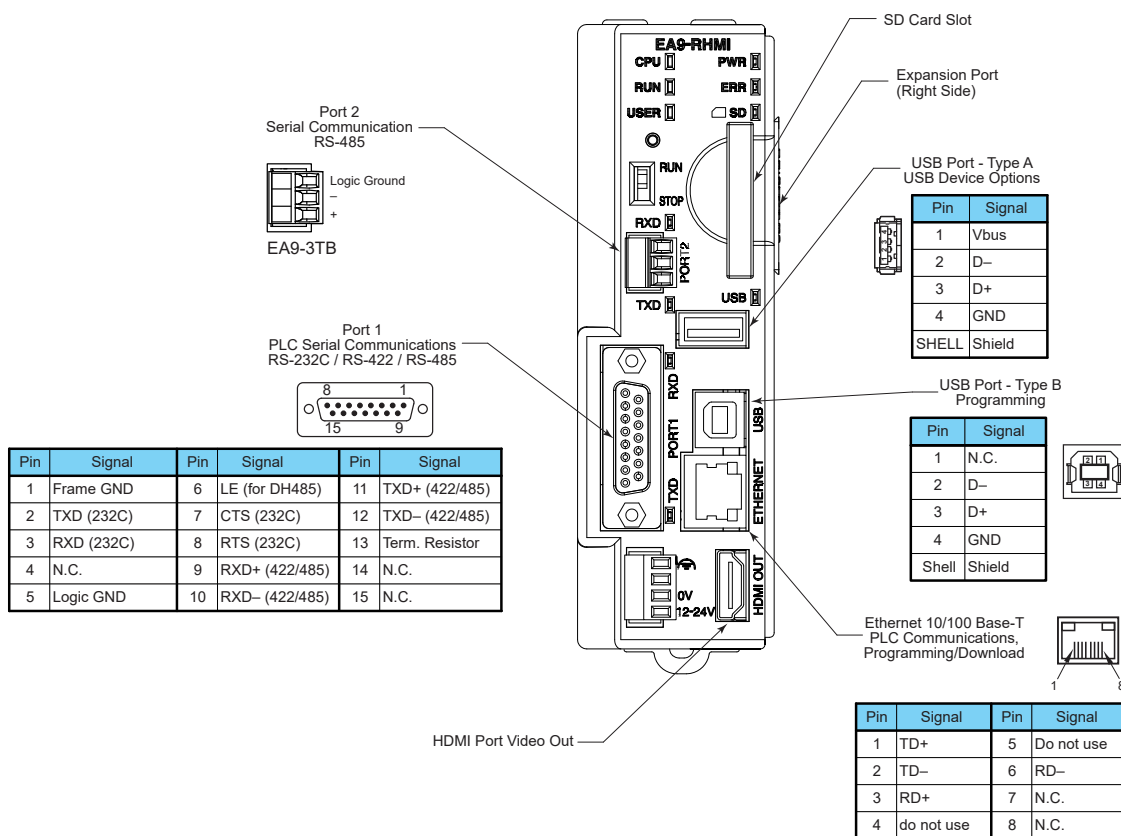
**Port 2** - Connect your RS-485 network via Port 2. Port 2 is provided with a 3-wire removable terminal block.

**Port 3** - Connect to your RS-232C device via Port 3. Port 3 is an RJ12 connection.

## HDMI Video Out

EA9-T12CL and EA9-T15CL include an HDMI Type A port to provide video output to a projector or remote monitor.

# C-more EA9-RHMI Communication Ports



## Ethernet Port

The Ethernet port has several uses:

- Download program to panel
- Communicate to PLCs/PCs
- Send e-mail
- Access FTP server
- Act as a Webserver (Secure HTTPs)
- Remote Internet access

The Ethernet port has an RJ-45 8-wire modular connector with green and yellow LEDs.

- The yellow LED indicates network speed – off for a 10 Mbps connection and illuminated for a 100 Mbps connection.
- The green LED indicates link status and illuminates when a link is established.

## Expansion Port

The expansion port supports the EA-ECOM module to provide a second Ethernet Port.

## USB Port B

Program **C-more** via the USB programming port. It's fast and easy, with no baud rate settings, parity, or stop bits to worry about. We stock standard USB cables for your convenience. USB Port B can be used to upload or download projects to and from a PC.

## USB Port A\*

The Universal Serial Bus (USB) Port A can be used to connect various USB HID (Human Input Device) devices to the panel, such as the following:

- USB touchscreen (ELO™ Single Touch Resistive/SAW, EETI eGalax Single Touch Resistive and pCap touchscreens)
- USB mouse
- USB keyboard
- USB flash drives (USB-FLASH)
- USB barcode scanner
- USB card scanner

**C-more** can log data to the USB flash drive as well as load projects to the panel from the pen drive. You can also back up project files and panel firmware.

\* 500mA maximum current available.  
Powered USB hub may be required for some devices

## Serial Port

**Port 1** - Connect to your serial controller network via Port 1. Port 1 is a 15-pin port that supports RS-232 or RS-422/485.

**Port 2** - Connect your RS-485 network via Port 2. Port 2 is provided with a 3-wire removable terminal block.

## HDMI Out Port

EA9-RHMI includes an HDMI Type A port to provide video / audio output to a projector or remote monitor. Supported resolutions are...

- 640 x 480 (VGA) 60Hz
- 720 x 480 (SD) 60Hz
- 1024 x 768 (XGA) 60Hz
- 1280 x 720 (HD) 60Hz

# C-more Communication Protocols & Cables

Compatibility Table			
PLC Family	Model	Protocols	
Allen-Bradley	MicroLogix 1000, 1100, 1200, 1400, 1500, SLC 5-01/02/03	DH485/AIC/AIC+	
	MicroLogix 1000, 1100, 1200, 1400 and 1500 SLC 5-03/04/05	DF1 Half Duplex; DF1 Full Duplex	
	ControlLogix™, CompactLogix™, FlexLogix™		
	PLC-5	DF1 Full Duplex	
	ControlLogix, CompactLogix, FlexLogix - Tag Based	DF1 Half Duplex; DF1 Full Duplex	
	ControlLogix, CompactLogix, FlexLogix - Generic I/O Messaging	EtherNet/IP Server	
	ControlLogix, CompactLogix, FlexLogix - Tag Based	EtherNet/IP Client	
	Micrologix 1100, 1400 & SLC5/05, all via native Ethernet port		
	MicroLogix 1000, 1100, 1200, 1400,1500 & SLC 5-03/04/05, all via ENI Adapter		
		Micro 800 series	Modbus RTU Modbus TCP
	Micro 800 series - Tag Based	DF1 Full Duplex EtherNet/IP Client	
Modbus RTU	Modbus RTU devices	Modbus RTU	
Modbus TCP/IP	Modbus TCP/IP devices	Modbus TCP/IP	
GE	90/30, 90/70, Micro 90, VersaMax Micro	SNPX	
	90/30, Rx3i	SRTP Ethernet	
Mitsubishi	FX Series	FX Direct	
	Q02, Q02H, Q06H, Q12H, Q25H	Q CPU	
	Q, QnA Serial	QnA Serial	
	Q, QnA Ethernet	QnA Ethernet	
Omron	C200 Adapter, C500	Host Link	
	CJ1/CS1 Serial, CJ1/CS1 Ethernet	FINS	
Modicon	984 CPU, Quantum 113 CPU, AEG Modicon Micro Series 110 CPU: 311-xx, 411-xx, 512-xx, 612-xx	Modbus RTU	
Siemens	S7-200 CPU, RS-485 Serial	PPI	
	S7-200 CPU, S7-300 CPU, S7-400, S7-1200 CPU, S7-1500; Ethernet	Ethernet ISO over TCP	
Productivity Series	all	Productivity Serial	
		Productivity Ethernet	
Do-more	all	Do-more Serial	
		Do-more Ethernet	
CLICK	all	Modbus (CLICK addressing)	
		Modbus TCP (CLICK addressing)	
Direct LOGIC	DL05/DL06	all	K-Sequence
			DirectNET
		Modbus (Koyo addressing)	
		H0-ECOM/H0-ECOM100	Direct LOGIC Ethernet
	DL105	all	K-Sequence
	DL205	D2-230	K-Sequence
		D2-240	K-Sequence DirectNET
		D2-250/D2-250-1/D2-260/ D2-262	K-Sequence
			DirectNET
			Modbus (Koyo addressing)
		D2-240/D2-250-1/D2-260 using D2-DCM	DirectNET
			Modbus (Koyo addressing)
		H2-ECOM/H2-ECOM100	Direct LOGIC Ethernet
	DL305	D3-330/330P (Requires the use of a Data Communications Unit)	DirectNET
		D3-340	DirectNET
		D3-350	K-Sequence DirectNET
			Modbus (Koyo addressing)
		D3-350 using D3-DCM	DirectNET
			Modbus (Koyo addressing)
	DL405	D4-430	K-Sequence DirectNET
		D4-440	K-Sequence DirectNET
D4-450/D4-454		K-Sequence DirectNET	
		Modbus (Koyo addressing)	
All with D4-DCM		DirectNET Modbus (Koyo addressing)	
H4-ECOM/H4-ECOM100	Direct LOGIC Ethernet		
	H2-WinPLC (Think & Do) Live V5.2 or later and Studio any version	Think & Do Modbus RTU (serial port)	
	H2-WinPLC (Think & Do) Live V5.5.1 or later and Studio V7.2.1 or later	Think & Do Modbus TCP/IP (Ethernet port)	

Cable Description	Cable Part Number	Price
AutomationDirect communication cable, 15-pin male D-sub to 6-pin RJ12, shielded, 9.8ft/3m cable length. For use with <b>C-more</b> or <b>C-more</b> Micro panel and AutomationDirect PLCs with RJ12 ports.	<a href="#"><u>EA-2CBL</u></a>	\$-04jn:
AutomationDirect communication cable, 15-pin male D-sub to 15-pin D-sub HD15 male, shielded, 3m/9.8ft cable length. For use with <b>C-more</b> or <b>C-more</b> Micro panel and a DL06, D2-250(-1), D2-260 or D2-262 (bottom port) CPU.	<a href="#"><u>EA-2CBL-1</u></a>	\$-04jo:
AutomationDirect communication cable, 15-pin male D-sub to 4-pin RJ11, shielded, 3m/9.8ft cable length. For use with <b>C-more</b> or <b>C-more</b> Micro panel and a D3-340 CPU top or bottom port.	<a href="#"><u>EA-3CBL</u></a>	Retired
AutomationDirect communication cable, 15-pin male D-sub to 15-pin male D-sub, shielded, 3m/9.8ft cable length. For use with <b>C-more</b> or <b>C-more</b> Micro panel and a DL405 (top port) CPU.	<a href="#"><u>EA-4CBL-1</u></a>	\$-04jq:
AutomationDirect communication cable, 15-pin male D-sub to 25-pin male D-sub, shielded, 3m/9.8ft cable length. For use with <b>C-more</b> or <b>C-more</b> Micro panel and a D2-DCM, D3-232-DCU, D3-350 (bottom port) or DL405 (bottom port) CPU.	<a href="#"><u>EA-4CBL-2</u></a>	\$-04js:
AutomationDirect communication cable, 15-pin male D-sub to 8-pin male mini DIN, shielded, 3m/9.8ft cable length. For use with <b>C-more</b> or <b>C-more</b> Micro panel and an Allen-Bradley Micrologix CPU.	<a href="#"><u>EA-MLOGIX-CBL</u></a>	\$-04jy:
AutomationDirect communication cable, 15-pin male D-sub to 9-pin female D-sub, shielded, 3m/9.8ft cable length. For use with <b>C-more</b> or <b>C-more</b> Micro panel and an Allen-Bradley SLC 5/03, 5/04 or 5/05 CPU with DF-1 port.	<a href="#"><u>EA-SLC-232-CBL</u></a>	\$;-04jl:
AutomationDirect communication cable, 15-pin male D-sub to 25-pin male D-sub, shielded, 3m/9.8ft cable length. For use with <b>C-more</b> or <b>C-more</b> Micro panel and an Allen-Bradley PLC-5 CPU with a DF1 port.	<a href="#"><u>EA-PLC5-232-CBL</u></a>	Retired
AutomationDirect communication cable, 15-pin male D-sub to 6-pin RJ45, shielded, 3m/9.8ft cable length. For use with <b>C-more</b> or <b>C-more</b> Micro panel and an Allen-Bradley SLC 5/01, 5/02 or 5/03 CPU with a DH485 port cable.	<a href="#"><u>EA-DH485-CBL</u></a>	\$-04ju:
AutomationDirect communication cable, 15-pin male D-sub to 15-pin male D-sub, shielded, 3m/9.8ft cable length. For use with <b>C-more</b> or <b>C-more</b> Micro and GE Fanuc Series 90/30 or 90/70 serial port.	<a href="#"><u>EA-90-30-CBL</u></a>	\$;-04jt:
AutomationDirect communication cable, 15-pin male D-sub to 25-pin male D-sub, 3m/9.8ft cable length. For use with <b>C-more</b> or <b>C-more</b> Micro panel and a Mitsubishi FX Series CPU.	<a href="#"><u>EA-MITSU-CBL</u></a>	\$-04jv:
AutomationDirect communication cable, 15-pin male D-sub to 8-pin male mini DIN, shielded, 3m/9.8ft cable length. For use with <b>C-more</b> or <b>C-more</b> Micro panel and a Mitsubishi FX Series CPU.	<a href="#"><u>EA-MITSU-CBL-1</u></a>	\$-04jx:
AutomationDirect communication cable, 15-pin male D-sub to 25-pin male D-sub, shielded, 3m/9.8ft cable length. For use with <b>C-more</b> or <b>C-more</b> Micro panel and an Omron C200 or C500 CPU.	<a href="#"><u>EA-OMRON-CBL</u></a>	\$-04jz:

## Example Cables:



# C-more Computer Programming Connections

Using the **C-more** Programming Software [EA9-PGMSW](#) for project development, the HMI can be connected to a PC (personal computer) in one of several ways:

- Connect a USB Programming Cable such as (USB-CBL-AB15) from a USB port type A on the PC to the USB type B programming port on the **C-more** HMI. The USB connection is for direct connection only and does not support USB hubs.
- Connect the **C-more** HMI to a PC with a Cat5 Ethernet cable via an Ethernet switch. Multiple **C-more** HMIs can be programmed in this configuration.

Following are the minimum system requirements for running **C-more** Programming Software, p/n [EA9-PGMSW](#), on a PC:

- USB or Ethernet connection to HMI (cables sold separately).
- Windows operating system - see [automationdirect.com](http://automationdirect.com) for specific operating system requirements.



**NOTE: Regarding Ethernet access to a C-more HMI.**

If you intend to take advantage of the methods of remote access to the HMI, including the Webserver (Secure HTTPs), PC remote access, FTP, iPhone or iPad app, you need to consider the security exposure in order to minimize the risks to your process and your C-more HMI.

Security measures may include password protection, changing the ports exposed on your network, including a VPN in your network, and other methods. Security should always be carefully evaluated for each installation.

## USB Programming Cable



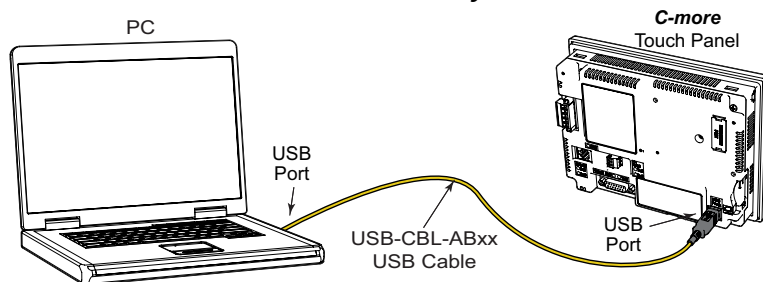
### Part No. USB-CBL-ABxx

USB Programming Cables		
Part Number	Length	Price
USB-CBL-AB3	3 feet	\$04kd:
USB-CBL-AB6	6 feet	\$04ke:
USB-CBL-AB10	10 feet	\$04kb:
USB-CBL-AB15	15 feet	\$04kc:

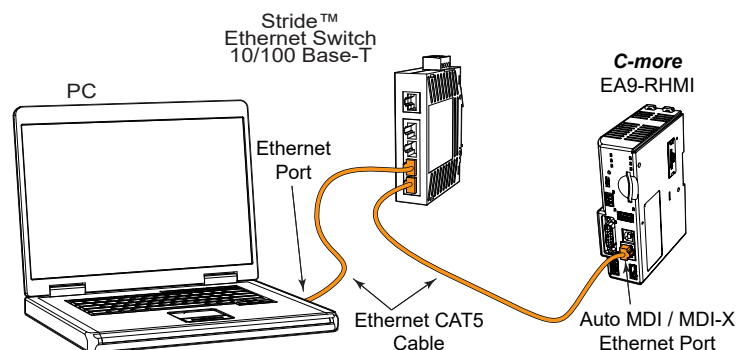
## Stride® Ethernet Switch



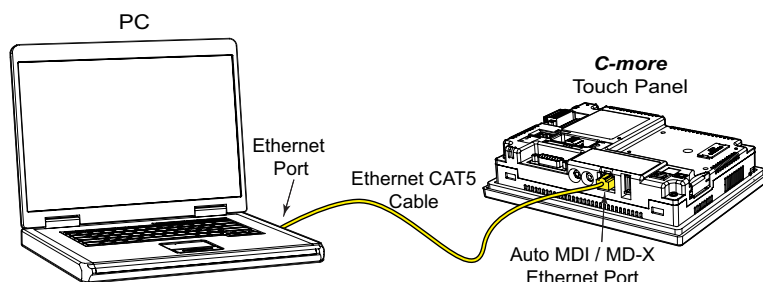
### USB Connectivity



### Ethernet Connectivity via a Hub or Switch



### Ethernet Direct Connection



# Communication Expansion Module

## EA-ECOM Ethernet Communication Module

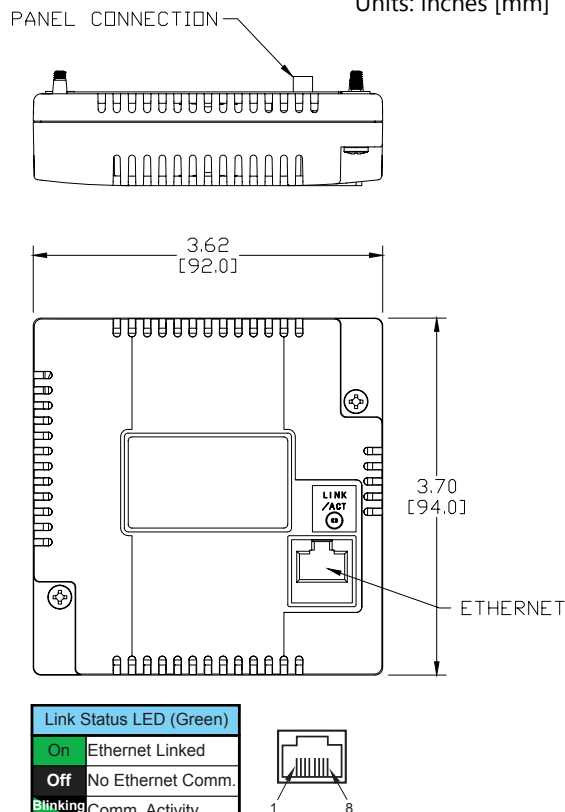
The EA-ECOM communication module is compatible with EA3 series **C-more** Micro 6-inch, 8-inch and 10-inch panels and most **C-more** panels. It adds an Ethernet (RJ45) port for programming and PLC communications at 10/100 Mbps. **C-more** Micro Software and firmware version 4.0 or later is required. **C-more** Software and firmware version 6.50 or later is required.

Part No. **EA-ECOM**    \$010##:



## Dimensions

Units: inches [mm]



### Ethernet Communication Interface Specifications

<b>Standard Specification</b>	Conforms to IEEE802.3
<b>Communication Speed</b>	10/100 Base-T (Automatic Negotiation)
<b>Cable Specification</b>	Category 5
<b>Auto MDI / MDI-X</b>	Yes
<b>Connector Type</b>	RJ45

### Communication Drivers

<b>C-more</b>	<b>C-more Micro</b>
Supports all <b>C-more</b> Ethernet drivers	AutomationDirect Productivity Series Ethernet
	AutomationDirect Do-more / BRX Ethernet
	AutomationDirect CLICK Ethernet
	AutomationDirect ECOM Ethernet
	Modbus TCP/IP
	Allen-Bradley EtherNet/IP (Client) SLC5/05
	Allen-Bradley EtherNet/IP (Client) ENI Adapter
	Allen-Bradley EtherNet/IP (Client) MicroLogix 1100/1400
	Allen-Bradley EtherNet/IP (Client) control/CompactLogix (SLC Mapping only)



Link Status LED (Green)	
On	Ethernet Linked
Off	No Ethernet Comm.
Blinking Green	Comm. Activity



### EA-ECOM Specifications

Part Number	EA-ECOM
<b>Operating Temperature</b>	0 to 50 °C (32 to 122 °F) Maximum surrounding air temperature rating: 50 °C
<b>Storage Temperature</b>	-20 to +60 °C (-4 to +140 °F)
<b>Humidity</b>	5-95% RH (non-condensing)
<b>Environmental Air</b>	For use in pollution degree 2 environment
<b>Vibration</b>	IEC60068-2-6 (Test Fc), 5-9 Hz: 3.5 mm amplitude, 9-150 Hz: 1.0G, sweeping, at a rate of 1 octave/min. (±10%), 10 sweep cycles per axis on each of 3 mutually perpendicular axes
<b>Shock</b>	IEC60068-2-27 (Test Ea), 15 G peak, 11ms duration, three shocks in each direction per axis, on 3 mutually perpendicular axes (total of 18 shocks)
<b>Noise Immunity</b>	NEMA ICS3-304 RFI, (145 MHz, 440 MHz 10 W @ 10 cm) Impulse 1000 V @ 1 µs pulse
<b>Emission</b>	EN55011 Class A (Radiated RF emission)
<b>Enclosure (panel door installation)</b>	NEMA 250 type 4/4X indoor use only UL50 type 4X indoor use only IP-65 indoor use only (When mounted correctly)
<b>Agency Approvals</b>	CE (EN61131-2), UL508, CUL Canadian C22.2 To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page
<b>Mounting Torque</b>	50 oz-in [0.35 N-m]
<b>Weight</b>	0.23 lb [105g]