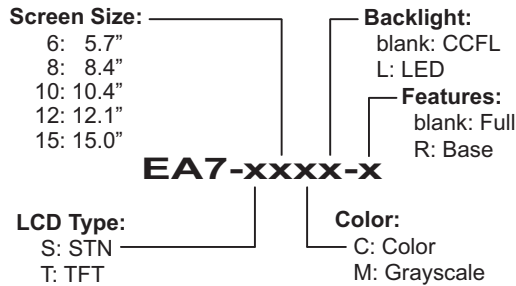


C-more Operator Panels Overview

Touch Panel Part Number Key:







Getting started

Installing the software and configuring the **C-more** panel is simple. You will need the following to successfully connect and configure a project for the panel:

- **C-more** touch panel - 6", 8", 10", 12" or 15" model
- **C-more** Programming Software, p/n EA-PGMSW
- **C-more** programming cable, USB or Ethernet
- 24 VDC switching power supply (min. 1.5A, switching) or the optional **C-more** AC Power Adapter
- Personal Computer - to run **C-more** programming software
- PLC communications cable (serial or Ethernet) to connect the **C-more** Touch Panel to your controller

Part Number	Description	Price
EA7-S6M-R	6-inch C-more grayscale STN touch panel (5.7 inch viewable screen), 15 shades of gray, 320 x 240 pixel QVGA screen resolution, 333 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), non-replaceable backlight, 50,000 hour half-life. *Base Model: Built-in USB, no Ethernet or Compact Flash support.	<--->
EA7-T6CL-R	6-inch C-more color TFT touch panel (5.7 inch viewable screen), 64K colors, 320 x 240 pixel QVGA screen resolution, 333 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), non-replaceable LED backlight, 50,000 hour half-life. Built-in USB, no Ethernet or Compact Flash support.	<--->
EA7-S6M	6-inch C-more grayscale STN touch panel (5.7 inch viewable screen), 15 shades of gray, 320 x 240 pixel QVGA screen resolution, 333 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), non-replaceable backlight, 50,000 hour half-life. Built-in Ethernet and USB; supports Compact Flash.	<--->
EA7-T6CL	6-inch C-more color TFT touch panel (5.7 inch viewable screen), 64K colors, 320 x 240 pixel QVGA screen resolution, 333 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), non-replaceable LED backlight, 50,000 hour half-life. Built-in Ethernet and USB; supports Compact Flash.	<--->
EA7-T8C	8-inch C-more color TFT touch panel (8.4 inch viewable screen), 64K colors, 640 x 480 pixel VGA screen resolution, 400 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), user replaceable backlight, 50,000 hour half-life. Built-in Ethernet and USB; supports Compact Flash.	<--->
EA7-T10C	10-inch C-more color TFT touch panel (10.4 inch viewable screen), 64K colors, 640 x 480 pixel VGA screen resolution, 400 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), user replaceable backlight, 50,000 hour half-life. Built-in Ethernet and USB; supports CompactFlash.	<--->
EA7-T12C	12-inch C-more color TFT touch panel (12.1 inch viewable screen), 64K colors, 800 x 600 pixel SVGA screen resolution, 400 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), user replaceable backlight, 50,000 hour half-life. Built-in Ethernet and USB; supports CompactFlash.	<--->
EA7-T15C	15-inch C-more color TFT touch panel (15.0 inch viewable screen), 64K colors, 1024 x 768 XGA screen resolution, 400 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), user replaceable backlight, 50,000 hour half-life. Built-in Ethernet and USB; supports CompactFlash.	<--->
EA-PGMSW	C-more touch panel Windows-based configuration software. Requires Windows 2000 (Service Pack 4), XP Home or Professional (Service Pack 2) or Vista. Includes software installation guide and CD-ROM. Requires USB 1.1 or Ethernet connection to touch panel. Cables sold separately.	<--->
USB-CBL-AB3	Standard 3-ft. (0.9m) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any C-more touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<--->
USB-CBL-AB6	Standard 6-ft. (1.8m) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any C-more touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<--->
USB-CBL-AB10	Standard 10-ft (3 meter) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any C-more touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<--->
USB-CBL-AB15	Standard 15-ft. (4.6m) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any C-more touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<--->

C-more Selection Guide & Specifications

Specification	Model	8" TFT color w/ full features	10" TFT color w/ full features	12" TFT color w/ full features	15" TFT color w/ full features
Part Number		EA7-T8C	EA7-T10C	EA7-T12C	EA7-T15C
					
Price		<--->	<--->	<--->	<--->
Display Actual Size and Type		8.4" TFT color	10.4" TFT color	12.1" TFT color	15.0" TFT color
Color Scale		65,536 colors			
Display Viewing Area		6.73" x 5.05" [170.9 mm x 128.2 mm]	8.31" x 6.24" [211.2 mm x 158.4 mm]	9.47" x 7.62" [240.6 mm x 184.5 mm]	11.97" x 8.98" [304.1 mm x 228.1 mm]
Screen Pixels		640 x 480 (VGA)		800 x 600 (SVGA)	1024 x 768 (XGA)
Display Brightness		300 cd/m ² (NITS)	270 cd/m ² (NITS)	260 cd/m ² (NITS)	220 cd/m ² (NITS)
LCD Panel Dot Pitch		0.267 mm x 0.267 mm	0.33 mm x 0.33 mm	0.267 mm x 0.267 mm	0.297 mm x 0.297 mm
Backlight Average Lifetime*		Approximately 50,000 hours			
Backlight User Replaceable		Yes – Correct replacement bulb is dependent on the panel serial no, see C-more Replacement Parts section for complete details			
Touch Panel Type		Analog Resistive (10-bit resolution, 1024 x 1024 touch area)		Analog Resistive (12-bit resolution, 4096 x 4096 touch area)	
CPU Type		32-Bit RISC CPU (400 MHz)		32-Bit RISC CPU (400 MHz) Plus Graphic Accelerator Chip	
Battery		Replaceable battery – ADC Part # D2-BAT-1 (Manufacturer Part # CR2354)			
System Memory		SDRAM 32 MBytes		SDRAM 64 MBytes	
System Flash Memory		FLASH 32 MBytes		FLASH 64 MBytes	
Backup Memory (SRAM)		Control data backup memory (SRAM) 256 KBytes			
Logging Data Memory		CompactFlash Memory Card p/n EA-CF-CARD, industrial grade, high speed (Optional) or USB Pen Drive p/n SDCZ4-2048-A10 (Optional)			
Number of Screens		Up to 999 – limited by available project memory (10 MBytes)		Up to 999 – limited by available project memory (40 MBytes)	
Realtime Clock		Built into panel (PLC clock is still accessible if available)			
Calendar – Month/Day/Year		Yes - battery backup			
Screen Saver		Yes, backlight turns off after a 30–1500 minute adjustable time, or can be disabled			
Serial PLC Interface		Serial PLC Port: RS-232C/422/485 15-Pin D-sub (female)			
USB Port – Type B		Download/Program – USB Port – type B (ver. 1.2)			
USB Port – Type A		Port for USB device options – type A (ver. 1.2)			
Ethernet Port		Ethernet 10/100 Base-T			
Audio Line Out		Audio Line Out, 1 Volt rms, stereo – requires amplifier and speaker(s)			
CF Card – Slot #1		Optional: CompactFlash Memory Card p/n EA-CF-CARD, industrial grade, high speed, CF slot #1 located on top side of touch panel.			
Expansion Assembly (p/n EA-EXP-OPT)		Optional: Use the CF Card Interface Module p/n EA-CF-IF in the right slot of the Expansion Assembly for installing CF card - Slot #2. The left slot of the Expansion Assembly is for future options.			
Supply Power		24 VDC, -15%, +20% (20.4–28.8 VDC operating range) (Use an AC Power Adapter, p/n EA-AC, to power the touch panel from a 100–240 VAC, 50/60 Hz. power source.)			
Power Consumption		15 W @ 24 VDC	17 W @ 24 VDC	20 W @ 24 VDC	33 W @ 24 VDC
Recommended Input Fuse		3.0 A DC slow blow			
Operating Temperature		0 to 50°C (32 to 122°F) Max surrounding air temperature rating: 50°C			
Storage Temperature		–20 to +60°C (–4 to +140°F)			
Humidity		10–85% RH, non-condensing			
Noise Immunity		Noise voltage: 1000 Vp-p, Pulse width: 1 μs, Rise time: 1 ns			
Withstand Voltage		1000 VDC for 1 minute, between DC power supply input terminal and safety ground			
Insulation Resistance		Over 20 MΩ between DC power supply input terminal and safety ground			
Vibration		IEC61131-2 compliant, 10–57 Hz: 0.075 mm amplitude, 57–150 Hz 1.0 G: 10 sweep cycles per axis on each of 3 mutually perpendicular axes			
Shock		15 G peak, 11 ms duration, 2 shocks per axis, on 3 mutually perpendicular axes			
Enclosure		IP65 Meets UL Type 4X when mounted correctly. For indoor use only.			
Environment		For use in Pollution Degree 2 Environment			
Agency Approvals		UL, cUL, CE, UL file 157382			
Dimensions		8.748" x 10.894" x 2.053" [222.2 mm x 276.7 mm x 52.1 mm]	10.669" x 13.661" x 2.079" [271.0 mm x 347.0 mm x 52.8 mm]	11.024" x 13.366" x 2.075" [280.0 mm x 339.5 mm x 52.7 mm]	13.000" x 16.748" x 2.048" [330.2 mm x 425.4 mm x 52.0 mm]
Weight		2.60 lb. [1,180 g]	3.55 lb. [1,610 g]	4.59 lb. [2,080 g]	7.01 lb. [3,180 g]

* NOTE: The backlight average lifetime is defined as the average usage time it takes before the brightness becomes 50% of the initial brightness. The lifetime of the backlight depends on the ambient temperature. The lifetime will decrease under low or high temperature usage.

C-more 12" TFT Color Touch Panel - Full Model

Part No. EA7-T12C



12-inch **C-more** color TFT touch panel (12.1 inch viewable screen), 64K colors, 800 x 600 pixel SVGA screen resolution, 400 MHz CPU plus Graphic Accelerator chip, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP-65 (when mounted correctly; for indoor use only), user replaceable backlight, 50,000 hour half-life. Built-in Ethernet and USB; supports Compact Flash.

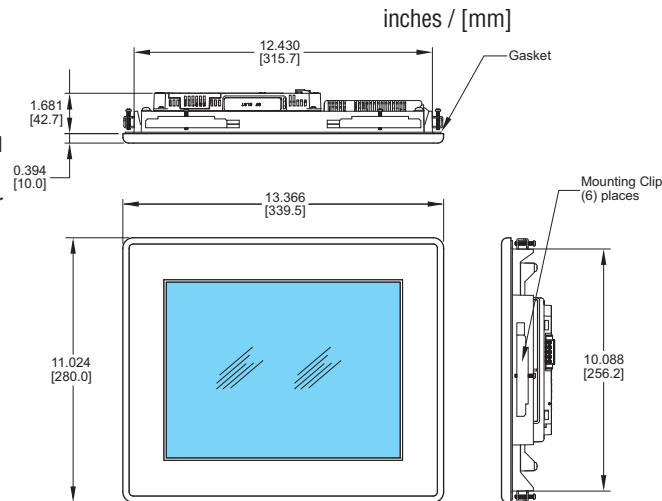
Features

- 12.1" diagonal color TFT (Thin Film Transfer) LCD display with 64K colors
- 800 x 600 pixel resolution
- 260 NITS display brightness
- 50,000 hour average backlight lifetime, user replaceable
- Analog resistive (4096 X 4096) touch screen allowing unlimited touch areas
- USB port B (program/download) and USB port A (USB device options)
- Ethernet 10/100 Base-T port (program/download & PLC comm)
- Remote Internet Access
- Serial PLC interface (RS-232/422/485)
- CompactFlash card slot, built-in
- Expansion assembly (optional) for CompactFlash devices (use with optional CF Card Interface Module)
- 24 VDC powered, 110 VAC power adapter (optional)
- Audio Line Out, stereo - requires amplifier and speaker(s)
- 40 MByte project memory
- Data logging
- 0 to 50°C (32 to 122°F) operating temperature range
- NEMA 4/4X, IP65 compliant when mounted correctly, indoor use only
- Slim design saves panel space
- UL, cUL & CE agency approvals
- 2-year warranty from date of purchase

Function	Available	Associated Features
Ethernet	Yes	FTP - Email - Web Server
USB	Yes	Data Logging
Compact Flash	Yes	Data Logging/Project
Expansion Assembly	Yes	CF Module & future modules
Audio Out	Yes	Speaker/Amplifier Connection
Ethernet	Yes	Remote access over Internet

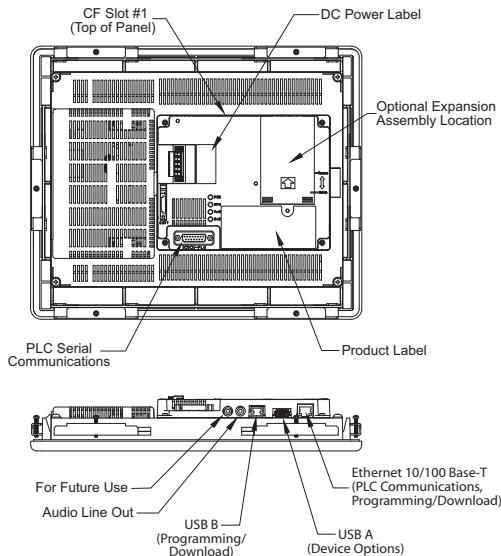


Dimensions

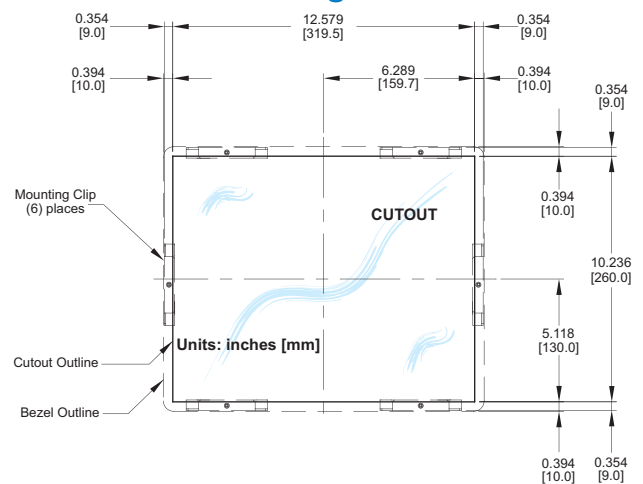


PLC Drivers	
Serial	Avail.
Productivity3000	Yes
AutomationDirect CLICK	Yes
Direct LOGIC K-sequence	Yes
Direct NET	Yes
Modbus (Koyo Addressing)	Yes
Allen-Bradley DF1 Full & Half Duplex	Yes
Allen-Bradley PLC5 DF1	Yes
Allen-Bradley DH-485	Yes
Allen-Bradley DF1 Full & Half Duplex - Tag Based (ControlLogix™ and CompactLogix™)	Yes
Modbus RTU	Yes
Entivity Modbus RTU	Yes
GE SNPX (90/30, 90/70), Micro 90, VersaMax Micro	Yes
Omron Host Link C200 Adapter C500	Yes
Omron FINS (CJ1, CS1)	Yes
Mitsubishi FX	Yes
Mitsubishi Q02, Q02H, Q06H, Q12H, Q25H	Yes
Mitsubishi Q, QnA Serial	Yes
Siemens PPI (S7-200 CPU)	Yes
Ethernet	
Productivity3000	Yes
Direct LOGIC Ethernet	Yes
Modbus TCP/IP	Yes
Entivity Modbus TCP/IP	Yes
Allen-Bradley EtherNet/IP™ Server - Generic I/O Messaging*	Yes
Allen-Bradley EtherNet/IP Client - Tag Based (ControlLogix™ and CompactLogix™)	Yes
Allen-Bradley EtherNet/IP Client - MicroLogix 1100 & SLC 5/05 via native Ethernet port; MicroLogix 1000, 1100, 1200, 1400, 1500 & SLC 5-03, 04, 05 via AB ENI Adapter	Yes
Omron FINS	Yes
Mitsubishi Q, QnA Ethernet	Yes
Siemens (S7-200 CPU, S7-300 CPU)	Yes

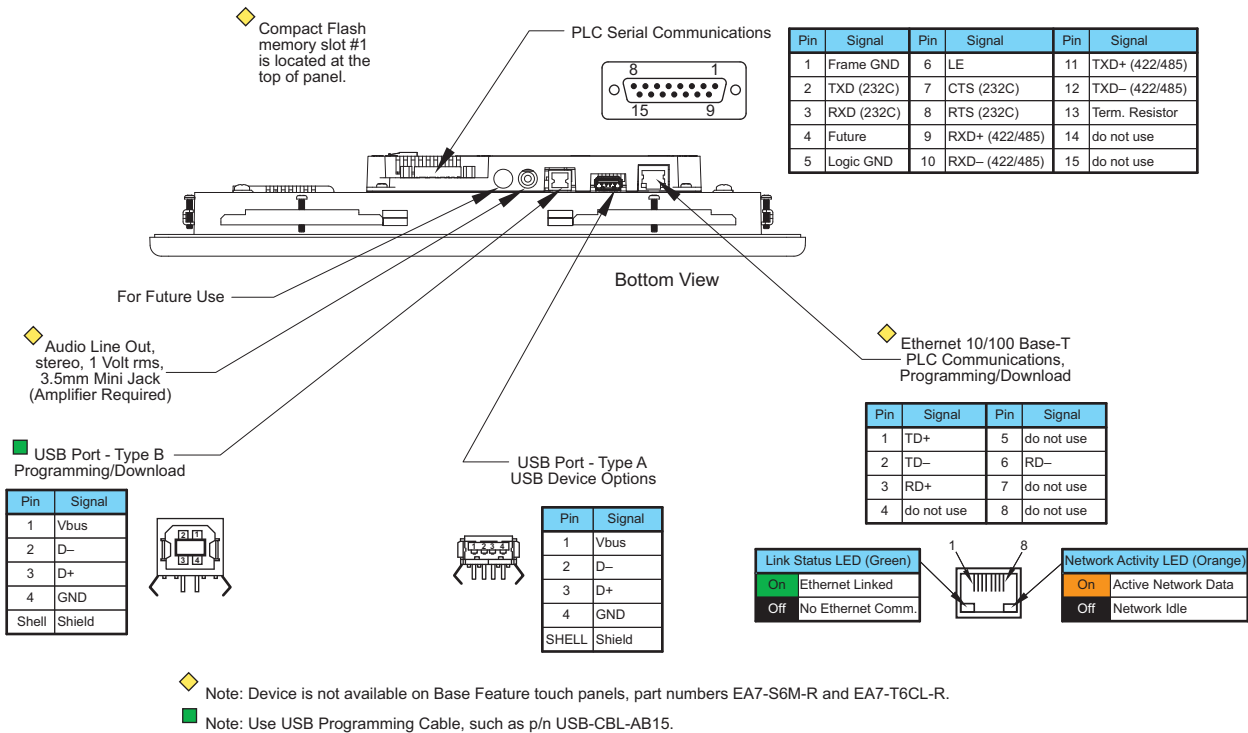
Ports & Memory Expansion



Mounting Cutout



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 Web server
- Remote Internet Access

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

- The orange LED indicates the Ethernet communication status. It illuminates when there is data activity on the network.
- The green LED indicates link status and illuminates when a link is established.

Ethernet connections:

- Productivity3000
- **Direct**LOGIC Ethernet
- Modbus TCP/IP
- Allen-Bradley EtherNet/IP™ Server - Generic I/O Messaging (ControlLogix™, CompactLogix™, and FlexLogix™)
- Allen-Bradley EtherNet/IP Client - Tag Based (ControlLogix, CompactLogix, and FlexLogix™)
- Allen-Bradley EtherNet/IP Client - MicroLogix 1100 & SLC 5/05, both via native Ethernet port
- Allen-Bradley MicroLogix 1000, 1100, 1200, 1500, SLC 5-03/04/05, all via ENI Adapter
- Entivity Modbus TCP/IP
- Omron Ethernet FINS
- Siemens Ethernet ISO over TCP

Note: The base panels (-R part numbers) do not include an Ethernet port, and do not have these capabilities.

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 for all models and can be used to connect various USB HID (Human Input Device) devices to the panel, such as:

- USB pen drives, (SDCZ4-2048-A10)
- USB keyboards
- USB barcode scanners
- USB card scanners

C-more can log data to the USB pen 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

The serial port is an RS-232, RS-422 or RS-485 female 15-pin D-sub connector. Use this port for serial connections to PLCs. The port supports the following PLC protocols:

All AutomationDirect.com PLCs:
 Productivity3000
DirectLOGIC K-sequence
DirectNET
 Modbus (Koyo Addressing)
 CLICK

Allen Bradley:
 DF1 Full & Half Duplex
 DF1 Full & Half Duplex - Tag Based
 PLC5 DF1
 DH485

Modbus RTU
 Entivity Modbus RTU
 GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)

Omron:
 Host Link (C200 Adapter, C500)
 FINS (CJ1, CS1)

Mitsubishi:
 Melsec FX
 Q/QnA
 Siemens PPI (S7-200 CPU)

C-more Communication Protocols & Cables

Compatibility Table				
PLC Family	Model	Protocols		
Allen-Bradley	MicroLogix 1000/1100/1200/1400/1500, SLC 5-01/02/03, PLC5	DH485/AIC/AIC+		
	MicroLogix 1000, 1100, 1200 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 & SLC 5/05, both via native Ethernet port			
	MicroLogix 1000, 1100, 1200, 1400, 1500 & SLC 5-03/04/05, all via ENI Adapter			
Modbus TCP/IP	Modbus TCP/IP devices	Modbus TCP/IP		
GE	90/30, 90/70, Micro 90, VersaMax Micro	SNPX		
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; Ethernet	Ethernet ISO over TCP		
Productivity3000	Productivity3000 Serial (P3-550)	AutomationDirect P3000 Serial		
	Productivity3000 Ethernet (P3-550)	AutomationDirect P3000 Ethernet		
CLICK	all	AutomationDirect Modbus (CLICK)		
DirectLOGIC	DL05/DL06	all	K-Sequence DirectNET Modbus (Koyo addressing)	
		H0-ECOM/H0-ECOM100	DirectLOGIC Ethernet	
	DL105	D2-230	all	K-Sequence
			D2-240	K-Sequence DirectNET
	DL205	D2-250/D2-250-1/D2-260	all	K-Sequence DirectNET
			Modbus (Koyo addressing)	
		D2-240/D2-250-1/D2-260 Using DCM	all	K-Sequence DirectNET
			Modbus (Koyo addressing)	
		H2-ECOM/H2-ECOM100	DirectLOGIC Ethernet	
		DL305	D3-330/330P (Requires the use of a Data Communications Unit)	all
	D3-340			DirectNET
	D3-350		all	K-Sequence DirectNET
			Modbus (Koyo addressing)	
	D3-350 DCM		all	K-Sequence DirectNET
			Modbus (Koyo addressing)	
	DL405	D4-430	all	K-Sequence DirectNET
			D4-440	K-Sequence DirectNET
		D4-450	all	K-Sequence DirectNET
			Modbus (Koyo addressing)	
		All with DCM	DirectNET	
		H4-ECOM/H4-ECOM100	DirectLOGIC 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
Productivity3000 AutomationDirect CLICK, DirectLOGIC PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 & H2-WinPLC (RS-232C)	EA-2CBL	<--->
DirectLOGIC (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232C)	EA-2CBL-1	<--->
DirectLOGIC PLC RJ-11 port, D3-340 (RS-232C)	EA-3CBL	<--->
DirectLOGIC DL405 PLC 15-pin D-sub port, DL405 (RS-232C)	EA-4CBL-1	<--->
DirectLOGIC PLC 25-pin D-sub port, DL405, D3-350, DL305, DCU and all DCMs (RS-232C)	EA-4CBL-2	<--->
Allen-Bradley MicroLogix 1000, 1100, 1200, 1400 & 1500 (RS-232C)	EA-MLOGIX-CBL	<--->
Allen-Bradley SLC 5-03/04/05 ControlLogix, CompactLogix, FlexLogix, DF1 port (RS-232C)	EA-SLC-232-CBL	<--->
Allen-Bradley PLC-5 DF1 port (RS-232C)	EA-PLC5-232-CBL	<--->
Allen-Bradley SLC 500 DH485 port (RS-485A)	EA-DH485-CBL	<--->
GE 90/30, 90/70, Micro 90, VersaMax Micro 15-pin D-sub port (RS-422A)	EA-90-30-CBL	<--->
MITSUBISHI FX Series 25-pin port (RS-422A)	EA-MITSU-CBL	<--->
MITSUBISHI FX Series 8-pin mini-DIN (RS-422A)	EA-MITSU-CBL-1	<--->
OMRON Host Link C200 Adapter, C500 (RS-232C)	EA-OMRON-CBL	<--->



NOTE: EZTouch serial PLC communication cables are compatible with C-more touch panels.

EA-2CBL



EA-2CBL-1



C-more Computer Programming Connections

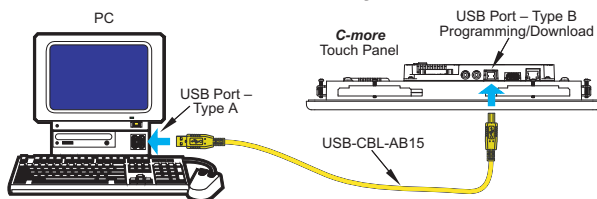
Using the **C-more** Programming Software for project development, the touch panel can be connected to a PC (personal computer) in one of several ways:

- 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 touch panel. The USB connection is for direct connection only and does not support USB hubs.
- Connect the **C-more** touch panel to a PC via an Ethernet hub or switch, and CAT5 Ethernet cables (full feature panels only). Multiple panels can be programmed in this configuration.
- Use an Ethernet crossover cable directly between the **C-more** touch panel's Ethernet port and the PC Ethernet port (full feature panels only).

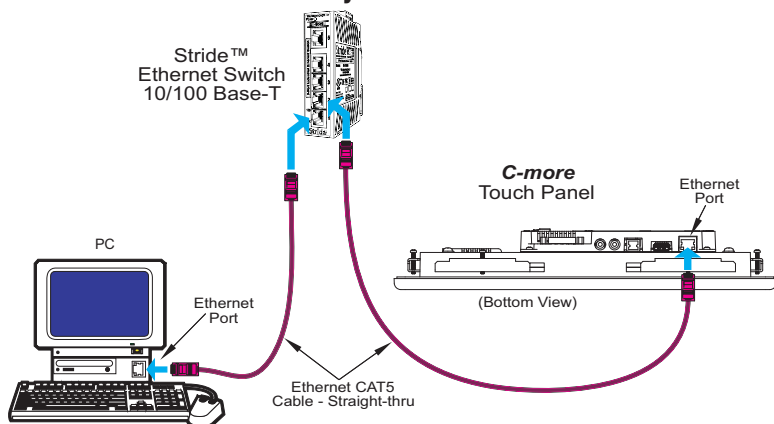
Following are the minimum system requirements for running **C-more** Programming Software (p/n EA-PGMSW) on a PC:

- Personal Computer with a 333 MHz or higher processor (CPU) clock speed recommended; Intel® Pentium/Celeron family, or AMD® K6/Athlon/Duron family, or compatible processor recommended
- Keyboard and Mouse or compatible pointing device
- Super VGA color video adapter and monitor with at least 800 x 600 pixels resolution (1024 x 768 pixels recommended) 64K color minimum
- 300 MB free hard-disk space
- 128 MB free RAM (512 MB recommended); 512 MB free RAM (1 GB recommended) for Vista
- CD-ROM or DVD drive for installing software from the CD
- USB port or Ethernet 10/100 Mbps port for project transfer from software to touch panel (Ethernet port not available on -R models)
- Operating System - Windows® Vista, Windows® XP Home / Professional Edition or Windows® 2000 with Service Pack 4.

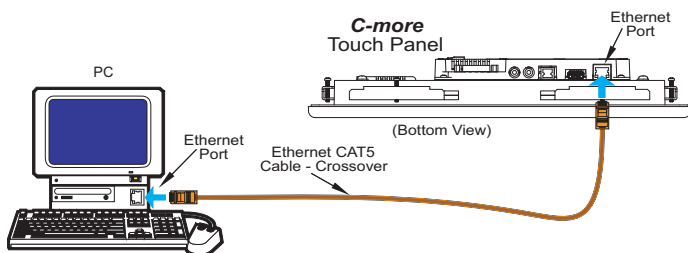
USB Connectivity



Ethernet Connectivity via a Hub or Switch



Ethernet Direct Connection



USB Programming Cable



Part No. USB-CBL-AB15



Other lengths available see USB-CBL-AB3, USB-CBL-AB6, USB-CBL-AB10 on page 9-27

Stride™ Ethernet Switch



Part No. SE-SW5U



Ethernet Configuration Kit



Part No. RT-CNFGKIT



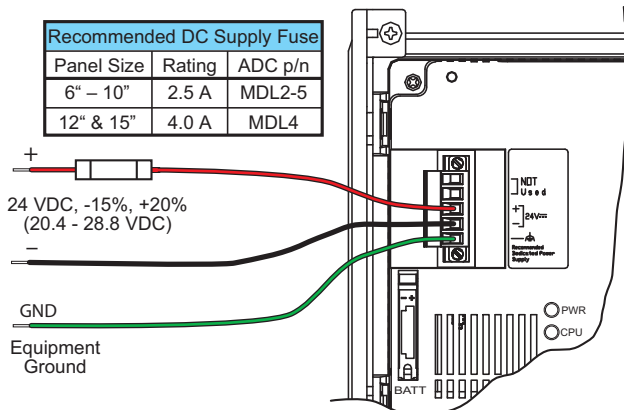
The Ethernet Configuration Kit includes a five-port 10/100 Base-T Ethernet switch, four straight-through cables, and one crossover cable. (The cables are at least five feet in length.) The kit provides a great convenience for configuring systems, demonstration systems or basic control projects using Ethernet.

C-more Power Connection Wiring

Providing Power to the Touch Panel

- Connect a dedicated 24 VDC switching power supply rated for a minimum of 1.5 Amps to the DC connector on the rear of the **C-more** touch panel. Connect the ground terminal to a proper equipment ground.
- or, install a **C-more** AC Power Adapter (EA-AC) to the rear of the touch panel and connect an AC voltage source of 100-240 VAC, 50/60Hertz, to its AC connector.
- then, turn on the power source and check the LED status indicators on the rear of the **C-more** touch panel for proper operation.

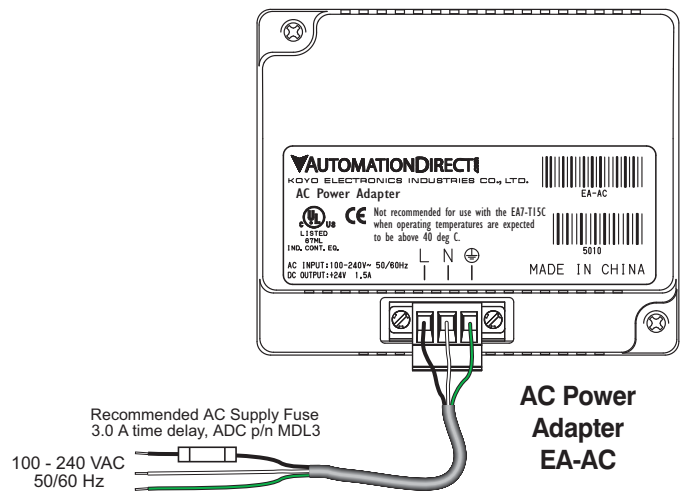
DC Wiring



Recommended Power Supply:
AutomationDirect Part No. PS24-050D

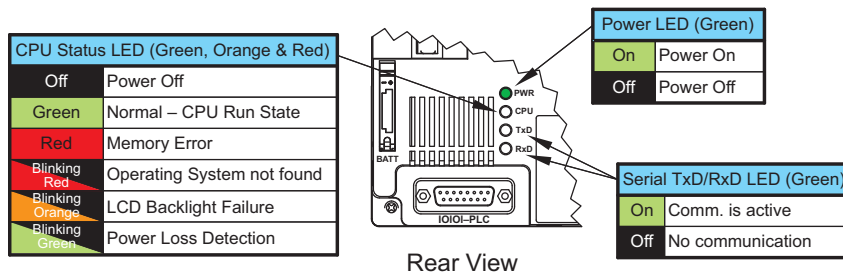
Tightening Torque	
Power supply cable torque	71 - 85 oz-in (0.5 - 0.6 Nm)
Power connector mounting torque	71 - 85 oz-in (0.5 - 0.6 Nm)
Mounting flange screw torque	57 - 71 oz-in (0.4 - 0.5 Nm)

AC Wiring



NOTE: The AC/DC Power Adapter is not recommended for use with the EA7-T15C touch panel when operating temperatures are expected to exceed 40 °C [104 °F].

C-more LED Status Indicators



WARNING: To minimize the risk of potential safety problems, you should follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to area and it is your responsibility to determine which codes should be followed, and to verify that the equipment, installation, and operation are in compliance with the latest revision of these codes.

Equipment damage or serious injury to

personnel can result from the failure to follow all applicable codes and standards. We do not guarantee the products described in this publication are suitable for your particular application, nor do we assume any responsibility for your product design, installation, or operation.

If you have any questions concerning the installation or operation of this equipment, or if you need additional information, please call us at 1-800-633-0405 or 770-844-4200.

This publication is based on information that was available at the time it was printed.

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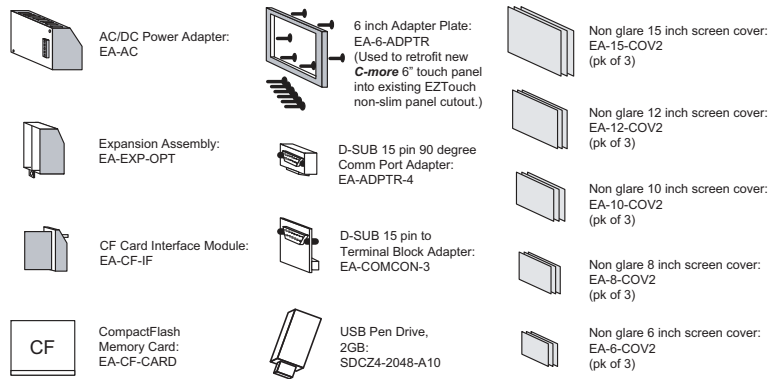
C-more Accessories

Accessories

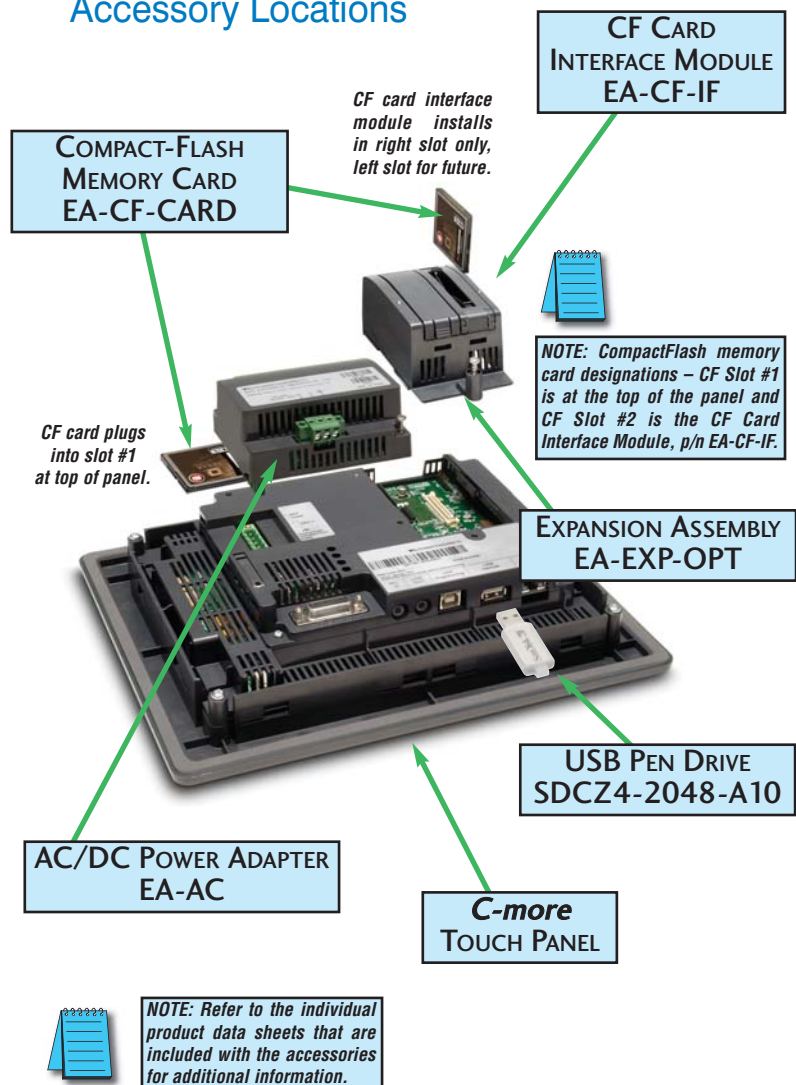
The **C-more** touch panels can be enhanced with the accessories below:

Part Number	Description	Price
EA-AC	The AC/DC Power Adapter, EA-AC, is for C-more touch panels only, and is powered from a 100-240 VAC, 50/60 Hertz power source. The adapter provides 24 VDC @ 1.5 A. Power Fault features help protect data being logged to CompactFlash during power failures. The C-more panel must have firmware version 1.21 Build 6.18E or higher for proper operation.	<--->
EA-EXP-OPT	C-more I/O Module Expansion Assembly, used to hold secondary CompactFlash Adapter (EA-CF-IF) and future option modules	<--->
EA-CF-IF	CompactFlash Card Adapter Module, used when adding secondary CompactFlash option to Expansion Assembly. Compatible with EA-CF-CARD Compact-Flash memory card accessory.	<--->
EA-CF-CARD	512 MB CompactFlash Memory Option, industrial grade, high speed memory for non-volatile storage.	<--->
EA-6-ADPTR	6-inch mounting adapter plate, REQUIRED to mount a 6 inch C-more touch panel into enclosures with legacy wide-bezel EZTouch cutouts. Converts a 8.932 inch x 6.223 inch cutout to 7.522 inch x 5.625 inch cutout.	<--->
EA-ADPTR-4	D-SUB 15-pin 90 degree PLC serial communication port adapter (allows a PLC communication cable to be plugged in at a 90 degree angle to reduce panel depth requirements)	<--->
EA-COMCON-3	D-SUB 15-pin to 6-terminal PLC serial communication port adapter to allow wire terminal connections for RS-422/485 PLC communication cable.	<--->
EA-6-COV2	Non Glare 6 Inch Screen Cover, protective overlay used to protect the touch screen while helping to reduce the glare from external light sources. (pk of 3)	<--->
EA-8-COV2	Non Glare 8 Inch Screen Cover, protective overlay used to protect the touch screen while helping to reduce the glare from external light sources. (pk of 3)	<--->
EA-10-COV2	Non Glare 10-Inch Screen Cover, protective overlay used to protect the touch screen while helping to reduce the glare from external light sources. (pk of 3)	<--->
EA-12-COV2	Non Glare 12-Inch Screen Cover, protective overlay used to protect the touch screen while helping to reduce the glare from external light sources. (pk of 3)	<--->
EA-15-COV2	Non Glare 15-Inch Screen Cover, protective overlay used to protect the touch screen while helping to reduce the glare from external light sources. (pk of 3)	<--->
SDCZ4-2048-A10	USB Pen Drive, 2GB, SanDisk Cruzer micro Pen Drive. Compatible with Windows 98SE, ME, 2000, XP and Mac OS 9.1.x+, OS X 10.1.2+ Certified Windows XP and Mac OS X. Recommended for use with the C-more Operator Touch Panels.	<--->

Accessories at a glance:



Accessory Locations



C-more Accessories

AC/DC Power Adapter

The AC/DC Power Adapter provides dedicated DC power to the panel if using 110 VAC as a power source. The AC/DC Power Adapter provides some features that a normal DC power supply cannot provide. The adapter provides a power loss signal to the touch panel that can be used to track power outages. This

signal also allows the touch panel by way of a timed sequence to stop writing data to CompactFlash memory devices providing a controlled shutdown for increased data logging reliability.

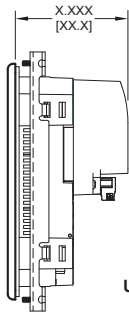
Part No. EA-AC



Dimensions

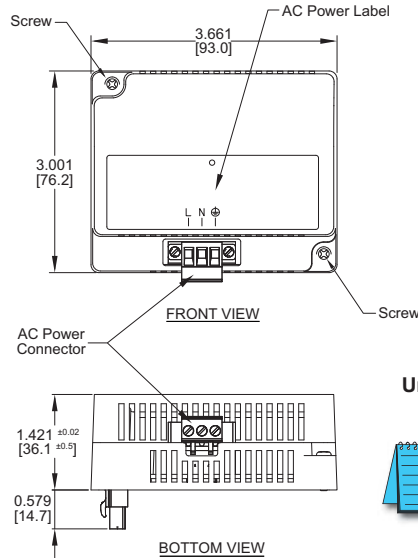


Overall Panel Depth w/ EA-AC Installed



- EA7-S6M-R = 2.921 [74.2]
- EA7-T6CL-R = 2.921 [74.2]
- EA7-S6M = 2.921 [74.2]
- EA7-T6CL = 2.921 [74.2]
- EA7-T8C = 3.157 [80.2]
- EA7-T10C = 3.106 [78.9]
- EA7-T12C = 3.102 [78.8]
- EA7-T15C = 3.075 [78.1]

Units: inches[mm]



Units: inches [mm]

NOTE: Power Fault features help protect data being logged to CompactFlash during power failures. The C-more touch panel must have firmware version 1.21 Build 6.18E or higher for proper operation.

NOTE: The AC/DC Power Adapter is not recommended for use with the EA7-T15C touch panel when operating temperatures are expected to exceed 40 °C [104 °F].

AC/DC Power Adapter Specifications

Part Number	EA-AC	Static Electricity Discharge Resistance	Compliant with IEC61000-4-2, Contact: 4 kV, Air: 8 kV
Input Voltage & Frequency	100-240 VAC; 50/60 Hertz	Agency Approvals	UL508, cUL, CE, EMC EN61132-2
Voltage Range	85-264 VAC w/ Under Voltage and Over Voltage Shutdown	Environment	For use in pollution degree 2 environment
Permissible Momentary Power Failure	Within 40 ms	Grounding	Ground resistance: less than 100 ohm
Input Power	68 VA or less	Dimensions - inches [mm]	3.00" (H) x 3.66" (W) x 1.42" (D) (76.2 mm x 93.0 mm x 36.1 mm) (Excluding DC Power Connector.)
Operating Temperature Range	0 °C to 50 °C [32 to 122 °F] Maximum surrounding temperature rating, 50 °C (For the EA7-T15C touch panel, maximum temperature is 40 °C, [104 °F] when using the AC/DC Power Adapter.)	Weight	6.13 oz. [175 g]
Storage Temperature Range	-20 to 60 °C [-4 to 140 °F]	Cooling Method	Natural convection when installed on vertically mounted touch panel.
Operating & Storage Humidity	10-85% RH (non-condensing)	Included Parts	AC Power Connector, Data Sheet Insert
Noise Immunity	1000 VAC p-p (Pulse width 1 μs, rise time: 1 ns), with proper ground connection on AC terminal block.	Removable AC Power Connector	EA-AC-CON or DECA Switchlab MC101-508-03G Secure with (2) captive M2.5 screws, torque to 70 oz-in [0.5 Nm]
Hi-Pot	1000 VAC, 1 minute, with proper ground connection on AC terminal block.	Output Voltage and Ripple	21.6 - 26.4 VDC, Ripple < 100 mV p-p
Insulation Resistance	500 VDC, 10 M ohm or above, with proper ground connection on AC terminal block.	Output Current	Maximum 1.5 A
Vibration	Compliant with IEC61131-2	Inrush Current	For 100 VAC: 15 A, 3 ms or less For 240 VAC: 20 A, 3 ms or less
Shock	Pulse shape: Sine half wave, Peak acceleration: 147 m/s ² (15 G), X, Y, Z: 3 directions, 2 times each	Power Fail Detection Voltage	58 VAC ±5%
Thermal Protection	140 °C [284 °F], with autorecovery	Mounting to Touch Panel	Secure with (2) spring loaded captive M3-20 screws, torque to 50 oz-in [0.35 Nm]
Short Circuit Protection	85 VAC: 2.6 A, 100 VAC: 2.8 A, 264 VAC: 3.9 A		

C-more Accessories

Expansion Assembly

The **C-more** Expansion Assembly allows installation of the optional CF Card Interface Module (shown below) for CF card use and also provides a slot for future option modules. Although the full featured models have a built-in CompactFlash slot, some users may require additional CF memory for data logging.

The optional Expansion Assembly can be installed on the rear of all but the 6-inch base models. This attachable assembly currently allows installation of an additional CompactFlash card with the use of the CF Card Interface Module. More options will be available in the future.

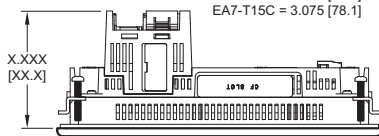
Part No. EA-EXP-OPT



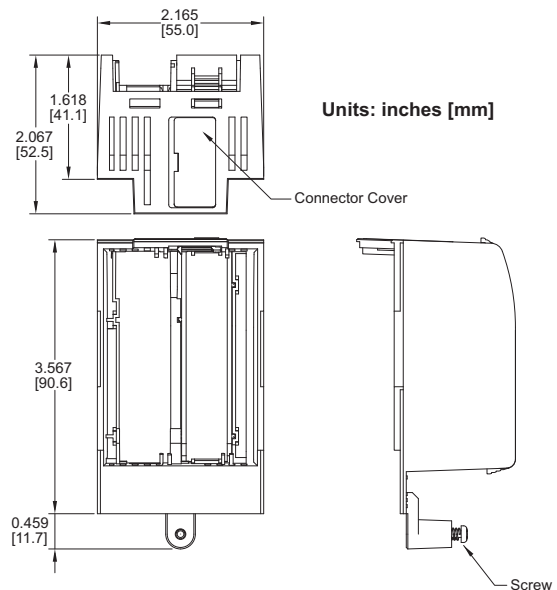
Overall Panel Depth w/ EA-EXP-OPT Installed

EA7-S6M = 2.921 [74.2]
 EA7-T6CL = 2.921 [74.2]
 EA7-T8C = 3.157 [80.2]
 EA7-T10C = 3.106 [78.9]
 EA7-T12C = 3.102 [78.8]
 EA7-T15C = 3.075 [78.1]

Units: inches[mm]



Dimensions



Units: inches [mm]

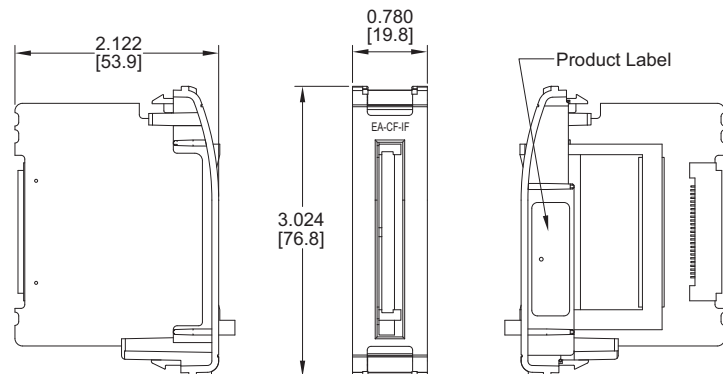
CF Card Interface Module

The **C-more** CF Card Interface Module is used with the Expansion Assembly to allow use of standard CompactFlash cards, such as the CompactFlash Memory (EA-CF-CARD). The CF card can be used for data logging or as project backup.

Part No. EA-CF-IF



Dimensions



Units: inches [mm]

C-more Accessories

512 MB CompactFlash Memory Card

EA-CF-CARD is a 512 MB high speed industrial grade CompactFlash memory card for non-volatile storage. Its 85 °C operating temperature makes it perfect for data logging in industrial applications (recommended for **C-more** touch panels). This is a standard "off the shelf" CompactFlash.

**Part No.
EA-CF-CARD**



Specifications/Features:

- CompactFlash™ Compatibility
- W/E Endurance 100,000 cycles
- Data transfer rate: 16 MB/second
- Operating Temp: -13 to 185°F (-25 to 85°C)
- Operating Humidity 85% max, non-condensing
- Storage Temp: -13 to 194 °F (-25 to 90°C)
- Storage Humidity 95% max, non-condensing

USB Pen Drive

**Part No.
SDCZ4-2048-A10**



The SanDisk Cruzer Micro is an extremely small 2GB USB Flash Drive (UFD) that connects to a USB port. Users can easily store their logging data, project data, key documents and images on a Cruzer Micro and transfer them to another computer with a USB port.

Specifications/Features:

- Dimensions: 7.9 mm x 18.95 mm x 52.2 mm (H x W x L)
- Stylish, metal casing
- Hi-Speed USB 2.0 certified (backwards compatible with all USB 1.1 ports)
- Compatible with Windows 2000, XP, Vista and Mac OS 9.1.x+, OS X v10.1.2+
- Certified Windows XP, Vista and Mac OS X



* For Windows only

C-more Accessories

6" Adapter Plate

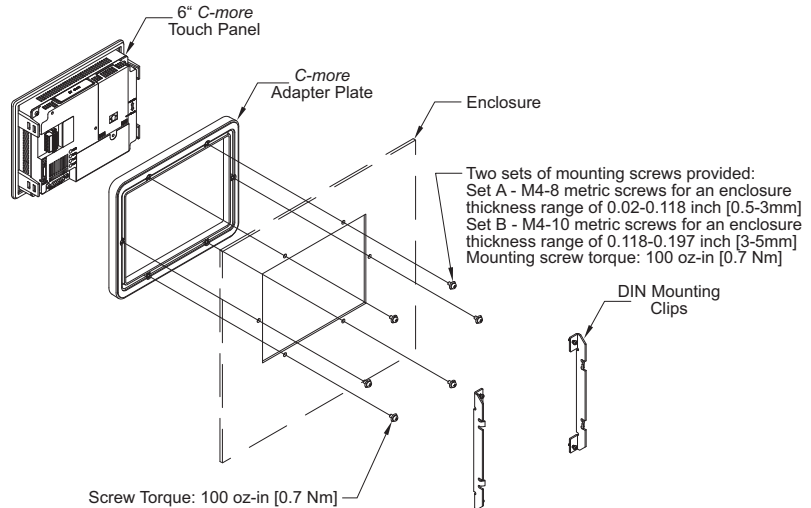
The adapter plate simplifies the retrofit of a new **C-more** 6" touch panel into an existing cabinet cutout for an EZTouch (units sold by AutomationDirect) 6" wide bezel touch panel, such as our part number EZ-S6C-K, EZ-S6C-F, EZ-S6M-R or EZ-S6M-F.

A NEMA 4/4X gasket is included. Please note that all sizes of the **C-more** touch panels have the same cutout as similarly sized EZTouch thin bezel (slim) touch panels, allowing quick replacement.

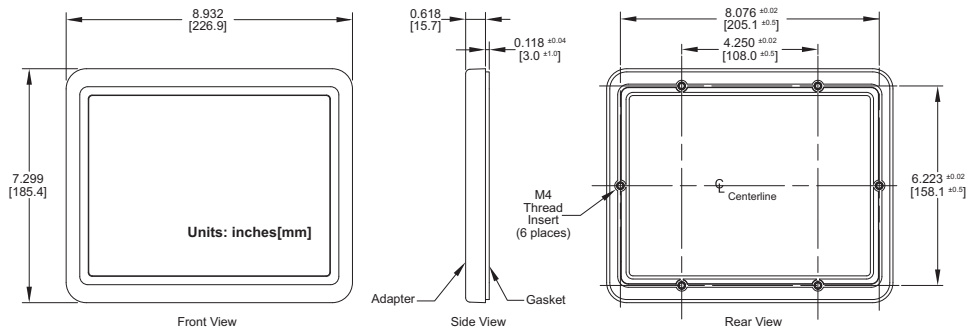
Part No. EA-6-ADPTR



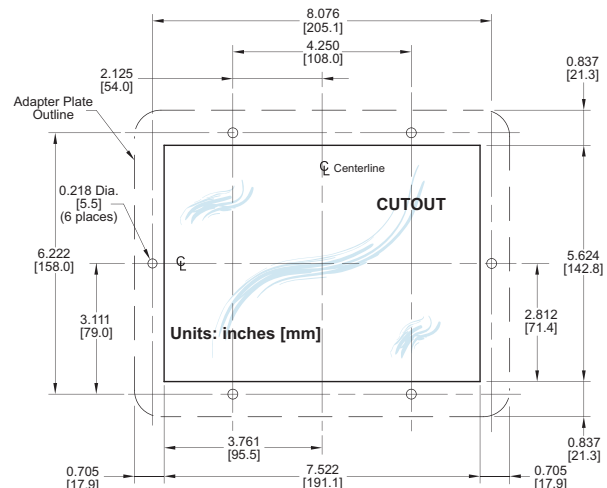
Mounting Details



Dimensions



Cutout Dimensions



C-more Accessories

D-SUB 15-pin 90-degree Communication Port Adapter

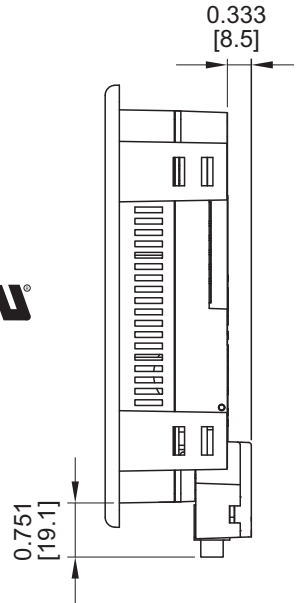
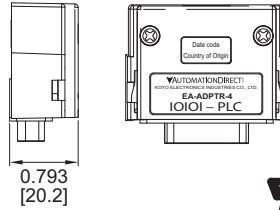
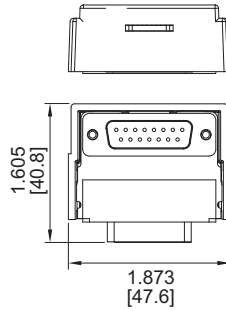
The EA-ADPTR-4 adapter plugs into the 15-pin serial port on the rear of the panel to allow a PLC communication cable to be plugged in at a 90 degree angle to reduce panel depth requirements. 15-pin straight through pin-out. UL Recognized.

Part No.
EA-ADPTR-4



Dimensions

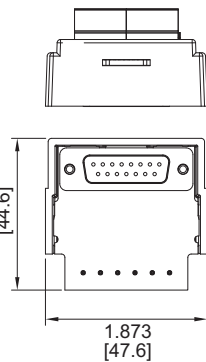
Units: inches [mm]



D-SUB 15-pin to Terminal Block Adapter

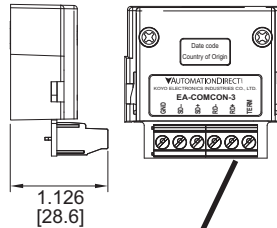
The EA-COMCON-3 adapter plugs into the 15-pin serial port on the rear of the panel to allow wire terminal connections for an RS-422/RS-485/DH-485 PLC communication cable. UL Recognized.

Part No.
EA-COMCON-3

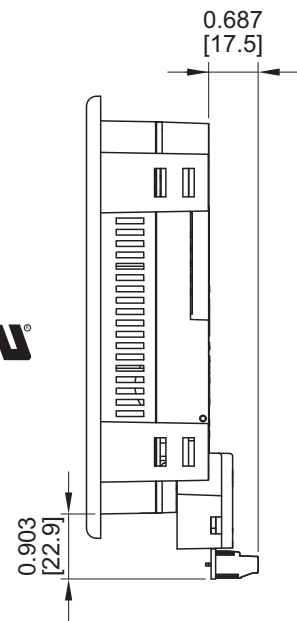
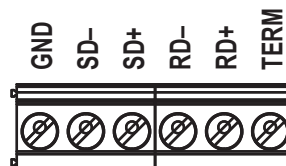


Dimensions

Units: inches [mm]



Terminals



C-more Accessories

Non-glare Screen Covers (in packages of 3)

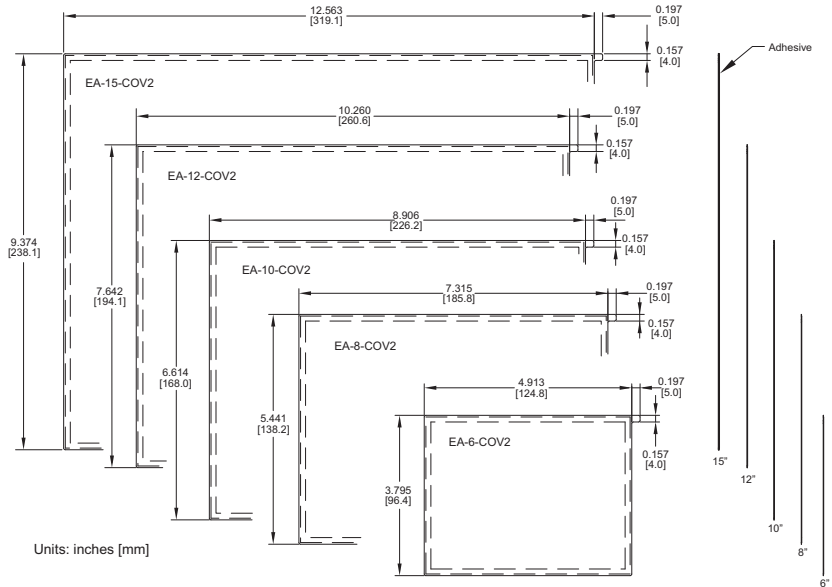
The non-glare screen covers are protective overlays used to protect the touch screen while helping to reduce the glare from external light sources.

Part Nos. EA-6-COV2, EA-8-COV2, EA-10-COV2, EA-12-COV2 and EA-15-COV2

Dimensions



- EA-6-COV2 <--->
- EA-8-COV2 <--->
- EA-10-COV2 <--->
- EA-12-COV2 <--->
- EA-15-COV2 <--->



Installation



NOTE: The Protective Cover ships with a thin protective sheet on the face of the cover that needs to be carefully removed. If your panel is not clear, the protective sheet may not have been removed.

C-more Replacement Parts

The optional replacement parts can be used to replace damaged, worn or lost **C-more** components.

Part Number	Description	Price
EA-15-BULB* EA-15-BULB2*	15" Panel Backlight Bulb Replacement	<-->
EA-12-BULB* EA-12-BULB2*	12" Panel Backlight Bulb Replacement	<-->
EA-10-BULB* EA-10-BULB2*	10" Panel Backlight Bulb Replacement	<-->
EA-8-BULB* EA-8-BULB2*	8" Panel Backlight Bulb Replacement	<-->
EA-DC-CON	DC Panel Power Connector Replacement	<-->
EA-AC-CON	AC Power Adapter Connector Replacement	<-->
D2-BAT-1	Replacement Battery	<-->
EA-BRK-1	6" Panel Mounting Clip Replacements (2 per pk.)	<-->
EA-BRK-2	8"-15" Panel Mounting Clip Replacements (8 per pk.)	<-->
EA-15-BEZEL	15" Panel Bezel Replacement	<-->
EA-12-BEZEL	12" Panel Bezel Replacement	<-->
EA-10-BEZEL	10" Panel Bezel Replacement	<-->
EA-8-BEZEL	8" Panel Bezel Replacement	<-->
EA-15-GSK	15" Panel Gasket Replacement	<-->
EA-12-GSK	12" Panel Gasket Replacement	<-->
EA-10-GSK	10" Panel Gasket Replacement	<-->
EA-8-GSK	8" Panel Gasket Replacement	<-->
EA-6-GSK	6" Panel Gasket Replacement	<-->
EA-6-ADPTR-GSK	6" Adapter Plate Gasket Replacement	<-->

Replacement parts at a glance:

Battery:
D2-BAT-1

6-inch mounting clips:
EA-BRK-1 (pk of 2)

8 - 15 inch mounting clips:
EA-BRK-2 (pk of 8)

DC power connector:
EA-DC-CON

AC power connector:
EA-AC-CON

15-inch backlight:
EA-15-BULB
EA-15-BULB2

12-inch backlight:
EA-12-BULB
EA-12-BULB2

10-inch backlight:
EA-10-BULB
EA-10-BULB2

8-inch backlight:
EA-8-BULB
EA-8-BULB2

15-inch gasket:
EA-15-GSK

12-inch gasket:
EA-12-GSK

10-inch gasket:
EA-10-GSK

8-inch gasket:
EA-8-GSK

6-inch gasket:
EA-6-GSK

15-inch Bezel:
EA-15-BEZEL (gasket not included)

12-inch Bezel:
EA-12-BEZEL (gasket not included)

10-inch Bezel:
EA-10-BEZEL (gasket not included)

8-inch Bezel:
EA-8-BEZEL (gasket not included)

Note: 6-inch bezel is not user replaceable.

6-inch Adapter Plate replacement gasket
EA-6-ADPTR-GSK

PLEASE REFER TO THE INDIVIDUAL DATA SHEET INSERTS THAT ARE INCLUDED WITH EACH REPLACEMENT PART FOR ADDITIONAL DETAILS.

*C-more Replacement Bulbs		
C-more Model	Bulb Model	C-more Serial Number
EA7-T8C	EA-8-BULB	EA7-T8C+10Z15B020 and older
	EA-8-BULB2	EA7-T8C+10Z15B021 and newer
EA7-T10C	EA-10-BULB	EA7-T10C+10Z11B080 and older
	EA-10-BULB2	EA7-T10C+10Z11B081 and newer
EA7-T12C	EA-12-BULB	EA7-T12C+10Z29B019 and older
	EA-12-BULB2	EA7-T12C+10Z29B020 and newer
EA7-T15C	EA-15-BULB	EA7-T15C+10Z22B120 and older
	EA-15-BULB2	EA7-T15C+10Z22B121 and newer

Serial Number = [Part Number]+[YYMDDFNNN]

Date Code = YYMF

- YY:** Year (05-99 --- e.g. 05 = 2005)
- M:** Month (1-9, X, Y, Z --- e.g. X = Oct.)
- DD:** Day (1-31)
- F:** Manufacturing Site (0-9, A-Z)
- NNN:** Sequence number for the date listed (000-999)

Part No.
EA-8-BULB, EA-8-BULB2,
EA-10-BULB, EA-10-BULB2,
EA-12-BULB, EA-12-BULB2,
EA-15-BULB, & EA-15-BULB2
see table



Backlight assembly, customer replaceable, for **C-more** 8", 10", 12" and 15" touch panels. The 8", 10" and 15" touch panels use two bulbs per panel and the 12" touch panels use one bulb per panel. The bulbs are packaged two per box for the 8", 10" and 15" touch panels and one per box for the 12" touch panels.

C-more Replacement Parts



MAINTENANCE AND ACCESSORY INSTRUCTION SHEETS CAN BE VIEWED AND DOWNLOADED ONLINE AT:
[HTTP://WWW.AUTOMATIONDIRECT.COM/STATIC/MANUALS/EAUSERM/EAUSERM.HTML](http://www.automationdirect.com/Static/Manuals/EAUSERM/EAUSERM.HTML)

DC Power Connector Part No. EA-DC-CON



Replacement 5-terminal DC power connector for **C-more** touch panels.

AC Power Connector Part No. EA-AC-CON



Replacement 3-terminal AC power connector for **C-more** touch panel AC Power Adapters.

Replacement Battery Part No. D2-BAT-1



Backup Battery (supplied with new panels)
C-more panels use battery backed RAM to store retentive values for internal tags. This battery will last for up to two years, and is easy to replace. You can even set up an alarm condition, and let **C-more** remind you when the battery needs replacing. The **C-more** panels come with the D2-BAT-1 already installed.

NOTE: The D2-BAT-1 is the same battery used in our DL06, D2-250(-1), D2-260 and D3-350 PLC products.

6" Panel Mounting Clips Part No. EA-BRK-1



Spare panel mounting clips for 6-inch **C-more** touch panels. Package of 2 clips with 4 screws.

8"-15" Panel Mounting Clips Part No. EA-BRK-2



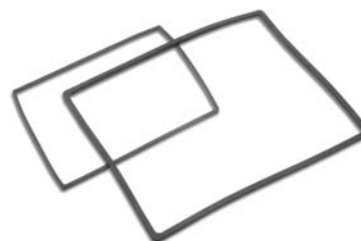
Spare panel mounting clips for the 8-inch through 15-inch **C-more** touch panels. Package of 8 clips with 8 screws.

Part No. EA-8-BEZEL, EA-10-BEZEL, EA-12-BEZEL and EA-15-BEZEL



NEMA 4/4X bezel, customer replaceable, for **C-more** 8", 10", 12" and 15" touch panels. Gasket not included.

Part No. EA-6-GSK, EA-8-GSK, EA-10-GSK, EA-12-GSK and EA-15-GSK



Replacement NEMA 4/4X touch panel gaskets for **C-more** 6", 8", 10", 12" and 15" touch panels.

Part No. EA-6-ADPTR-GSK



6-inch replacement NEMA 4/4X gasket for the **C-more** touch panel adapter plate.



CAUTION - The battery used in this device may present a risk of fire or chemical burn if mistreated. Do not recharge, disassemble, heat above 100 °C (212 °F) or incinerate. Replace battery with AutomationDirect part number D2-BAT-1 or CR2354 only. Use of another battery may present a risk of fire or explosion. Dispose of used battery properly. Keep away from children.

Perchlorate Material, special disposal handling may apply.