

# C-more Operator Panels Overview

## Overview

With the **C-more** series, AutomationDirect provides the best combination of reliability, ease of use, and features at the lowest possible prices. With **C-more**, you can virtually replace almost all mechanical pushbuttons, switches, meters, and other peripheral devices.

The configuration software makes touchscreen panel setup and programming quick and simple, and all **C-more** touch panels use the same programming package. Take advantage of advanced features such as the Event Manager and data logging. Now you can collect large amounts of data or play back long historical records on trend graphs. Plug in up to two compact flash cards (full feature panels only) or a USB memory device for Gigabytes of data logging storage.

Another tool is the built-in project simulator that allows you to view your project on the PC screen exactly as it would appear on the touch panel; and to test all your screens before downloading the project to the panel. You can simulate your entire project at any stage of development.

**C-more** displays are available in either grayscale (15 shades of gray) or full color (64K colors), depending on model. Cost-conscious STN grayscale displays are available in the 6" touch screen size. Color TFT touch screen displays are available in 6", 8", 10", 12" or 15" versions.

For a detailed list of communications drivers, see page 10-26. Check Web site for updates.



- Analog touch screen to eliminate touch cell boundaries
- Plenty of memory and methods to get data in/out of the panel
- Overlapping active devices on the touch screen
- 65,536 colors for enhanced graphics
- Higher screen resolutions on 12" and 15" panels
- Built-in project simulation; test on PC while developing
- Serial RS-232, RS-422/485 and Ethernet 10/100Base-T communications (Ethernet available on full feature units only.)
- Programming via USB or Ethernet (Ethernet available on full feature units only.)
- Optional AC power adapter
- Bright backlight bulbs
- User replaceable bulbs on 8, 10, 12 & 15" panels
- Animation of bitmaps and objects
- 4,000 built-in symbols and more fonts
- PID face plate, trending, alarming and a recipe database
- Event Manager to trigger actions based on assigned state changes, schedules, PLC tag names, etc., set up in a database environment. The event can also trigger a sound byte, initiate a screen capture, send a data file (FTP), send an e-mail, etc
- Select unique background for each screen
- Data logging
- Built-in FTP client/server, e-mail client, and Web server
- Remote Internet Access
- Audio output port - stereo, requires amplifier and speaker(s)

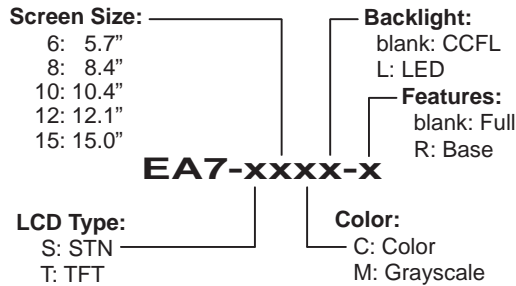
Note: A few features are not available on the base models (EA7-S6M-R and EA7-T6CL-R). Please refer to the specifications on the following pages or the individual data sheet inserts that are included with each accessory or replacement part for additional details.

## Support

Our Web site contains all of the information in this section, any new feature releases, tech support, plus much more. Please visit [www.automationdirect.com](http://www.automationdirect.com), or visit <http://C-more.automationdirect.com> for a more interactive presentation. You may also contact our Technical Support group if you have any questions for which you can't find an answer. Give us a call from 9 a.m. to 6 p.m. ET, Monday - Friday, at 770-844-4200 and we will be glad to assist you.

# 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
<b>EA7-S6M-R</b>	6-inch <b>C-more</b> 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.	<--->
<b>EA7-T6CL-R</b>	6-inch <b>C-more</b> 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.	<--->
<b>EA7-S6M</b>	6-inch <b>C-more</b> 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.	<--->
<b>EA7-T6CL</b>	6-inch <b>C-more</b> 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.	<--->
<b>EA7-T8C</b>	8-inch <b>C-more</b> 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.	<--->
<b>EA7-T10C</b>	10-inch <b>C-more</b> 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.	<--->
<b>EA7-T12C</b>	12-inch <b>C-more</b> 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.	<--->
<b>EA7-T15C</b>	15-inch <b>C-more</b> 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.	<--->
<b>EA-PGMSW</b>	<b>C-more</b> 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.	<--->
<b>USB-CBL-AB3</b>	Standard 3-ft. (0.9m) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any <b>C-more</b> touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<--->
<b>USB-CBL-AB6</b>	Standard 6-ft. (1.8m) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any <b>C-more</b> touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<--->
<b>USB-CBL-AB10</b>	Standard 10-ft (3 meter) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any <b>C-more</b> touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<--->
<b>USB-CBL-AB15</b>	Standard 15-ft. (4.6m) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any <b>C-more</b> touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<--->

# The C-more Family

Features	Base Model	Full Featured Model
<b>More durable</b>		
- 50,000 hour bulb life	y	y
- Replaceable bulbs on 8", 10", 12", and 15" models	-	y
<b>Better screens</b>		
- Bright screens (NIT ratings)	y	y
- TFT with 65,536 colors available on all sizes	y	y
- 15 shade monochrome STN screens on 6" models	y	y
<b>More flexibility</b>		
- Analog touch screen (no touch cell grid!)	y	y
- Overlapping objects	y	y
<b>Better communications</b>		
- USB Port-A	y	y
- USB Port-B	y	y
- Built-in Ethernet port	-	y
- Built-in serial communications	y	y
<b>More capacity</b>		
- Built-in 10Mbyte project memory	y	y
- CompactFlash card slot #1 (data logging)	-	y
- Supports USB memory devices (data logging)	y	y
- Symbol Factory™ library with 4,000 symbols.	y	y
<b>More objects</b>		
- Over 50 objects including 16 pen trends, switches, PID trend faceplate, PID bar graph faceplate	y	y
- Create custom objects and store in user library	y	y
- Improved multilanguage support for objects in German, French, Italian, Spanish, Chinese and Japanese characters	y	y
<b>More high end features</b>		
- Project simulator	y	y
- Bitmap animation	y	y
- E-mail messaging	-	y
- Built-in FTP server	-	y
- Pop-up window within a touch screen	y	y
- Data logging to USB/CompactFlash	USB only	y
- Historical alarms with time and date stamp along with alarm frequency reporting.	y	y
- Supports simultaneous communication to multiple brands of PLC/PACs.	-	y
- Event Manager	y	y
- Audio line out	-	y
<b>Improved ease of use</b>		
- Improved multi-language support.	y	y
- Improved dialog boxes	y	y
- "Power User" property box	y	y
- More fonts and sizes	y	y
- Master background screens	y	y
- Improved recipes	y	y
<b>Optional accessories</b>		
- Optional "Screw on" 110VAC power supply	y	y
- Expansion unit for additional CompactFlash	-	y

## Supported drivers

### AutomationDirect PLCs

K-Sequence (*Direct*LOGIC PLCs)  
 DirectNET (*Direct*LOGIC PLCs)  
 Modbus (Productivity3000 PACs, *Direct*LOGIC PLCs. CLICK PLCs)  
 ECOM Ethernet (*Direct*LOGIC PLCs)  
 Think & Do (Modbus RTU and Modbus TCP/IP)  
 GS Drives  
 SOLO Temperature Controllers

### Modbus RTU

### Modbus TCP/IP

### Allen-Bradley

A-B DF1  
 A-B DH485  
 A-B EtherNet/IP Client  
 A-B Ethernet/IP Server Generic IO Messaging

### GE SNPX

### Omron

Omron Host Link Adapter  
 Omron FINS (Serial and Ethernet)

### Mitsubishi





FX Series CPU  
 FX-1N(C), 2N(C), 3U(C) CPU  
 Q Series (Q02, Q02H, Q06H, Q12H, Q25H CPU)  
 Q/QnA (Serial and Ethernet)

### Siemens

S7-200 (Serial: PPI)  
 S7-200 (Ethernet: ISO over TCP/IP)  
 S7-300 (Ethernet: ISO over TCP/IOP)

Please refer to the Compatibility Table in the following technical section for detailed information about which protocols are available for use with specific controllers.

# C-more Selection Guide & Specifications

Specification	Model	6" STN grayscale w/ base features	6" TFT color w/ base features	6" STN grayscale w/ full features	6" TFT color w/ full features
<b>Part Number</b>		<b>EA7-S6M-R</b>	<b>EA7-T6CL-R</b>	<b>EA7-S6M</b>	<b>EA7-T6CL</b>
					
<b>Price</b>		<--->	<--->	<--->	<--->
<b>Display Actual Size and Type</b>		5.7" STN grayscale	5.7" TFT color	5.7" STN grayscale	5.7" TFT color
<b>Color Scale</b>		15 shades of gray	65,536 colors	15 shades of gray	65,536 colors
<b>Display Viewing Area</b>		4.54" x 3.4" [115.2 mm x 86.4 mm]			
<b>Screen Pixels</b>		320 x 240 (QVGA)			
<b>Display Brightness</b>		150 cd/m <sup>2</sup> (NITS)	270 cd/m <sup>2</sup> (NITS)	150 cd/m <sup>2</sup> (NITS)	270 cd/m <sup>2</sup> (NITS)
<b>LCD Panel Dot Pitch</b>		0.36 mm x 0.36 mm			
<b>Backlight Average Lifetime*</b>		Approximately 50,000 hours			
<b>Backlight User Replaceable</b>		No			
<b>Touch Panel Type</b>		Analog Resistive (10-bit resolution, 1024 x 1024 touch area)			
<b>CPU Type</b>		32-Bit RISC CPU (333 MHz)			
<b>Battery</b>		Replaceable battery – ADC Part # D2-BAT-1 (Manufacturer Part # CR2354)			
<b>System Memory</b>		SDRAM 32 MBytes			
<b>System Flash Memory</b>		FLASH 32 MBytes			
<b>Backup Memory (SRAM)</b>		Control data backup memory (SRAM) 256 KBytes			
<b>Logging Data Memory</b>		USB Pen Drive p/n SDCZ4-2048-A10 (Optional)		CompactFlash Memory Card p/n EA-CF-CARD, industrial grade, high speed (Optional) or USB Pen Drive p/n SDCZ4-2048-A10 (Optional)	
<b>Number of Screens</b>		Up to 9999 with ver. 2.40 and later – limited by project memory (10 MBytes)			
<b>Realtime Clock</b>		Built into panel (PLC clock is still accessible if available)			
<b>Calendar – Month/Day/Year</b>		Yes – battery backup			
<b>Screen Saver</b>		Yes, backlight turns off after a 30–1500 minute adjustable time, or can be disabled			
<b>Serial PLC Interface</b>		Serial PLC Port: RS-232/422/485 15-Pin D-sub (female)			
<b>USB Port – Type B</b>		Download/Program – USB Port – type B (ver. 1.2)			
<b>USB Port – Type A</b>		Port for USB device options – type A (ver. 1.2)			
<b>Ethernet Port</b>		not available		Ethernet 10/100 Base-T	
<b>Audio Line Out</b>		not available		Audio Line Out, 1 Volt rms, stereo – requires amplifier and speaker(s)	
<b>CF Card – Slot #1</b>		not available		Optional: CompactFlash Memory Card p/n EA-CF-CARD, industrial grade, high speed, CF slot #1 located on top side of touch panel.	
<b>Expansion Assembly (p/n EA-EXP-OPT)</b>		not available		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.	
<b>Supply Power</b>		24 VDC, -15%, +20% (20.4–28.8 VDC oper. range) (Use AC Power Adapter, p/n EA-AC, to power panel from a 100-240 VAC, 50/60 Hz. power source.)			
<b>Power Consumption</b>		9W @ 24 VDC	9 W @ 24 VDC	10 W @ 24 VDC	11 W @ 24 VDC
<b>Recommended Input Fuse</b>		3.0 A DC slow blow			
<b>Operating Temperature</b>		0 to 50 °C (32 to 122 °F); Maximum surrounding air temperature rating: 50 °C (122 °F)			
<b>Storage Temperature</b>		–20 to +60°C (–4 to +140°F)			
<b>Humidity</b>		10–85% RH, non-condensing			
<b>Noise Immunity</b>		Noise voltage: 1,000 Vp-p, Pulse width: 1 µs, Rise time: 1 ns			
<b>Withstand Voltage</b>		1,000 VDC for 1 minute, between DC power supply input terminal and safety ground			
<b>Insulation Resistance</b>		Over 20 MΩ between DC power supply input terminal and safety ground			
<b>Vibration</b>		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			
<b>Shock</b>		15 G peak, 11 ms duration, 2 shocks per axis, on 3 mutually perpendicular axes			
<b>Enclosure</b>		IP65 Meets UL Type 4X when mounted correctly. For indoor use only.			
<b>Environment</b>		For use in Pollution Degree 2 Environment			
<b>Agency Approvals</b>		UL, cUL, CE; UL file 157382			
<b>Dimensions</b>		6.140" x 8.047" x 1.697" [156.0 mm x 204.4 mm x 43.1 mm]			
<b>Weight</b>		1.46 lb. [660g]	1.43 lb. [650g]	1.50 lb. [680g]	1.48 lb. [670g]

\* 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 Selection Guide & Specifications

Company Information

Systems Overview

Programmable Controllers

Field I/O

Software

C-more & other HMI

Drives

Soft Starters

Motors & Gearbox

Steppers/Servos

Motor Controls

Proximity Sensors

Photo Sensors

Limit Switches

Encoders

Current Sensors

Pressure Sensors

Temperature Sensors

Pushbuttons/Lights

Process

Relays/Timers

Comm.

Terminal Blocks & Wiring

Power

Circuit Protection

Enclosures

Tools





Pneumatics

Safety

Appendix

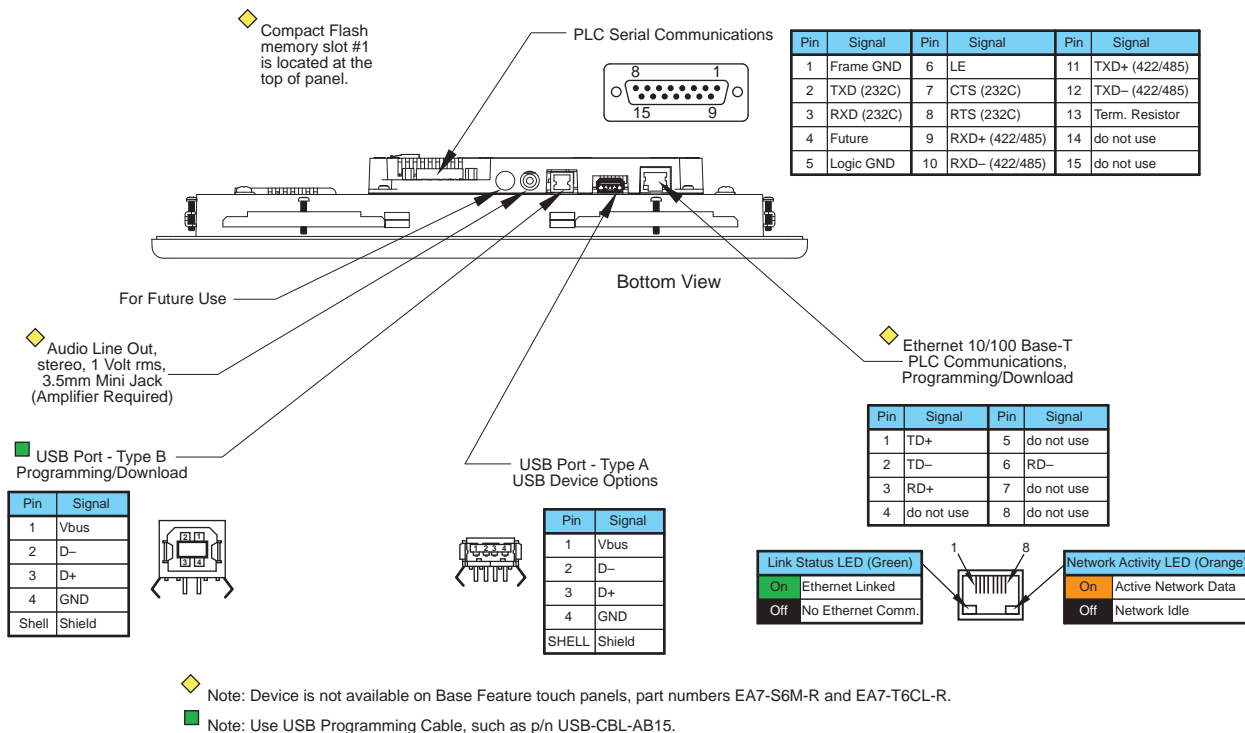
Product Index

Part # Index

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

\* 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 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  
**Direct**LOGIC K-sequence  
**Direct**NET  
 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	
<b>Allen-Bradley</b>	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		
<b>Modbus TCP/IP</b>	Modbus TCP/IP devices	Modbus TCP/IP	
<b>GE</b>	90/30, 90/70, Micro 90, VersaMax Micro	SNPX	
<b>Mitsubishi</b>	FX Series	FX Direct	
	Q02, Q02H, Q06H, Q12H, Q25H	Q CPU	
	Q, QnA Serial Q, QnA Ethernet	QnA Serial QnA Ethernet	
<b>Omron</b>	C200 Adapter, C500	Host Link	
	CJ1/CS1 Serial, CJ1/CS1 Ethernet	FINS	
<b>Modicon</b>	984 CPU, Quantum 113 CPU, AEG Modicon Micro Series 110 CPU: 311-xx, 411-xx, 512-xx, 612-xx	Modbus RTU	
<b>Siemens</b>	S7-200 CPU, RS-485 Serial	PPI	
	S7-200 CPU, S7-300 CPU; Ethernet	Ethernet ISO over TCP	
<b>Productivity3000</b>	Productivity3000 Serial (P3-550)	AutomationDirect P3000 Serial	
	Productivity3000 Ethernet (P3-550)	AutomationDirect P3000 Ethernet	
<b>CLICK</b>	all	AutomationDirect Modbus (CLICK)	
<b>DirectLOGIC</b>	DL05/DL06	all	K-Sequence <b>DirectNET</b> Modbus (Koyo addressing)
		H0-ECOM/H0-ECOM100	<b>DirectLOGIC</b> Ethernet
	DL105	all	K-Sequence
		D2-230	K-Sequence
	DL205	D2-240	K-Sequence <b>DirectNET</b>
		D2-250/D2-250-1/D2-260	K-Sequence <b>DirectNET</b>
			Modbus (Koyo addressing)
		D2-240/D2-250-1/D2-260 Using DCM	<b>DirectNET</b>
			Modbus (Koyo addressing)
		H2-ECOM/H2-ECOM100	<b>DirectLOGIC</b> Ethernet
	DL305	D3-330/330P (Requires the use of a Data Communications Unit)	<b>DirectNET</b>
			<b>DirectNET</b>
		D3-340	K-Sequence
		D3-350	<b>DirectNET</b>
			Modbus (Koyo addressing)
		D3-350 DCM	<b>DirectNET</b> Modbus (Koyo addressing)
	DL405	D4-430	K-Sequence <b>DirectNET</b>
		D4-440	K-Sequence <b>DirectNET</b>
			K-Sequence <b>DirectNET</b>
		D4-450	K-Sequence <b>DirectNET</b>
			Modbus (Koyo addressing)
		All with DCM	<b>DirectNET</b> Modbus (Koyo addressing)
	H4-ECOM/H4-ECOM100	<b>DirectLOGIC</b> 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, <b>DirectLOGIC</b> PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 & H2-WinPLC (RS-232C)	<b>EA-2CBL</b>	<--->
<b>DirectLOGIC</b> (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232C)	<b>EA-2CBL-1</b>	<--->
<b>DirectLOGIC</b> PLC RJ-11 port, D3-340 (RS-232C)	<b>EA-3CBL</b>	<--->
<b>DirectLOGIC</b> DL405 PLC 15-pin D-sub port, DL405 (RS-232C)	<b>EA-4CBL-1</b>	<--->
<b>DirectLOGIC</b> PLC 25-pin D-sub port, DL405, D3-350, DL305, DCU and all DCMs (RS-232C)	<b>EA-4CBL-2</b>	<--->
Allen-Bradley MicroLogix 1000, 1100, 1200, 1400 & 1500 (RS-232C)	<b>EA-MLOGIX-CBL</b>	<--->
Allen-Bradley SLC 5-03/04/05 ControlLogix, CompactLogix, FlexLogix, DF1 port (RS-232C)	<b>EA-SLC-232-CBL</b>	<--->
Allen-Bradley PLC-5 DF1 port (RS-232C)	<b>EA-PLC5-232-CBL</b>	<--->
Allen-Bradley SLC 500 DH485 port (RS-485A)	<b>EA-DH485-CBL</b>	<--->
GE 90/30, 90/70, Micro 90, VersaMax Micro 15-pin D-sub port (RS-422A)	<b>EA-90-30-CBL</b>	<--->
MITSUBISHI FX Series 25-pin port (RS-422A)	<b>EA-MITSU-CBL</b>	<--->
MITSUBISHI FX Series 8-pin mini-DIN (RS-422A)	<b>EA-MITSU-CBL-1</b>	<--->
OMRON Host Link C200 Adapter, C500 (RS-232C)	<b>EA-OMRON-CBL</b>	<--->



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

**EA-2CBL**



**EA-2CBL-1**

