The *C-more* Family

Features	Base Model	Full Featured Model
More durable		
- 50,000 hour bulb life	y	y
Better screens		
- 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
More flexibility		
- Analog touch screen (no touch cell grid!)	y	y
- Overlapping objects	y	y
Better communications		
- USB Port-A	y	y
- USB Port-B	y	y
- Built-in Ethernet port	-	y
- Built-in serial communications	y	y
More capacity		
- 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
More objects		
- 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
More high end features		
- 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
Improved ease of use		
- 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
Optional accessories		
- 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 (QO2,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/IP)

S7-400 (Ethernet: ISO over TCP/IP)

S7-1200 (Ethernet: ISO over TCP/IP)

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 Base and Full Featured Panels

Base Panels

EA7-S6M-R - *C-more 6″*, Grayscale STN — **$432**

EA7-T6CL-R - *C-more 6″*, 65,536 Color TFT — **$540**

Full Featured Panels

EA7-S6M - *C-more 6″*, Grayscale STN
With Ethernet — **$540**

EA7-T6CL - *C-more 6″*, 65,536 Color TFT
With Ethernet — **$757**

EA7-T8C - *C-more 8″*, 65,536 Color TFT
With Ethernet — **$1081**

EA7-T10C - *C-more 10″*, 65,536 Color TFT
With Ethernet — **$1,727**

EA7-T12C - *C-more 12″*, 65,536 Color TFT
With Ethernet — **$2,051**

EA7-T15C - *C-more 15″*, 65,536 Color TFT
With Ethernet — **$2,484**

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Motor Controls

Proximity Sensors

Photo Sensors

Limit Switches

Encoders

Current Sensors

Pressure Sensors

Temperature Sensors

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Relays/ Timers

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Part # Index

C-more Operator Panels Overview

For new applications choose EA9 series C-more panels, part numbers EA9-TxCL(-R).

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 communicationsdrivers, see page 10-26. Check Web site for updates.

Features

- 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
- 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**, 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

For new applications choose EA9 series C-more panels, part numbers EA9-TxCL(-R).

Touch Panel Part Number Key:

Screen Size:
- 6: 5.7"
- 8: 8.4"
- 10: 10.4"
- 12: 12.1"
- 15: 15.0"

EA7-xxxx-x

LCD Type:
- S: STN
- T: TFT

Backlight:
- blank: CCFL
- L: LED

Features:
- blank: Full
- R: Base

Color:
- C: Color
- M: Grayscale
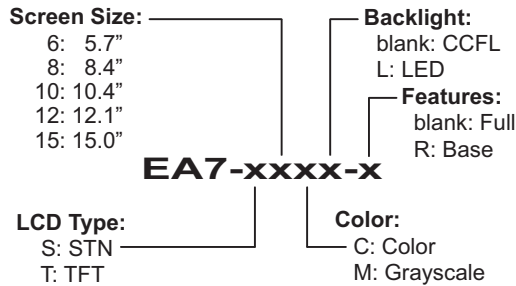
Getting started

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), Vista, Windows 7 or Windows 8. 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.)	<--->

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Photo Sensors

Limit Switches

Encoders

Current Sensors

Pressure Sensors

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C-more Selection Guide & Specifications

For new applications choose EA9 series C-more panels, part numbers EA9-TxCL(-R).

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
Part Number	EA7-S6M-R	EA7-T6CL-R	EA7-S6M	EA7-T6CL
Price	<--->	<--->	<--->	<--->
Display Actual Size and Type	5.7" STN grayscale	5.7" TFT color	5.7" STN grayscale	5.7" TFT color
Color Scale	15 shades of gray	65,536 colors	15 shades of gray	65,536 colors
Display Viewing Area	4.54" x 3.4" [115.2 mm x 86.4 mm]			
Screen Pixels	320 x 240 (QVGA)			
Display Brightness	150 cd/m² (NITS)	270 cd/m² (NITS)	150 cd/m² (NITS)	270 cd/m² (NITS)
LCD Panel Dot Pitch	0.36 mm x 0.36 mm			
Backlight Average Lifetime*	Approximately 50,000 hours			
Backlight User Replaceable	No			
Touch Panel Type	Analog Resistive (10-bit resolution, 1024 x 1024 touch area)			
CPU Type	32-Bit RISC CPU (333 MHz)			
Battery	Replaceable battery – ADC Part # D2-BAT-1 (Manufacturer Part # CR2354)			
System Memory	SDRAM 32 MBytes			
System Flash Memory	FLASH 32 MBytes			
Backup Memory (SRAM)	Control data backup memory (SRAM) 256 KBytes			
Logging Data Memory	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)	
Number of Screens	Up to 9999 with ver. 2.40 and later – limited by project memory (10 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-232/422/485 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	not available		Ethernet 10/100 Base-T	
Audio Line Out	not available		Audio Line Out, 1 Volt rms, stereo – requires amplifier and speaker(s)	
CF Card – Slot #1	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.	
Expansion Assembly (p/n EA-EXP-OPT)	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.	
Supply Power	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.)			
Power Consumption	9W @ 24 VDC	9 W @ 24 VDC	10 W @ 24 VDC	11 W @ 24 VDC
Recommended Input Fuse	3.0 A DC slow blow			
Operating Temperature	0 to 50 °C (32 to 122 °F); Maximum surrounding air temperature rating: 50 °C (122 °F)			
Storage Temperature	−20 to +60°C (−4 to +140°F)			
Humidity	10–85% RH, non-condensing			
Noise Immunity	Noise voltage: 1,000 Vp-p, Pulse width: 1 μs, Rise time: 1 ns			
Withstand Voltage	1,000 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, CSA; UL file 157382, CSA file 234884			
Dimensions	6.140" x 8.047" x 1.697" [156.0 mm x 204.4 mm x 43.1 mm]			
Weight	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.
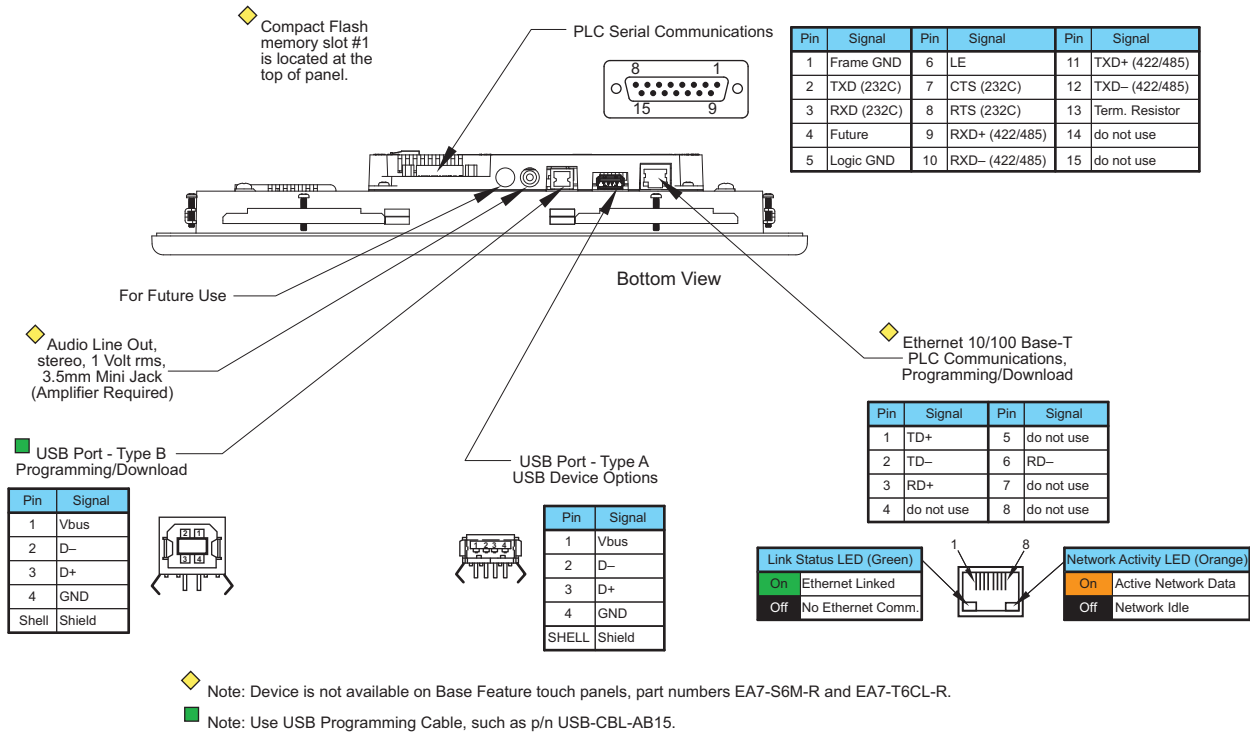
C-more Selection Guide & Specifications

For new applications choose EA9 series C-more panels, part numbers EA9-TxCL(-R).

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/m² (NITS)	270 cd/m² (NITS)	260 cd/m² (NITS)	220 cd/m² (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, CSA; UL file 157382, CSA file 234884			
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. [1,180g]	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

For new applications choose EA9 series C-more panels, part numbers EA9-TxCL(-R).

◇ Compact Flash memory slot #1 is located at the top of panel.

PLC Serial Communications

Pin	Signal	Pin	Signal	Pin	Signal
1	Frame GND	6	LE	11	TXD+ (422/485)
2	TXD (232C)	7	CTS (232C)	12	TXD– (422/485)
3	RXD (232C)	8	RTS (232C)	13	Term. Resistor
4	Future	9	RXD+ (422/485)	14	do not use
5	Logic GND	10	RXD– (422/485)	15	do not use

Bottom View

For Future Use

◇ Audio Line Out, stereo, 1 Volt rms, 3.5mm Mini Jack (Amplifier Required)

■ USB Port - Type B Programming/Download

Pin	Signal
1	Vbus
2	D–
3	D+
4	GND
Shell	Shield

USB Port - Type A USB Device Options

Pin	Signal
1	Vbus
2	D–
3	D+
4	GND
SHELL	Shield

◇ Ethernet 10/100 Base-T PLC Communications, Programming/Download

Pin	Signal	Pin	Signal
1	TD+	5	do not use
2	TD–	6	RD–
3	RD+	7	do not use
4	do not use	8	do not use

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

Network Activity LED (Orange)	
On	Active Network Data
Off	Network Idle

◇ Note: Device is not available on Base Feature touch panels, part numbers EA7-S6M-R and EA7-T6CL-R.

■ Note: Use USB Programming Cable, such as p/n USB-CBL-AB15.

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 EhterNet/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)

Automation Direct

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

C-more Communication Protocols & Cables

For new applications choose EA9 series C-more panels, part numbers EA9-TxCL(-R).

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 and 1500		DF1 Half Duplex; DF1 Full Duplex
	SLC 5-/03/04/05		
	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, S7-400, S7-1200 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	all	K-Sequence
	DL205	D2-230	K-Sequence
		D2-240	K-Sequence
			DirectNET
		D2-250/D2-250-1/D2-260	K-Sequence
			DirectNET
			Modbus (Koyo addressing)
		D2-240/D2-250-1/D2-260 Using DCM	DirectNET
			Modbus (Koyo addressing)
		H2-ECOM/H2-ECOM100	DirectLOGIC 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 DCM	DirectNET
			Modbus (Koyo addressing)
	DL405	D4-430	K-Sequence
			DirectNET
		D4-440	K-Sequence
			DirectNET
		D4-450	K-Sequence
			DirectNET
			Modbus (Koyo addressing)
		All with DCM	DirectNET
			Modbus (Koyo addressing)
		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, *Direct*LOGIC PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 & H2-WinPLC (RS-232C)	**EA-2CBL**	<--->
*Direct*LOGIC (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232C)	**EA-2CBL-1**	<--->
*Direct*LOGIC PLC RJ-11 port, D3-340 (RS-232C)	**EA-3CBL**	<--->
*Direct*LOGIC DL405 PLC 15-pin D-sub port, DL405 (RS-232C)	**EA-4CBL-1**	<--->
*Direct*LOGIC PLC 25-pin D-sub port, DL405, D3-350, DL305 DCU and all DCM's (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