C-more Operator Panels Overview

Touch Panel Part Number Key:

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

Features:
blank: Full
R: Base

EA7-xxx-x

LCD Type:
S: STN
T: TFT

Color:
C: color
M: gray scale
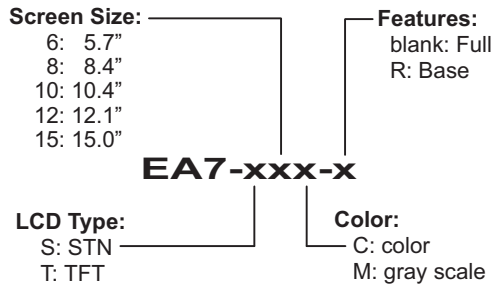
Compatibility with our past!

All *C-more* panels have been designed to fit in the same dimensional cutout as a similar sized EZTouch panel*. In addition, *C-more* can convert and run existing EZTouch projects created with EZTouch Edit 3.1a sold by AutomationDirect. Just point, click and convert EZTouch projects to *C-more* and you are ready to go. All your hard work is transferred. To replace an EZTouch:

1) Remove it from its mounting cutout.
2) Click on your existing EZTouch project in the C-more browser. It will be converted to a C-more project, which can be downloaded into the new C-more panel.
3) Now mount the new C-more into the old cutout (using adapter plate where required) and reconnect your existing cables.

It's that simple!

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

* Replacement of an EZTouch wide bezel 6″ model requires adapter EA-6-ADPTR.

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, IP-65 (when mounted correctly; for indoor use only), non-replaceable 50,000 hour half-life backlight. *Base Model: Built-in USB, no Ethernet or CompactFlash support.	<--->
EA7-S6C-R	6-inch *C-more* color STN touch panel (5.7 inch viewable screen), 256 colors, 320 x 240 pixel QVGA screen resolution, 333 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP-65 (when mounted correctly; for indoor use only), non-replaceable 50,000 hour half-life backlight. *Base Model: Built-in USB, no Ethernet or CompactFlash 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, IP-65 (when mounted correctly; for indoor use only), non-replaceable 50,000 hour half-life backlight. Built-in Ethernet and USB; supports CompactFlash.	<--->
EA7-S6C	6-inch *C-more* color STN touch panel (5.7 inch viewable screen), 256 colors, 320 x 240 pixel QVGA screen resolution, 333 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP-65 (when mounted correctly; for indoor use only), non-replaceable 50,000 hour half-life backlight. Built-in Ethernet and USB; supports CompactFlash.	<--->
EA7-T6C	6-inch *C-more* color TFT touch panel (5.7 inch viewable screen), 65K colors, 320 x 240 pixel QVGA screen resolution, 333 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP-65 (when mounted correctly; for indoor use only), non-replaceable 50,000 hour half-life backlight. Built-in Ethernet and USB; supports CompactFlash.	<--->
EA7-T8C	8-inch *C-more* color TFT touch panel (8.4 inch viewable screen), 65K colors, 640 x 480 pixel VGA screen resolution, 400 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP-65 (when mounted correctly; for indoor use only), user replaceable 50,000 hour half-life backlight. Built-in Ethernet and USB; supports CompactFlash.	<--->
EA7-T10C	10-inch *C-more* color TFT touch panel (10.4 inch viewable screen), 65K colors, 640 x 480 pixel VGA screen resolution, 400 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP-65 (when mounted correctly; for indoor use only), user replaceable 50,000 hour half-life backlight. Built-in Ethernet and USB; supports CompactFlash.	<--->
EA7-T12C	12-inch *C-more* color TFT touch panel (12.1 inch viewable screen), 65K colors, 800 x 600 pixel SVGA screen resolution, 400 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP-65 (when mounted correctly; for indoor use only), user replaceable 50,000 hour half-life backlight. Built-in Ethernet and USB; supports CompactFlash.	<--->
EA7-T15C	15-inch *C-more* color TFT touch panel (15.0 inch viewable screen), 65K colors, 1024 x 768 pixel XGA screen resolution, 400 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP-65 (when mounted correctly; for indoor use only), user replaceable 50,000 hour half-life backlight. Built-in Ethernet and USB; supports CompactFlash.	<--->
EA-PGMSW	*C-more* touch panel Windows-based configuration software. Requires Windows® 2000 Service Pack 4 or XP Home or Professional Service Pack 2. 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 Part Number Cross Reference

EZTouch (as sold by AutomationDirect)			*C-more* *	
EZTouch 6", grayscale STN (0–45 °C)		*C-more 6" Adapter*	*C-more 6", grayscale STN (0–50 °C)*	
EZ-S6M-R	*Requires:*	*EA-6-ADPTR*	**EA7-S6M-R** <--->	
EZ-S6M-RS				
EZ-S6M-F	*Requires:*	*EA-6-ADPTR*	**EA7-S6M** <--->	
EZ-S6M-FS			*(includes Ethernet)*	
EZTouch 6", 128 Color STN (0–45 °C)		*C-more 6" Adapter*	*C-more 6", 256 Color STN or 65,536 Color TFT (0–50 °C)*	
EZ-S6C-K	*Requires:*	*EA-6-ADPTR*	**EA7-S6C-R** <---> *(256 Color STN)*	
EZ-S6C-KS				
EZ-S6C-F	*Requires:*	*EA-6-ADPTR*	**EA7-S6C** <---> *(256 Color STN; includes Ethernet)*	
EZ-S6C-FS				
EZ-S6C-FST			**EA7-T6C** <---> *(65,536 Color TFT; includes Ethernet)*	
EZTouch 8", 128 Color STN (0–40 °C)			*C-more 8", 65,536 Color TFT (0–50 °C)*	
EZ-S8C-F			**EA7-T8C** <---> *(includes Ethernet)*	
EZ-S8C-FS				
EZ-S8C-FST				
EZTouch 10", 128 Color TFT (0–50 °C)			*C-more 10", 65,536 Color TFT (0–50 °C)*	
EZ-T10C-F			**EA7-T10C** <---> *(includes Ethernet)*	
EZ-T10C-FS				
EZ-T10C-FST				
EZ-T10C-FSE				
No 12" EZTouch available			*C-more 12", 65,536 Color TFT (0–50 °C)*	
			EA7-T12C <---> *(includes Ethernet)*	
EZTouch 15", 128 Color TFT (0–45 °C)			*C-more 15", 65,536 Color TFT (0–50 °C)*	
EZ-T15C-FS			**EA7-T15C** <---> *(includes Ethernet)*	
EZ-T15C-FST				
EZ-T15C-FSE				

**Note: All C-more touch panels are NEMA 4/4X, IP-65 (when mounted correctly, for indoor use only), non-FDA.*

C-more Selection Guide & Specifications

Model Specification	6" STN grayscale w/ base features	6" STN color w/ base features	6" STN grayscale w/ full features	6" STN color w/ full features	6" TFT color w/ full features
Part Number	EA7-S6M-R	EA7-S6C-R	EA7-S6M	EA7-S6C	EA7-T6C
Price	<--->	<--->	<--->	<--->	<--->
Display Actual Size and Type	5.7" STN grayscale	5.7" STN color	5.7" STN grayscale	5.7" STN color	5.7" TFT color
Color Scale	15 shades of gray	256 colors	15 shades of gray	256 colors	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)	200 cd/m² (NITS)	150 cd/m² (NITS)	200 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 SDCZ4-512-A10 (Optional)		CompactFlash Memory Card p/n EA-FLASH-128MB, industrial grade, high speed (Optional) or USB Pen Drive p/n SDCZ4-512-A10 (Optional)		
Number of Screens	Up to 999 – limited by available 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-FLASH-128MB, 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	10 W @ 24 VDC	10 W @ 24 VDC	11 W @ 24 VDC	13 W @ 24 VDC
Recommended Input Fuse	3.0 A DC slow blow				
Operating Temperature	0 to 50°C (32 to 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	NEMA 4/4X , IP-65 (When mounted correctly. For indoor use only.)				
Agency Approvals	UL, cUL, CE				
Dimensions	6.140" x 8.047" x 1.697" [156.0 mm x 204.4 mm x 43.1 mm]				
Weight	1.46 lb. [660 g]	1.39 lb. [630 g]	1.50 lb. [680 g]	1.43 lb. [650 g]	1.52 lb. [690 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 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/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 - Part Number EA-xx-BULB, xx = panel size			
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-FLASH-128MB, industrial grade, high speed (Optional) or USB Pen Drive p/n SDCZ4-512-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-FLASH-128MB, 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)			
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	NEMA 4/4X , IP-65 (When mounted correctly. For indoor use only.)			
Agency Approvals	UL, cUL, CE			
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 10" TFT Color Touch Panel - Full Model

The *C-more* 10" TFT color full featured touch panel uses a 10.4" diagonal analog (1024 X 1024) touch screen with a 640 x 480 (VGA) pixel resolution TFT LCD (liquid crystal display) with 65K colors. *C-more* 10" touch panels can be directly mounted into any EZTouch 10" touch panel cutouts.
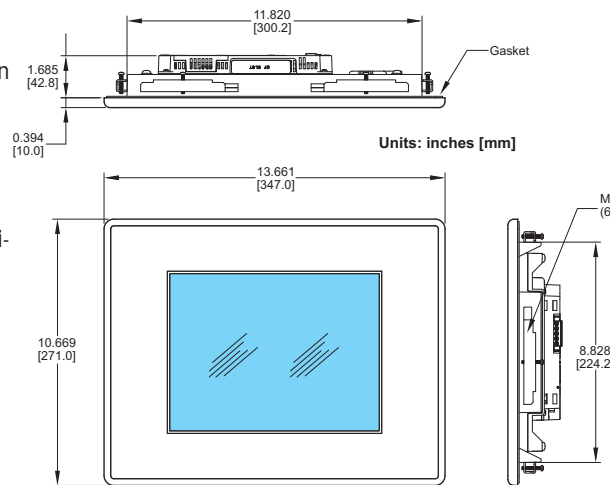
Part No. EA7-T10C

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Features

- 10.4" diagonal color TFT (Thin Film Transfer) LCD display with 65K colors
- 640 x 480 pixel resolution
- 270 NITS display brightness
- 50,000 hour average backlight lifetime, user replaceable
- Analog resistive (1024 X 1024) 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)
- Serial PLC interface (RS-232/422/485)
- 1 GByte 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)
- 10 MByte project memory
- Data logging
- 0 to 50°C (32 to 122°F) operating temperature range
- NEMA 4/4X, IP-65 compliant when mounted correctly, indoor use only
- Slim design save 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

PLC Drivers

Serial	Avail.
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 DH485	Yes
Allen-Bradley DF1 Full & Half Duplex – Tag Based *	Yes
Modbus RTU	Yes
Entivity Modbus RTU	Yes
GE Fanuc SNPX (90/30, 90/70)	Yes
Omron Host Link C200 Adapter, C500	Yes
Omron FINS (CJ1, CS1)	Yes
Mitsubishi FX	Yes

Ethernet	
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 *	Yes
Allen-Bradley EhterNet/IP Client - MicroLogix 1100 & SLC 5/05 via native Ethernet port; MicroLogix 1000, 1100, 1200, 1500 & SLC 5-03, 04, 05 via AB ENI Adapter	Yes

* ControlLogix™ and CompactLogix™
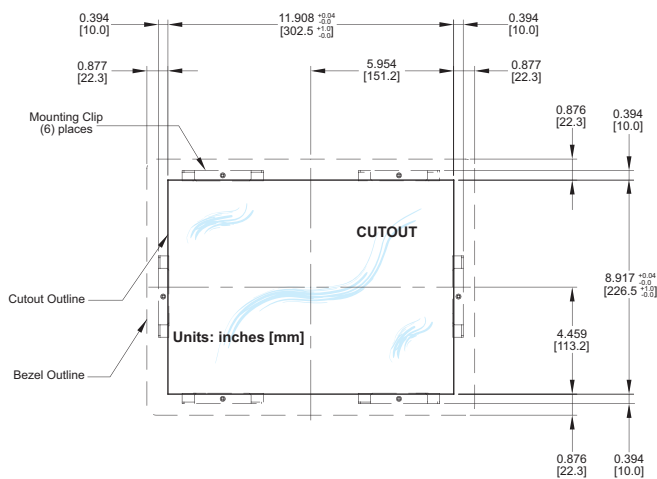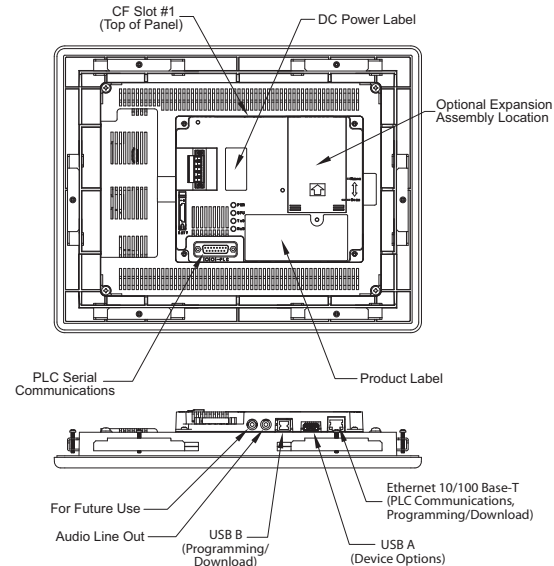
Dimensions

11.820 [300.2]
1.685 [42.8]
0.394 [10.0]
Gasket

Units: inches [mm]

13.661 [347.0]
10.669 [271.0]
8.828 [224.2]
Mounting Clip (6) places

Mounting Cutout

0.394 [10.0]
11.908 +0.04 -0.0 [302.5 +1.0 -0.0]
0.394 [10.0]
0.877 [22.3]
5.954 [151.2]
0.877 [22.3]
0.876 [22.3]
0.394 [10.0]

Mounting Clip (6) places

CUTOUT

8.917 +0.04 -0.0 [226.5 +1.0 -0.0]
4.459 [113.2]

Cutout Outline

Units: inches [mm]

Bezel Outline

0.876 [22.3]
0.394 [10.0]

Ports & Memory Expansion

CF Slot #1 (Top of Panel)
DC Power Label
Optional Expansion Assembly Location

PLC Serial Communications
Product Label

For Future Use
Audio Line Out
USB B (Programming/Download)
USB A (Device Options)
Ethernet 10/100 Base-T (PLC Communications, Programming/Download)

Automation Direct

PLC Overview

DL05/06 PLC

DL105 PLC

DL205 PLC

DL305 PLC

DL405 PLC

Field I/O

Software

C-more HMIs

Other HMI

AC Drives

Motors

Steppers/ Servos

Motor Controls

Proximity Sensors

Photo Sensors

Limit Switches

Encoders

Current Sensors

Pushbuttons/ Lights

Process

Relays/ Timers

Comm.

TB's & Wiring

Power

Circuit Protection

Enclosures

Appendix

Part Index

C-more Communication Ports

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	Vcc	9	RXD+ (422/485)	14	do not use
5	Logic GND	10	RXD− (422/485)	15	do not use

For Future Use

Bottom View

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

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

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	do not use
2	D−
3	D+
4	GND

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-S6C-R.

Note: Use USB Programming Cable, 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

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 to PLCs/PCs:
- *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 EhterNet/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

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, (SDCZ4-512-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.

PLC Port

The PLC 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 *Direct*LOGIC PLCs:
  *Direct*LOGIC K-sequence
  *Direct*NET
  Modbus (Koyo Addressing)

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

Modbus RTU
Entivity Modbus RTU
GE Fanuc SNPX (90/30, 90/70)
Omron:
  Host Link (C200 Adapter, C500)
  FINS (CJ1, CS1)
Mitsubishi Melsec FX

C-more PLC Communication Protocols & Cables

PLC Compatibility Table		
PLC Family	**Model**	**Protocols**
Allen-Bradley	MicroLogix 1000/1100/1200/1500, SLC 5-/01/02/03, PLC5	DH485/AIC/AIC+
	MicroLogix 1000, 1100, 1200 and 1500	DF1 Half Duplex; DF1 Full Duplex
	SLC 5-/03/04/05	DF1 Half Duplex; DF1 Full Duplex
	ControlLogix™, CompactLogix™, FlexLogix™	DF1 Half Duplex; DF1 Full Duplex
	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	EtherNet/IP Client
	MicroLogix 1000, 1100, 1200, 1500 & SLC 5-03/04/05, all via ENI Adapter	EtherNet/IP Client
Modbus TCP/IP	Modbus TCP/IP devices	Modbus TCP/IP
GE Fanuc	90/30 and 90/70	SNPX
Mitsubishi	FX Series	FX Direct
Omron	C200 Adapter, C500	Host Link
	CJ1/CS1 Serial	FINS
Modicon	984 CPU, Quantum 113 CPU, AEG Modicon Micro Series 110 CPU: 311-xx, 411-xx, 512-xx, 612-xx	Modbus RTU
DirectLOGIC	DL05/DL06 — all	K-Sequence
		*Direct*NET
		Modbus (Koyo addressing)
	DL05/DL06 — H0-ECOM/H0-ECOM100	*Direct*LOGIC Ethernet
	DL105 — all	K-Sequence
	DL205 — D2-230	K-Sequence
	DL205 — D2-240	K-Sequence
		*Direct*NET
	DL205 — D2-250/D2-250-1/D2-260	K-Sequence
		*Direct*NET
		Modbus (Koyo addressing)
	DL205 — D2-240/D2-250-1/D2-260 Using DCM	*Direct*NET
		Modbus (Koyo addressing)
	DL205 — H2-ECOM/H2-ECOM100	*Direct*LOGIC Ethernet
	DL305 — D3-330/330P (Requires the use of a Data Communications Unit)	*Direct*NET
	DL305 — D3-340	*Direct*NET
	DL305 — D3-350	K-Sequence
		*Direct*NET
		Modbus (Koyo addressing)
	DL305 — D3-350 DCM	*Direct*NET
		Modbus (Koyo addressing)
	DL405 — D4-430	K-Sequence
		*Direct*NET
	DL405 — D4-440	K-Sequence
		*Direct*NET
	DL405 — D4-450	K-Sequence
		*Direct*NET
		Modbus (Koyo addressing)
	DL405 — All with DCM	*Direct*NET
		Modbus (Koyo addressing)
	DL405 — H4-ECOM/H4-ECOM100	*Direct*LOGIC Ethernet
	H2-WinPLC (Think & Do) Live V5.2 or later and Studio any version	Think & Do Modbus RTU (serial port)
	H2-WinPLC (Think & Do) Live V5.5.1 or later and Studio V7.2.1 or later	Think & Do Modbus TCP/IP (Ethernet port)

Cable Description	Cable Part Number	Price
*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 & 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 Fanuc 90/30 and 90/70 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 (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)
- 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®XP Home / Professional Edition Service Pack 2 or Windows® 2000 with Service Pack 4

USB Connectivity
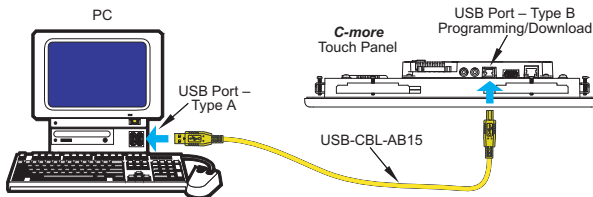
Ethernet Connectivity via a Hub or Switch
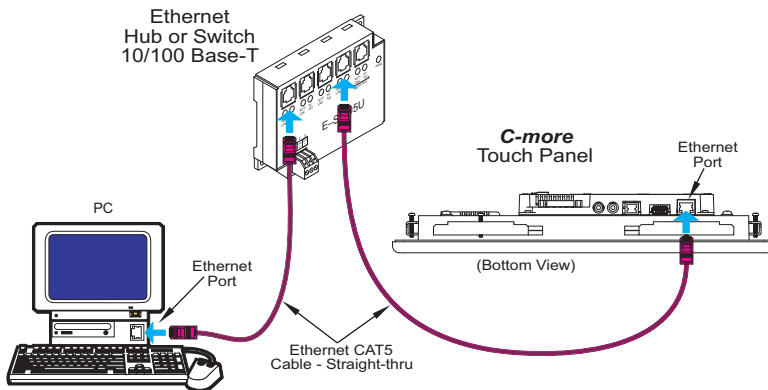
Ethernet Direct Connection
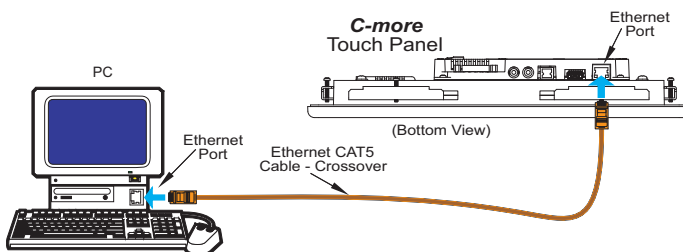
USB Programming Cable

Part No. USB-CBL-AB15

<--->

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

Ethernet Switch (switching hub)

Message in from a device

Message is sent out only from the port connected to destination device

Part No. E-SW05U

<--->

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.
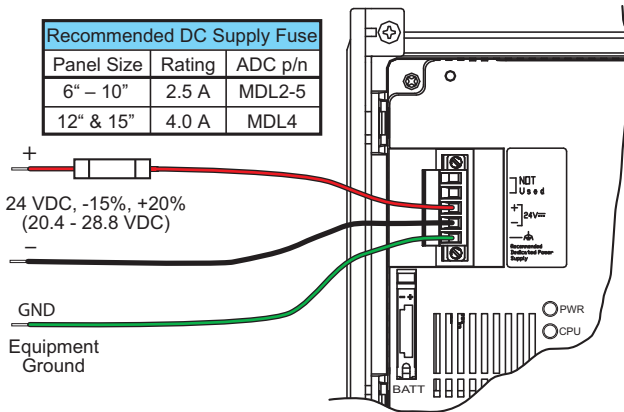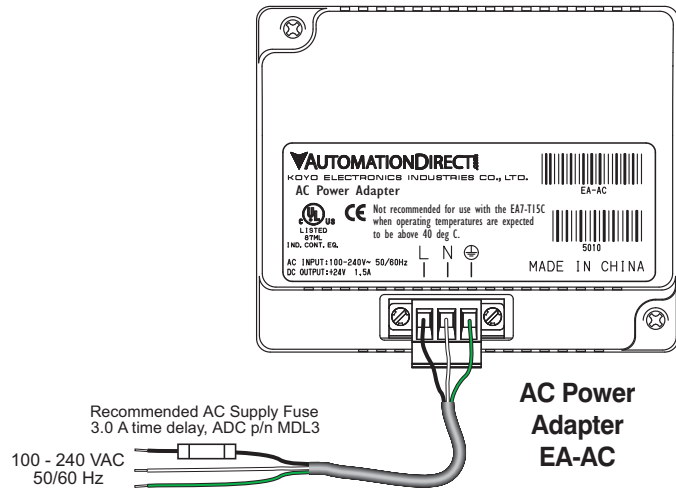- or, install a *C-more* AC Power Adapter (EA-AC) to the rear of the touch panel and connect an AC voltage source of 100-240 VAC, 50/60Hertz, to its AC connector.
- then, turn on the power source and check the LED status indicators on the rear of the *C-more* touch panel for proper operation.
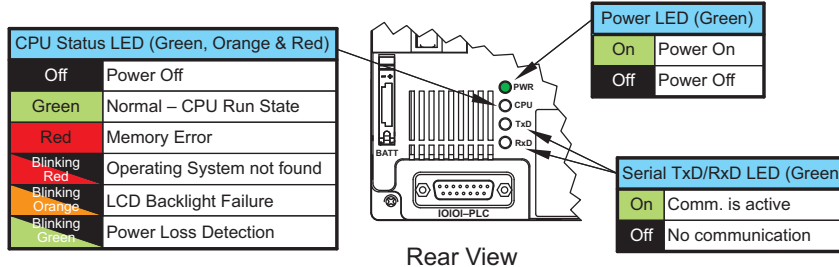
DC Wiring

Recommended DC Supply Fuse		
Panel Size	Rating	ADC p/n
6" – 10"	2.5 A	MDL2-5
12" & 15"	4.0 A	MDL4

+

24 VDC, -15%, +20%
(20.4 - 28.8 VDC)

–

GND

Equipment
Ground

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

AC Wiring

**AC Power
Adapter
EA-AC**

Recommended AC Supply Fuse
3.0 A time delay, ADC p/n MDL3

100 - 240 VAC
50/60 Hz

C-more LED Status Indicators

CPU Status LED (Green, Orange & Red)	
Off	Power Off
Green	Normal – CPU Run State
Red	Memory Error
Blinking Red	Operating System not found
Blinking Orange	LCD Backlight Failure
Blinking Green	Power Loss Detection

Power LED (Green)	
On	Power On
Off	Power Off

Serial TxD/RxD LED (Green)	
On	Comm. is active
Off	No communication

Rear View

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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PLC Overview

DL05/06 PLC

DL105 PLC

DL205 PLC

DL305 PLC

DL405 PLC

Field I/O

Software

C-more HMIs

Other HMI

AC Drives

Motors

Steppers/ Servos

Motor Controls

Proximity Sensors

Photo Sensors

Limit Switches

Encoders

Current Sensors

Pushbuttons/ Lights

Process

Relays/ Timers

Comm.

TB's & Wiring

Power

Circuit Protection

Enclosures

Appendix

Part Index

The C-more Family

Features	Base Model	Full Featured Model
More durable		
- 50,000 hour bulb life	y	y
- Replaceable bulbs on 8″, 10″, 12″, and 15″ models	-	y
Better screens		
- Bright screens (NIT ratings)	y	y
- TFT with 65,536 colors available on all sizes	-	y
- 256 color 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 PLCs.	-	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

All AutomationDirect.com *Direct*LOGIC PLCs and PC-based control:

K-Sequence (DL05/06/105/205/350/405)
*Direct*NET (DL05/06/105/205/350/405)
*Direct*NET (DL330/340)
*Direct*LOGIC Modbus (DL05/06/205/350/405)
ECOM Ethernet (DL05/06/205/405) Ethernet
Entivity Modbus RTU (H2-WinPLC)
Entivity Modbus TCP/IP Ethernet (H2-WinPLC)

Modicon Modbus RTU
Modicon Modbus TCP/IP Ethernet

Allen-Bradley:
AB DF1 Full Duplex (SLC500)
AB DF1 Half Duplex (MicroLogix/SLC500)
AB DF1 Full Duplex (PLC5)
AB DH485 (MicroLogix/SLC500/AIC)
AB DF1 Full Duplex (MicroLogix)
AB DF1 Full Duplex Tag-Based (Control/CompactLogix /FlexLogix)
AB DF1 Half Duplex Tag-Based (Control/CompactLogix /FlexLogix)
AB EtherNet/IP Client (MicroLogix 1100)
AB EtherNet/IP Client (SLC5/05/ENI Adapter)
AB EtherNet/IP Client Tag-Based (Control/CompactLogix /FlexLogix)
AB EtherNet/IP Server:
(Generic IO Messaging) (Control/CompactLogix/FlexLogix)

GE 90/30 and 90/70 SNPX
Omron Host Link Adapter (C200/C500)
Omron FINS Serial (CS/CJ)
Mitsubishi Direct FX

Allen-Bradley Tag Import

Import tags directly from the RSLogix 5000 L5K file. *C-more* Software now supports direct insertion of ControlLogix, CompactLogix and FlexLogix tags from the PLC into *C-more* (no mapping or translations required).