C-more Micro 6-inch, 8-inch and 10-inch EA3 Panel Specifications

EA3-T6CL, and EA3-T10CL Specifications			
Part Number:	<u>EA3-T6CL</u> <u>EA3-T10CL</u>		
Description:	320 x 240 pixel LCD display (Landscape mode), Five user defined keypad function buttons with five user defined LED indicators	800 x 600 pixel LCD display (Landscape mode), Seven user defined keypad function buttons with seven user defined LED indicators	
Display:			
• <i>Type</i>	5.7" TFT Graphical type 10.4" TFT Graphical type with LED Backlight with LED Backlight		
• Resolution	320 (W) x 240 (H) pixel (Landscape Mode) 240 (W) x 320 (H) pixel (Portrait Mode)	800 (W) x 600 (H) pixel (Landscape Mode) 600 (W) x 800 (H) pixel (Portrait Mode)	
• Color	32768	colors	
 Display Brightness (Reference) 	270 nits (typ)	270 nits (typ)	
• Viewing Area Size	4.57" (W) x 3.44" (H) [116.2 mm x 87.4 mm]	8.46" (W) x 6.41" (H) [214.8 mm x 162.7 mm]	
Active Area Size	4.54" (W) x 3.40" (H) [115.2 mm x 86.4 mm]	8.31" (W) x 6.24" (H) [211.2 mm x 158.4 mm]	
Contrast / Brightness	Adjusted from the panel's buil	t-in configuration setup menu	
• Viewing Angle (Landscape Mode)	3, 9 o'clock axis -> 80 degrees 6 o'clock axis -> 80 degrees 6 o'clock axis -> 80 degrees 6 o'clock axis -> 80 degrees 12 o'clock axis -> 80 degrees 12 o'clock axis -> 60 degrees		
Backlight:			
• Type	LED		
• Color	White		
User Replaceable	No		
Touch Screen:			
•Type	Analog resistive, single touch*		
Operation	82 gram force [0	0.8 N] maximum	
• Life	Minimum of 1,000,000 cycles		
Features:			
• User Memory	6MB	30MB	
Number of Screens	Up to 999 – limited by		
• Beep (Internal)	Ye		
Keypad Function Buttons	Five user defined function key buttons with the ability to customize label with an overlay. Minimum of 500,000 cycles	Seven user defined function key buttons with the ability to customize label with an overlay. Minimum of 500,000 cycles	
 Keypad Function Button LEDs 	Each function key button includes a re	ed LED that can be user programmed.	
Programming Port	USB 2.0	Type B	
Serial Communications	RJ12 serial communi 15-pin D-sub serial communicatio		
• Ethernet Communications	10/100 Base-T (Automatic Negotiation) with EA-ECOM Module		
Screen Objects			
• Functional Devices	Pushbutton, Switch, Indicator Button, Indicator Light, Graphic Indicator Light, Numeric Display, Numeric Entry, Inc/Dec Value, Bar Graph, Bitmap Button, Static Bitmap, Dynamic Bitmap, Recipe Button, Static Text, Lookup Text, Dynamic Text, Screen Change Pushbutton, Screen Selector, Adjust Contrast, Function, Key Configuration Object, Real Time Graphics Line Graph, Analog Meter.		
Static Shapes	Lines, Rectangles,	Circles and Frames	
Displayable Fonts	Fixed fonts: 4x6, 6x6, 6x6B, 6x8, 8x16, 8x32, 8x64, 16x16	6, 16x32, 16x64, 32x16, 32x32, 32x64, and Windows fonts	
*Note: The Touchscreen is designed to respon	d to a single touch. If it is touched at multiple points at the s	ame time, an unexpected object may be activated.	
C-more Micro EA3-T6CL and EA3-T10CL panel specifications continued on next page.			

www.automationdirect.com Operator Interface tCMM-37

C-more Micro 6-inch, 8-inch and 10-inch EA3 Panel Specifications

EA	3-T6CL and EA3-T10CL Specification	ns (cont'd)
Part Number:	EA3-T6CL	EA3-T10CL
Electrical:		
• Input Power	10.2 - 26.4 VDC; Class 2 or SELV (Safety Extra-Low Voltage) or Limited Energy Circuit power supply 5VDC USB B-Port to PC	10.2 - 26.4 VDC; Class 2 or SELV (Safety Extra-Low Voltage) or Limited Energy Circuit power supply
• Power Consumption	7.5 W (External power supply) 2.0 W (USB)	10W
Maximum Inrush Current	13A for 800µs	10A for 1ms
Acceptable External Power Drop Duration	Maximu	um 1ms
Environmental:		
Operating Temperature	0 to 50 °C (32 to 122 °F); Maximum surrou IEC 60068-2-14 (Tes	nding air temperature rating: 50 °C (122 °F) t Nb, Thermal Shock)
Storage Temperature	-20 to +60 °C (-4 to +140 °F) IEC 60068-2-1 (Test Ab, Cold) IEC 60068-2-2 (Test Bb, Dry Heat) IEC 60068-2-14 (Test Na, Thermal Shock)	
• Humidity	5–95% RH (non-condensing)	
Environmental Air	For use in Pollution Degree 2 environment, no corrosive gases permitted	
Housing Material	ABS F	Plastic
Gasket Material	Silicone	Rubber
Overlay Sheet Material	PET	
Vibration	IIEC60068-2-6 (Test Fc)	
• Shock	IEC60068-2-27 (Test Ea)	
• Altitude	Up to 2000m (6562ft)	
• Noise Immunity	(EN61131-2)	
• Enclosure	NEMA 250 type 4/4X indoor use only UL50 type 4X indoor use only IP-65 indoor use only (not tested by UL) (When mounted correctly)	
• Agency Approvals	CE (EN61131-2), UL508, CUL Canadian C22.2 No. 142-M95, UL E157382, RoHS (2011/65/EU) To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page	
Physical:		
• Enclosure Mounting Thickness Range	0.04" – 0.2"	[1 – 5 mm]
Mounting Clip Screw Torque Range	21 – 28 oz·in [0.15 – 0.20 Nm]	63 – 77 oz·in [0.45 – 0.55 Nm]
• Weight	21.1 oz. (600g)	57.1 oz. (1620g)

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C-more Micro EA3 Series PLC Drivers

	PLC Drivers	
Serial - port1 or port2	Serial - port2 only	Ethernet*
AutomationDirect Productivity Series	Allen-Bradley DF1 Half Duplex	AutomationDirect Productivity Series Ethernet
AutomationDirect Do-more / BRX**	Allen-Bradley DF1 Full Duplex	AutomationDirect Do-more / BRX Ethernet
AutomationDirect CLICK	Allen-Bradley PLC5 DF1	AutomationDirect CLICK Ethernet
AutomationDirect K-sequence	Allen-Bradley DH485	AutomationDirect ECOM Ethernet
AutomationDirect DirectNET	GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)	Modbus TCP/IP
AutomationDirect Modbus (master only)	Mitsubishi FX	Allen-Bradley EtherNet/IP(Client) SLC5/05
Modicon Modbus RTU (master only)	Mitsubishi Q & QnA	Allen-Bradley EtherNet/IP(Client) ENI Adapter
Entivity Modbus RTU (master only)	Omron Host Link (C200 Adapter, C500)	Allen-Bradley EtherNet/IP(Client) MicroLogix 1100/1400
	Omron FINS Serial (CJ1, CS1)	Allen-Bradley EtherNet/IP (Client) Control/CompactLogix (SLC Mapping only)
	Siemens PPI (S7-200 CPU)	
	AutomationDirect SOLO Temperature Controller	
	AutomationDirect GS Drives	

^{*} Ethernet port is built in to EA3-S3ML and EA3-T4CL. EA3-T6CL and EA3-T10CL require the optional EA-ECOM module for Ethernet. Ethernet communications require external power supply.

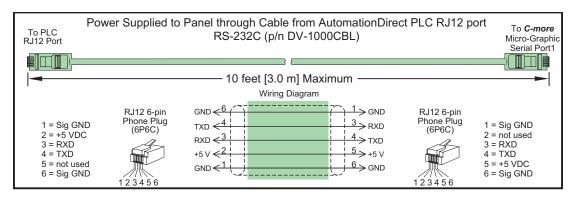
** BX-P-SER2-RJ12 is required

www.automationdirect.com **Operator Interface** tCMM-39

C-more Micro EA3 Series Power Connection Wiring

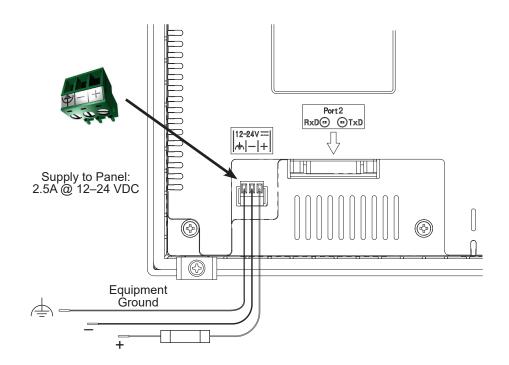
EA3-S3ML-RN and EA3-S3ML-R

- <u>EA3-S3ML-RN</u> and <u>EA3-S3ML-R</u> *C-more* Micro panels are powered during programming from the PC through the USB to RS-232 Programming Cable Assembly, <u>EA-MG-PGM-CBL</u>.
- During operation, <u>EA3-S3ML-RN</u> and <u>EA3-S3ML-R</u> *C-more* Micro panels can be powered from most AutomationDirect PLC's RJ12 serial communications ports by using the <u>DV-1000CBL</u> communications cable.



EA3-S3ML, EA3-T4CL, EA3-T6CL and EA3-T10CL

<u>EA3-S3ML</u>, <u>EA3-T4CL</u>, <u>EA3-T6CL</u> and <u>EA3-T10CL</u> **C-more** Micro EA3 series panels are powered by a Class 2, 2.5 Amp @ 12-24 VDC power source in normal operation.





WARNING: USING A DIFFERENTIAL POWER SUPPLY AND CONNECTION THE USB TO A PC CAN DAMAGE BOTH THE PANEL AND THE PC.

C-more Micro EA3 Series PLC Connections

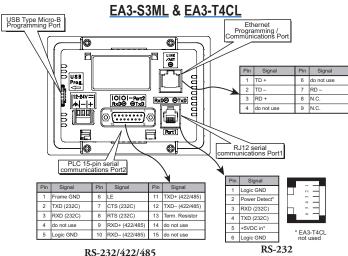
Cabling requirements

The table below decribes the EA3 series cabling options available for most AutomationDirect PLCs.

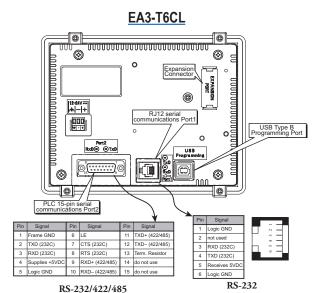
EA3 Series Cabling Options			
Part Number	Port1 RJ12 (RS-232)	Port2 15-pin (RS-232) See PLC List A	Port2 15-pin (RS-232) See PLC List B
EA3-S3ML		EA-2CBL	EA-2CBL-1
EA3-S3ML-R	DV-1000CBL*	N/A	N/A
EA3-S3ML-RN		IN/A	IN/A
EA3-T4CL	DV-1000CBL,		
EA3-T6CL	D0-CBL D0-CBL	EA-2CBL	EA-2CBL-1
EA3-T10CL			
PLC List A Productivity Series, Do-more / BRX**, CLICK, DL05, DL105, DL205, D3-350, D4-450 phone jack			
PLC List B	D2-250, D250-1, D2-260, DL06 VGA connector		
*Cable can provide +5VDC for panel power **BX-P-SER2-RJ12 is required			

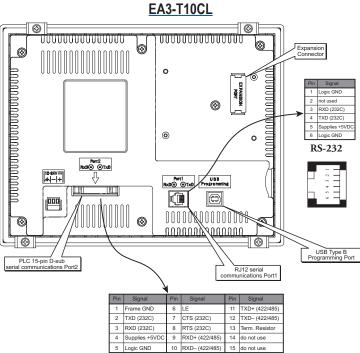
Drivers for your Controller

- AutomationDirect Productivity Series serial / Ethernet*
- AutomationDirect Do-more / BRX serial / Ethernet*
- AutomationDirect CLICK (Modbus(master only))- serial / Ethernet*
- DirectLOGIC K-sequence, DirectLOGIC DirectNET, DirectLOGIC Modbus (master only) (Koyo Addressing)
 DirectLOGIC ECOM Ethernet*
- Modbus RTU (master only) Modbus TCP/IP*
- Allen-Bradley DF1 Full Duplex, Allen-Bradley DF1 Half Duplex, Allen-Bradley PLC5 DF1, AB DH485, Allen-Bradley EtherNet/ IP (Client) SLC5/05, NET-ENI, MicroLogix 1100/1400*, Control/ CompactLogix (SLC mapping only)
- Omron Host Link (C200 Adapter, C500)
 Omron FINS serial (CJ1, CS1)
- GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)
- Mitsubishi Melsec FX
- Siemens PPI
- Entivity Modbus RTU (master only)
- AutomatiionDirect GS Drives
- AutomationDirect SOLO Temperature Controllers
- Mitsubishi Q/QnA
- * Ethernet port is built in to EA3-S3ML and EA3-T4CL. EA3-T6CL and EA3-T10CL require the optional EA-ECOM module for Ethernet.

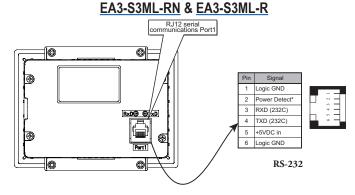


Communication Ports





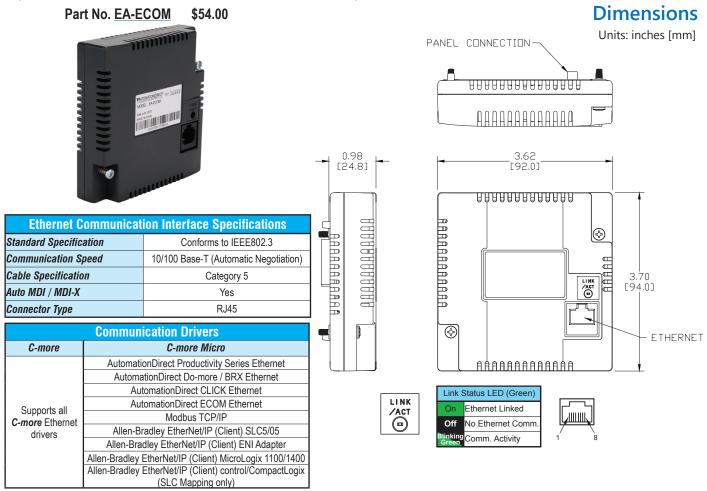
RS-232/422/485



Communication Expansion Module

EA-ECOM Ethernet Communication Module

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



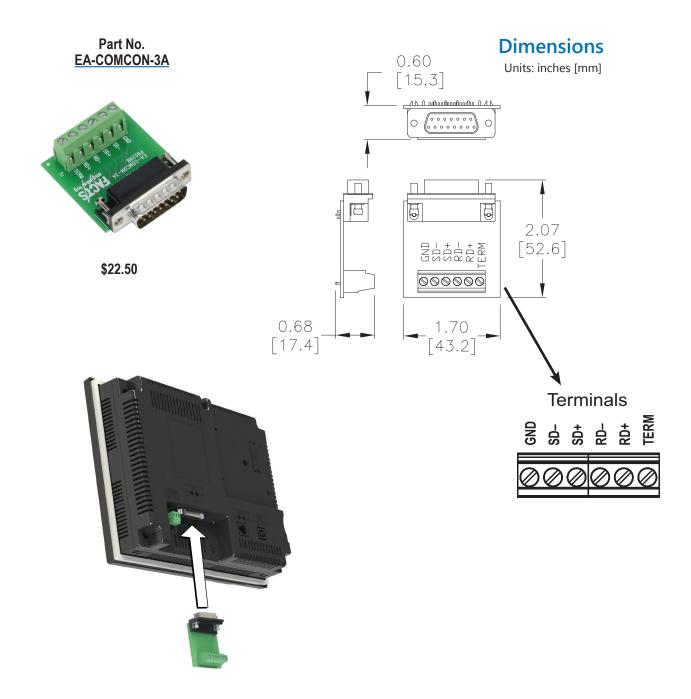
EA-ECOM Specifications		
Part Number	<u>EA-ECOM</u>	
Operating Temperature	0 to 50 °C (32 to 122 °F) Maximum surrounding air temperature rating: 50 °C	
Storage Temperature	-20 to +60 °C (-4 to +140 °F)	
Humidity	5–95% RH (non-condensing)	
Environmental Air	For use in pollution degree 2 environment	
Vibration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

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C-more Micro EA3 Panel Accessories

D-SUB 15-pin to Terminal Block Adapter

The <u>EA-COMCON-3A</u> adapter plugs into the 15-pin serial port on the rear of *C-more* Micro EA3 Series 8-inch and 10-inch panels to allow wire terminal connections for an RS-422/RS-485/DH485 PLC communication cable.



C-more Micro EA3 Panel Accessories

Clear Screen Overlay

Optional clear screen overlay used to protect **C-more** Micro displays from minor scratches and wear. <u>EA-MG-COV-CL</u> contains 5 clear screen overlays. All other packages contain 3 clear screen overlays.



Part No. <u>EA-MG-COV-CL</u> \$38.50

Part No. <u>EA-4-COV3</u> \$36.50

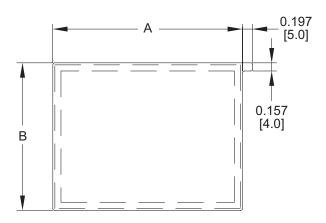
Part No. <u>EA-6-COV2</u> \$40.50

Part No. <u>EA-8-COV2</u> \$43.50

Part No. <u>EA-10-COV2</u> \$49.00

Dimensions

Units: inches [mm]



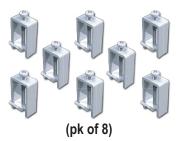
Part Number	Dimensions - inch [mm]	
rait Nullibei	A	В
EA-MG-COV-CL	3.13 [79.4]	1.75 [44.4]
EA-4-COV3	4.15 [105.5]	2.52 [64.0]
EA-6-COV2	4.91 [124.8]	3.80 [96.4]
EA-8-COV2	7.32 [185.8]	5.44 [138.2]
EA-10-COV2	8.91 [226.2]	6.61 [168.0]

C-more Micro 8-inch and 10-inch EA3 Panel Replacement Parts

Replacement parts at a glance:

Part Number	Description	Price
EA3-BRK	C-more Micro panel mounting brackets, replacement. Package of 8. For use with C-more Micro EA3 series touch panels.	\$29.00
EA-MG-DC-CON	C-more Micro DC 3-terminal power connector, replacement. Package of 5. For use with all C-more Micro 4in, 6in, 8in and 10in panels, and power adapters EA-MG-P1 and EA-MG-SP1.	\$15.50
EA3-8-GSK	C-more Micro panel mounting gasket, replacement. For use with C-more Micro EA3-T8CL 8in touch panel.	\$18.50
EA3-10-GSK	C-more Micro panel mounting gasket, replacement. For use with C-more Micro EA3-T10CL 10in touch panel.	\$20.50
EA3-MG-8-FKL	C-more Micro function key label insert, replacement. Package of 5. For use with C-more Micro EA3-T8CL HMI. (3) blank labels, (1) portrait F1-F7 label and (1) landscape F1-F7 label included.	\$16.50
EA3-MG-10-FKL	C-more Micro function key label insert, replacement. Package of 5. For use with C-more Micro EA3-T10CL HMI. (3) blank labels, (1) portrait F1-F7 label and (1) landscape F1-F7 label included.	\$20.50

Panel Mounting Clips Part No. <u>EA3-BRK</u>



DC Power Connector Part No. EA-MG-DC-CON



Panel Gasket Part No. EA3-8-GSK



Panel Gasket Part No. <u>EA3-10-GSK</u>



Function Keys Label Inserts Part No. EA3-MG-8-FKL



(pk of 5; 3 blank, 1 F1-F7 for landscape, 1 F1-F7 for portrait)

Function Keys Label Inserts Part No. EA3-MG-8-FKL



(pk of 5; 3 blank, 1 F1-F7 for landscape, 1 F1-F7 for portrait)

C-more Micro Communication Cables and

Cable Kits

Cable	Cable	
Description	Part Number	Price
Cables for direct connect to panel's serial Port1	rait Nullibel	
(Panel powered from PLC's serial port.)		
Networking cable, RS-232 (RJ12 6P6C) to RS-232 (RJ12 6P6C), shielded, 12ft cable length. For use with CLICK, DL05, D2-240, D4-450 and Productivity3000 PLCs.	D0-CBL	\$38.00
DirectLOGIC DL06 connector, 15-pin D-sub HD15 male to RJ12 female. For use with DL06 CPUs and DL205 D2-250, D2-250-1, D2-260 and D2-262 CPUs.	<u>FA-15HD</u>	\$14.50
DirectLOGIC universal cable kit, for use with all DirectLOGIC PLCs with RS-232 ports.	FA-CABKIT	\$52.00
Communication cable, 6-pin RJ12 to 6-pin RJ11, 2m/6.6ft cable length. For use with any OP400 series OptiMate unit and a D3-340 CPU.	OP-3CBL-1	\$6.00
Cables used with serial Port2		
AutomationDirect communication cable, 15-pin male D-sub to 6-pin RJ12, shielded, 9.8ft/3m cable length. For use with <i>C-more</i> or <i>C-more</i> Micro panel and AutomationDirect PLCs with RJ12 ports.	EA-2CBL	\$23.00
AutomationDirect communication cable, 15-pin male D-sub to 15-pin D-sub HD15 male, shielded, 3m/9.8ft cable length. For use with <i>C-more</i> or <i>C-more</i> Micro panel and a DL06, D2-250(-1), D2-260 or D2-262 (bottom port) CPU.	EA-2CBL-1	\$23.50
AutomationDirect communication cable, 15-pin male D-sub to 4-pin RJ11, shielded, 3m/9.8ft cable length. For use with <i>C-more</i> or <i>C-more</i> Micro panel and a D3-340 CPU top or bottom port.	EA-3CBL	\$23.00
AutomationDirect communication cable, 15-pin male D-sub to 15-pin male D-sub, shielded, 3m/9.8ft cable length. For use with <i>C-more</i> or <i>C-more</i> Micro panel and a DL405 (top port) CPU.	EA-4CBL-1	\$23.00
AutomationDirect communication cable, 15-pin male D-sub to 25-pin male D-sub, shielded, 3m/9.8ft cable length. For use with <i>C-more</i> or <i>C-more</i> Micro panel and a D2-DCM, D3-232-DCU, D3-350 (bottom port) or DL405 (bottom port) CPU.	EA-4CBL-2	\$24.00
AutomationDirect communication cable, 15-pin male D-sub to 8-pin male mini DIN, shielded, 3m/9.8ft cable length. For use with <i>C-more</i> or <i>C-more</i> Micro panel and an Allen-Bradley Micrologix CPU.	EA-MLOGIX-CBL	\$35.00
AutomationDirect communication cable, 15-pin male D-sub to 9-pin female D-sub, shielded, 3m/9.8ft cable length. For use with <i>C-more</i> or <i>C-more</i> Micro panel and an Allen-Bradley SLC 5/03, 5/04 or 5/05 CPU with DF-1 port.	EA-SLC-232-CBL	\$23.00
AutomationDirect communication cable, 15-pin male D-sub to 25-pin male D-sub, 3m/9.8ft cable length. For use with <i>C-more</i> or <i>C-more</i> Micro panel and an Allen-Bradley PLC-5 CPU with a DF1 port.	EA-PLC5-232-CBL	\$23.00
AutomationDirect communication cable, 15-pin male D-sub to 6-pin RJ45, shielded, 3m/9.8ft cable length. For use with <i>C-more</i> or <i>C-more</i> Micro panel and an Allen-Bradley SLC 5/01, 5/02 or 5/03 CPU with a DH485 port cable.	EA-DH485-CBL	\$22.50
AutomationDirect communication cable, 15-pin male D-sub to 15-pin male D-sub, shielded, 3m/9.8ft cable length. For use with <i>C-more</i> or <i>C-more</i> Micro and GE Fanuc Series 90/30 or 90/70 serial port.	EA-90-30-CBL	\$23.00
AutomationDirect communication cable, 15-pin male D-sub to 25-pin male D-sub, 3m/9.8ft cable length. For use with <i>C-more</i> or <i>C-more</i> Micro panel and a Mitsubishi FX Series CPU.	EA-MITSU-CBL	\$23.00
AutomationDirect communication cable, 15-pin male D-sub to 8-pin male mini DIN, shielded, 3m/9.8ft cable length. For use with C-more or C-more Micro panel and a Mitsubishi FX Series CPU.	EA-MITSU-CBL-1	\$23.00
AutomationDirect communication cable, 15-pin male D-sub to 25-pin male D-sub, shielded, 3m/9.8ft cable length. For use with <i>C-more</i> or <i>C-more</i> Micro panel and an Omron C200 or C500 CPU.	EA-OMRON-CBL	\$23.00
EA3-T10CL cannot be powered by a PLC and cannot communicate with a PL Programming Port.	.C through the USB	













EA-PLC5-232-CBL

EA-SLC-232-CBL



EA-DH485-CBL

(EA3 series only).

Note: Adding the optional EA-ECOM module allows communication via an Ethernet connection







EA-90-30-CBL

EA-MITSU-CBL-1 EA-MITSU-CBL

EA-OMRON-CBL

C-more Micro Programming Software

FREE software!

C-more Micro Programming Software can be downloaded at no charge or a CD version may be purchased by ordering <u>EA-MG-PGMSW</u>. The software requires a USB port or Ethernet connection* on your PC to connect to the **C-more** Micro panel. Software Help Files are included in the download. This software programs all the **C-more** Micro panels (does not program the **C-more** 6-inch through 15-inch touch panels).





Note: This software is used to program *C-more* Micro panels only.



Note: The Ethernet port is built in to <u>EA3-S3ML</u> and <u>EA3-T4CL</u>. <u>EA3-T6CL</u> and <u>EA3-T10CL</u> require the optional <u>EA-ECOM</u> module for Ethernet.

Part Number	Panel Software / Firmware Version Required	
EA3-S3ML-RN	4.30 or later	
EA3-S3ML-R	4.50 or later	
EA3-S3ML	4.00 lates	
EA3-T4CL	4.20 or later	
EA3-T6CL	3.6 or later	
EA3-T10CL	3.5 or later	

C-more Micro Programming Software is a spin-off of its powerful sibling **C-more**

Touch Panel. It offers very high end features designed to reduce your configuration time. Simply drag and drop the objects from the object list (right side of screen) onto the screen construction area. Then configure your PLC tags and click on the objects you wish to use. Use the built-in simulator to review your work on your PC before ever downloading your project! The time saving benefits of the *C-more* Micro configuration software could easily pay for the panel. Check out www.CmoreMicro.com to download a free version

Thumbnail project preview pane

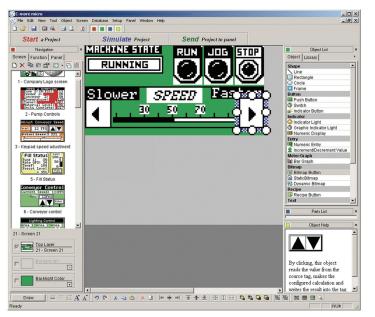
Helps keep track of multi-screen projects.

Built-in project simulator

- Runs your project on your PC
- Test all of your screens before downloading
- Time savings pays for the panel
- Simulate function keys and keypad bezel

Built-in user object/ screen libraries

Save time by re-using your custom objects and screens.



Scrolling object selection window

Lets you find the object you want fast. Just drag and drop it on the screen.

PC requirements

Following are the minimum system requirements for running **C-more** Micro Programming Software, <u>EA-MG-PGMSW</u>, on a PC:

- Windows® Operating System (See automationdirect.com for specific operating system requirements.)
- 150 MB free hard-disk space
- CD-ROM or DVD drive for installing software from the CD, or internet access to download free programming software
- USB port to use with the correct Programming Cable Assembly for project transfer from the programming software to the panel

Scrolling help window

Gives you helpful information on each object