







# C-more Micro 3-inch EA1 Series Overview






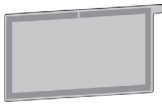
<b>C-more Micro 3-inch EA1 Series</b>			
<b>Part Number</b>		<b>Description</b>	<b>Price</b>
<b>EA1-S3ML</b>	<b>Touch Screen</b> 	<b>C-more</b> Micro EA1 series touch screen HMI, 3in monochrome STN LCD, 128 x 64, supports (1) serial port. Selectable backlight colors: red, green, amber, lime, or yellow	\$205.00
<b>EA1-S3ML-N</b>	<b>Non-Touch</b> 	<b>C-more</b> Micro EA1 series non-touch screen HMI, 3in monochrome STN LCD, 128 x 64, supports (1) serial port. Selectable backlight colors: red, green, amber, lime, or yellow	\$161.00
<b>EA1-S3MLW</b>	<b>Touch Screen</b> 	<b>C-more</b> Micro EA1 series touch screen HMI, 3in monochrome STN LCD, 128 x 64, supports (1) serial port. Selectable backlight colors: white, pink1, pink 2, pink3 or red	\$205.00
<b>EA1-S3MLW-N</b>	<b>Non-Touch</b> 	<b>C-more</b> Micro EA1 series non-touch screen HMI, 3in monochrome STN LCD, 128 x 64, supports (1) serial port. Selectable backlight colors: white, pink1, pink 2, pink3 or red	\$161.00



**NOTE:** Software and Firmware Version 1.5 or later is required with models EA1-S3MLW and EA1-S3MLW-N. Available for free download at [www.automationdirect.com](http://www.automationdirect.com).

# C-more Micro 3-inch EA1 Series

<b>C-more Micro 3-inch EA1 Series Panels Programming Software &amp; Programming Cable</b>			
<b>Part Number</b>		<b>Description</b>	<b>Price</b>
<b>EA-MG-PGMSW</b>		<b>C-more</b> Micro Windows-based programming software, CD. For use with <b>C-more</b> Micro panels. Requires USB port connection from PC to <b>C-more</b> Micro panel.	\$25.00
<b>EA-MG-PGM-CBL</b>		USB/RS-232 programming cable assembly, USB Type A male to RJ12 male, 6ft cable length. For use with <b>C-more</b> Micro panels, CLICK CPUs, Do-more H2 series CPUs, and DirectLogic CPUs.	\$43.00

<b>C-more Micro 3-inch EA1 Series Panel Accessories</b>			
<b>Part Number</b>		<b>Description</b>	<b>Price</b>
<b>EA-MG-BZ1</b>		Keypad bezel, 8 predefined function keys. For use with EA1 series 3in <b>C-more</b> Micro HMIs.	\$64.00
<b>EA-MG-BZ2</b>		Keypad bezel, 20 predefined function keys. For use with EA1 series 3in <b>C-more</b> Micro HMIs.	\$87.00
<b>EA-MG-P1</b>		AC/DC power adapter, 24 VDC. For use with EA1 series 3in <b>C-more</b> Micro HMIs.	\$31.50
<b>EA-MG-SP1</b>		AC/DC power adapter, 24 VDC. For use with EA1 series 3in <b>C-more</b> Micro HMIs. Integral 15-pin D-Sub RS-232/422/485 port included.	\$54.00
<b>EA-COMCON-3A</b>		DSUB port adapter, 15-pin male to 6-pole RS-422/485 terminal block, straight cable entry. For use with <b>C-more</b> Micro EA1 series 3in with EA1-MG-SP1, <b>C-more</b> Micro EA3 series 8in and 10in HMIs, <b>C-more</b> EA9 8in, 10in, 12in and 15in HMIs.	\$19.00
<b>EA-MG-COV-CL</b>		Screen protector, clear, 3in. Package of 5. For use with <b>C-more</b> Micro 3in HMIs.	\$35.50



**For a list of supported protocols and cabling options refer to the 3-inch C-more Micro Protocols and cabling chart starting on page tCMM-14.**

# C-more Micro 3-inch EA1 Specifications

Specification	Model	3-inch STN Micro Panel Touch Screen	3-inch STN Micro Panel Non-Touch Screen
<b>Part Number</b>		EA1-S3ML, EA1-S3MLW	EA1-S3ML-N, EA1-S3MLW-N
<b>Description</b>		128 x 64 pixel LCD display, five user defined keypad function buttons, and five user defined LED's	
<b>Display</b>			
• <b>Type</b>		3.1-inch STN monochrome LCD, graphical characters	
• <b>Resolution</b>		128 (W) x 64 (H) pixel	
• <b>Color</b>		2 colors (normal / inverse)	
• <b>Viewing Area Size</b>		2.789" (W) x 1.385" (H) [70.8 mm x 35.2 mm]	
• <b>Active Area Size</b>		2.670" (W) x 1.259" (H) [67.8 mm x 32.0 mm]	
• <b>Contrast</b>		Adjusted from the panel's built-in configuration setup menu	
• <b>Viewing Angle</b>		3, 9 o'clock axis → 45 degrees 6 o'clock axis → 45 degrees 12 o'clock axis → 30 degrees	
<b>Backlight</b>			
• <b>Type</b>		LED	
• <b>Color</b>		5 user defined colors: <b>EA1-S3ML, EA1-S3ML-N</b> - Red, Green, Amber, Lime, and Yellow <b>EA1-S3MLW, EA1-S3MLW-N</b> - White, Pink1, Pink2, Pink3 and Red	
• <b>User Replaceable</b>		No	
<b>Touch Screen</b>			
• <b>Type</b>		Analog touch panel, single touch*	N/A
• <b>Operation</b>		51 gram force [0.5 N] maximum	N/A
• <b>Life</b>		Minimum of 1,000,000 cycles	N/A
<b>Features</b>			
• <b>User Memory</b>		768 KB	
• <b>Number of Screens</b>		Up to 999 – limited by project memory usage	
• <b>Beep (Internal)</b>		Yes	
• <b>Keypad Function Buttons</b>		Five user defined function key buttons with the ability to customize the label. Minimum of 500,000 cycles	
• <b>Keypad Function Button LEDs</b>		Each function key button includes a red LED that can be user programmed.	
• <b>Serial Communications</b>		Built-in RJ12 serial communications port (RS-232). Optional serial communications port (RS-232, RS-485/422) when using the optional EA-MG-SP1 Serial Port with DC Power Adapter.	
• <b>Expansion Connection</b>		Yes – used with optional Keypad Bezels, EA-MG-BZ1 & BZ2, and EA-MG-P1 DC Power Adapter, and EA-MG-SP1 Serial Port with DC Power Adapter.	
<b>Screen Objects</b>			
• <b>Functional Devices</b>		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, Scroll Text, Screen Change Pushbutton, Screen Selector, Adjust Contrast, Function, Key Configuration Object, Realtime Graph, Line Graph, Analog Meter	
• <b>Static Shapes</b>		Lines, Rectangles, Circles and Frames	
• <b>Displayable Fonts</b>		Fixed fonts: 4x6, 6x6, 6x6B, 6x8, 8x16, 8x32, 8x64, 16x16, 16x32, 16x64, 32x16, 32x32, 32x64, and Windows fonts	
<b>*Note: The Touchscreen is designed to respond to a single touch. If it is touched at multiple points at the same time, an unexpected object may be activated.</b>			
<b>C-more 3-inch Micro panel specifications continued on next page.</b>			



NOTE: Photo includes EA-MG-BZ2

# C-more Micro 3-inch EA1 Specifications

Specification	Model	3-inch STN Micro Panel Touch Screen	3-inch STN Micro Panel Non-Touch Screen
<b>Part Number</b>		EA1-S3ML, EA1-S3MLW	EA1-S3ML-N, EA1-S3MLW-N
<b>Electrical</b>			
• <b>Input Voltage Range</b>		5.0 VDC (4.75 – 5.25 VDC)	
• <b>Input Power</b>		Supplied through the panel's RJ12 serial communications port connection when used with any AutomationDirect PLC having an RJ12 communication port. Can also be supplied from an external Class 2, 12-24 VDC power source when using the optional EA-MG-P1 DC Power Adapter, or the optional EA-MG-SP1 Serial Port with DC Power Adapter	
• <b>Power Consumption</b>		1.05W (220mA @ 4.75 VDC)	
• <b>Recommended Fuse</b>		Type AGC fast acting glass fuse, 250 mA, 250 VAC, ADC p/n AGC-25 No fuse required when directly connected to a PLC or PC with recommended cable.	
• <b>Maximum Inrush Current</b>		1 A for 500 µs	
• <b>Acceptable External Power Drop Duration</b>		Maximum 1ms	
<b>Environmental*</b>			
• <b>Operating Temperature</b>		0 to 50 °C (32 to 122 °F) Maximum surrounding air temperature rating: 50 °C	
• <b>Storage Temperature</b>		-20 to +60 °C (-4 to +140 °F)	
• <b>Humidity</b>		5–95% RH (non-condensing)	
• <b>Environmental Air</b>		For use in Pollution Degree 2 Environment	
• <b>Vibration</b>		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	
• <b>Shock</b>		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)	
• <b>Noise Immunity</b>		NEMA ICS3-304 ( EN61131-2 ) RFI, (145MHz, 440Mhz 10W @ 10cm) Impulse 1000V @ 1µs pulse EN61000-4-2 (ESD), EN61000-4-3 (RFI), EN61000-4-4 (FTB), EN61000-4-5 (Surge) N61000-4-6 (Conducted), EN61000-4-8 (Power frequency magnetic field immunity)	
• <b>Enclosure</b>		For use on a flat surface of Type 1, 4X enclosure (Indoor use only)	
• <b>Agency Approvals</b>		CE (EN61131-2), UL508, CUL Canadian C22.2 No. 142-M95, UL File E157382, CSA File 234884	
<b>Physical</b>			
• <b>Dimensions</b>		4.488" (W) x 3.228" (H) x 1.593" (D) [114.0 mm x 82.0 mm x 40.5 mm]	
• <b>Enclosure Mounting Thickness Range</b>		0.04" – 0.2" [1 – 5 mm]	
• <b>Mounting Clip Screw Torque Range</b>		21 – 28 oz-in [0.15 – 0.2 N-m]	
• <b>Depth from bezel rear with options Module</b>		2.295" [58.3 mm]	
• <b>Weight</b>		5.82 oz. (165 g)	



**NOTE:** The environmental specifications for the panels shown above are also applicable for the C-more 3" Micro accessories shown later in this section of the catalog.

Supported Protocols / Drivers	
Serial - Panel port1 or port2*	Serial - Panel port2 only *
AutomationDirect Productivity Series	Allen-Bradley DF1 Full Duplex
AutomationDirect CLICK	Allen-Bradley DF1 Half Duplex
AutomationDirect Do-more / BRX**	Allen-Bradley PLC5 DF1
AutomationDirect K-sequence	Allen-Bradley DH485
AutomationDirect DirectNET	GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)
AutomationDirect Modbus	Mitsubishi FX
Modicon Modbus RTU	Mitsubishi Q & QnA
Entivity Modbus RTU	Omron Host Link (C200 Adapter, C500)
	Omron FINS Serial (CJ1, CS1)
	Siemens PPI (S7-200 CPU)
	AutomationDirect GS Drives
	AutomationDirect SOLO Temperature Controller



For a list of supported protocols and cabling options refer to the 3-inch C-more Micro Protocols and cabling chart starting on page tCMM-14.

Notes: \* Serial port 2 requires the use of EA-MG-SP1 adapter for C-more Micro 3-inch EA1 series  
\*\* BX-P-SER2-RJ12 is required

# 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 EA-MG-PGMSW. 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).



Copyright © AutomationDirect.com. All rights reserved.



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



**Note: The Ethernet port is built in to EA3-S3ML and EA3-T4CL. EA3-T6CL, EA3-T8CL and EA3-T10CL require the optional EA-ECOM module for Ethernet.**

Part Number	Panel Software / Firmware Version Required
EA1-S3ML	1.0 or later
EA1-S3ML-N	
EA1-S3MLW	
EA1-S3MLW-N	1.5 or later
EA1-T4CL	
EA1-T6CL	3.0 or later
EA3-S3ML-RN	4.30 or later
EA3-S3ML-R	
EA3-S3ML	4.20 or later
EA3-T4CL	
EA3-T6CL	3.6 or later
EA3-T8CL	3.5 or later
EA3-T10CL	

**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](http://www.CmoreMicro.com) to download a free version.

## Built-in project simulator

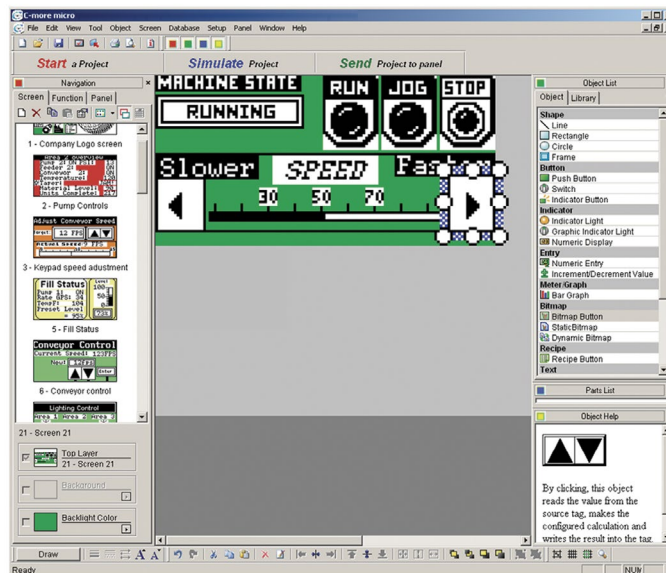
- Runs your project on your PC
- Test all of your screens before downloading
- Time savings pays for the panel
- Simulate function keys and keypad bezel

## Built-in user object/ screen libraries

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

## Thumbnail project preview pane

Helps keep track of multi-screen projects.



## Scrolling object selection window

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

## Scrolling help window

Gives you helpful information on each object

## PC requirements

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

- Operating System - Windows® XP Professional Edition Service Pack 2, Windows® 7 (32 or 64 bit), Windows 8 (32 or 64 bit) or Windows 10
- 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