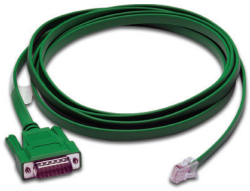
C-more Communication Protocols & Cables

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, 1400 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, 1400 & SLC5/05, all via native Ethernet port		
	MicroLogix 1000, 1100, 1200, 1400,1500 & SLC 5-03/04/05, all via ENI Adapter		
	Micro 800 series		Modbus RTU
			Modbus TCP
	Micro 800 series - Tag Based		DF1 Full Duplex
			EtherNet/IP Client
Modbus RTU	Modbus RTU devices		Modbus RTU
Modbus TCP/IP	Modbus TCP/IP devices		Modbus TCP/IP
GE	90/30, 90/70, Micro 90, VersaMax Micro		SNPX
	90/30, Rx3i		SRTP Ethernet
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, S7-1500; Ethernet		Ethernet ISO over TCP
Productivity Series	all		AutomationDirect P3000 Serial
			AutomationDirect P3000 Ethernet
Do-more	all		Do-more Serial
			Do-more Ethernet
CLICK	all		AutomationDirect Modbus (CLICK)
***Direct*LOGIC**	DL05/DL06	all	K-Sequence
			*Direct*NET
			Modbus (Koyo addressing)
		H0-ECOM/H0-ECOM100	*Direct*LOGIC Ethernet
	DL105	all	K-Sequence
	DL205	D2-230	K-Sequence
		D2-240	K-Sequence
			*Direct*NET
		D2-250/D2-250-1/D2-260/ D2-262	K-Sequence
			*Direct*NET
			Modbus (Koyo addressing)
		D2-240/D2-250-1/D2-260 using D2-DCM	*Direct*NET
			Modbus (Koyo addressing)
		H2-ECOM/H2-ECOM100	*Direct*LOGIC Ethernet
	DL305	D3-330/330P (Requires the use of a Data Communications Unit)	*Direct*NET
		D3-340	*Direct*NET
		D3-350	K-Sequence
			*Direct*NET
			Modbus (Koyo addressing)
		D3-350 using D3-DCM	*Direct*NET
			Modbus (Koyo addressing)
	DL405	D4-430	K-Sequence
			*Direct*NET
		D4-440	K-Sequence
			*Direct*NET
		D4-450/D4-454	K-Sequence
			*Direct*NET
			Modbus (Koyo addressing)
		All with D4-DCM	*Direct*NET
			Modbus (Koyo addressing)
		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
Communication cable, 15-pin male D-sub to 6-pin RJ12, shielded, 9.8ft/3m cable length. For use with *C-more* or *C-more* Micro panel and AutomationDirect PLCs with RJ12 ports.	***EA-2CBL***	
Communication cable, 15-pin male D-sub to 15-pin D-sub HD15 male, shielded, 3m/9.8ft cable length. For use with *C-more* or *C-more* Micro panel and a DL06, D2-250(-1), D2-260 or D2-262 (bottom port) CPU.	***EA-2CBL-1***	
Communication cable, 15-pin male D-sub to 4-pin RJ11, shielded, 3m/9.8ft cable length. For use with *C-more* or *C-more* Micro panel and a D3-340 CPU top or bottom port.	***EA-3CBL***	
Communication cable, 15-pin male D-sub to 15-pin male D-sub, shielded, 3m/9.8ft cable length. For use with *C-more* or *C-more* Micro panel and a DL405 (top port) CPU.	***EA-4CBL-1***	
Communication cable, 15-pin male D-sub to 25-pin male D-sub, shielded, 3m/9.8ft cable length. For use with *C-more* or *C-more* Micro panel and a D2-DCM, D3-232-DCU, D3-350 (bottom port) or DL405 (bottom port) CPU.	***EA-4CBL-2***	
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 an Allen-Bradley Micrologix CPU.	***EA-MLOGIX-CBL***	
Communication cable, 15-pin male D-sub to 9-pin female D-sub, shielded, 3m/9.8ft cable length. For use with *C-more* or *C-more* Micro panel and an Allen-Bradley SLC 5/03, 5/04 or 5/05 CPU with DF-1 port.	***EA-SLC-232-CBL***	
Communication cable, 15-pin male D-sub to 25-pin male D-sub, 3m/9.8ft cable length. For use with *C-more* or *C-more* Micro panel and an Allen-Bradley PLC-5 CPU with a DF1 port.	***EA-PLC5-232-CBL***	
Communication cable, 15-pin male D-sub to 6-pin RJ45, shielded, 3m/9.8ft cable length. For use with *C-more* or *C-more* Micro panel and an Allen-Bradley SLC 5/01, 5/02 or 5/03 CPU with a DH485 port cable.	***EA-DH485-CBL***	
Communication cable, 15-pin male D-sub to 15-pin male D-sub, shielded, 3m/9.8ft cable length. For use with *C-more* or *C-more* Micro and GE Fanuc Series 90/30 or 90/70 serial port.	***EA-90-30-CBL***	
Communication cable, 15-pin male D-sub to 25-pin male D-sub, 3m/9.8ft cable length. For use with *C-more* or *C-more* Micro panel and a Mitsubishi FX Series CPU.	***EA-MITSU-CBL***	
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***	
Communication cable, 15-pin male D-sub to 25-pin male D-sub, shielded, 3m/9.8ft cable length. For use with *C-more* or *C-more* Micro panel and an Omron C200 or C500 CPU.	***EA-OMRON-CBL***	

Example Cables:

EA-2CBL



EA-2CBL-1

C-more Computer Programming Connections

Using the *C-more* Programming Software EA9-PGMSW for project development, the HMI can be connected to a PC (personal computer) in one of several ways:

- Connect a USB Programming Cable such as (USB-CBL-AB15) from a USB port type A on the PC to the USB type B programming port on the C-more HMI. The USB connection is for direct connection only and does not support USB hubs.
- Connect the ***C-more*** HMI to a PC with a Cat5 Ethernet cable via an Ethernet switch. Multiple ***C-more*** HMIs can be programmed in this configuration.

Following are the minimum system requirements for running *C-more* Programming Software, p/n EA9-PGMSW, on a PC:

- USB or Ethernet connection to HMI (cables sold separately).
- Windows operating system - see automationdirect.com for specific operating system requirements.

NOTE: Regarding Ethernet access to a C-more HMI.

If you intend to take advantage of the methods of remote access to the HMI, including the web server, PC remote access, FTP, iPhone or iPad app, you need to consider the security exposure in order to minimize the risks to your process and your C-more HMI.

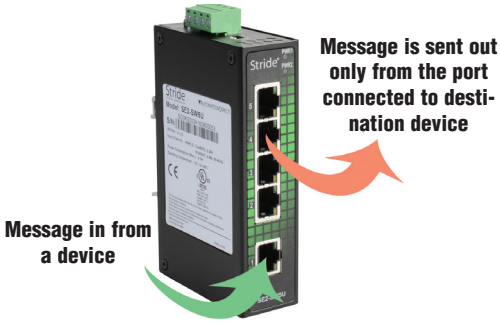
Security measures may include password protection, changing the ports exposed on your network, including a VPN in your network, and other methods. Security should always be carefully evaluated for each installation.

USB Programming Cable

Part No. USB-CBL-ABxx

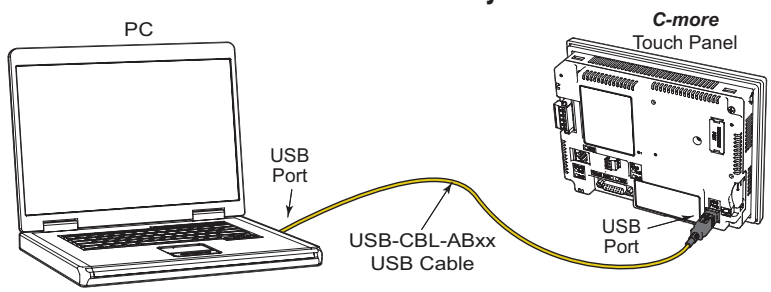
USB Programming Cables		
Part Number	***Length***	***Price***
USB-CBL-AB3	3 feet	
USB-CBL-AB6	6 feet	
USB-CBL-AB10	10 feet	
USB-CBL-AB15	15 feet	

Stride® Ethernet Switch

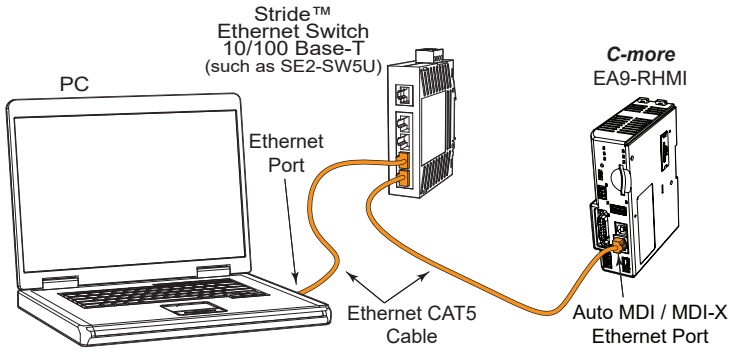


Part No. SE2-SW5U

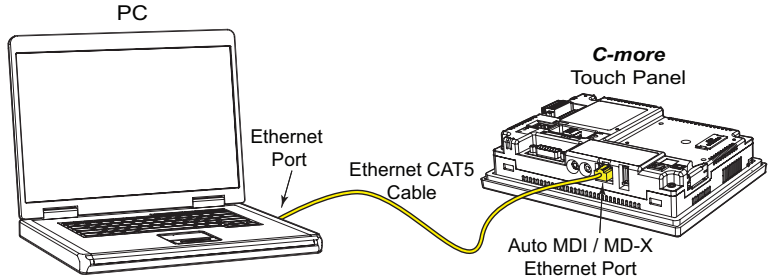
USB Connectivity



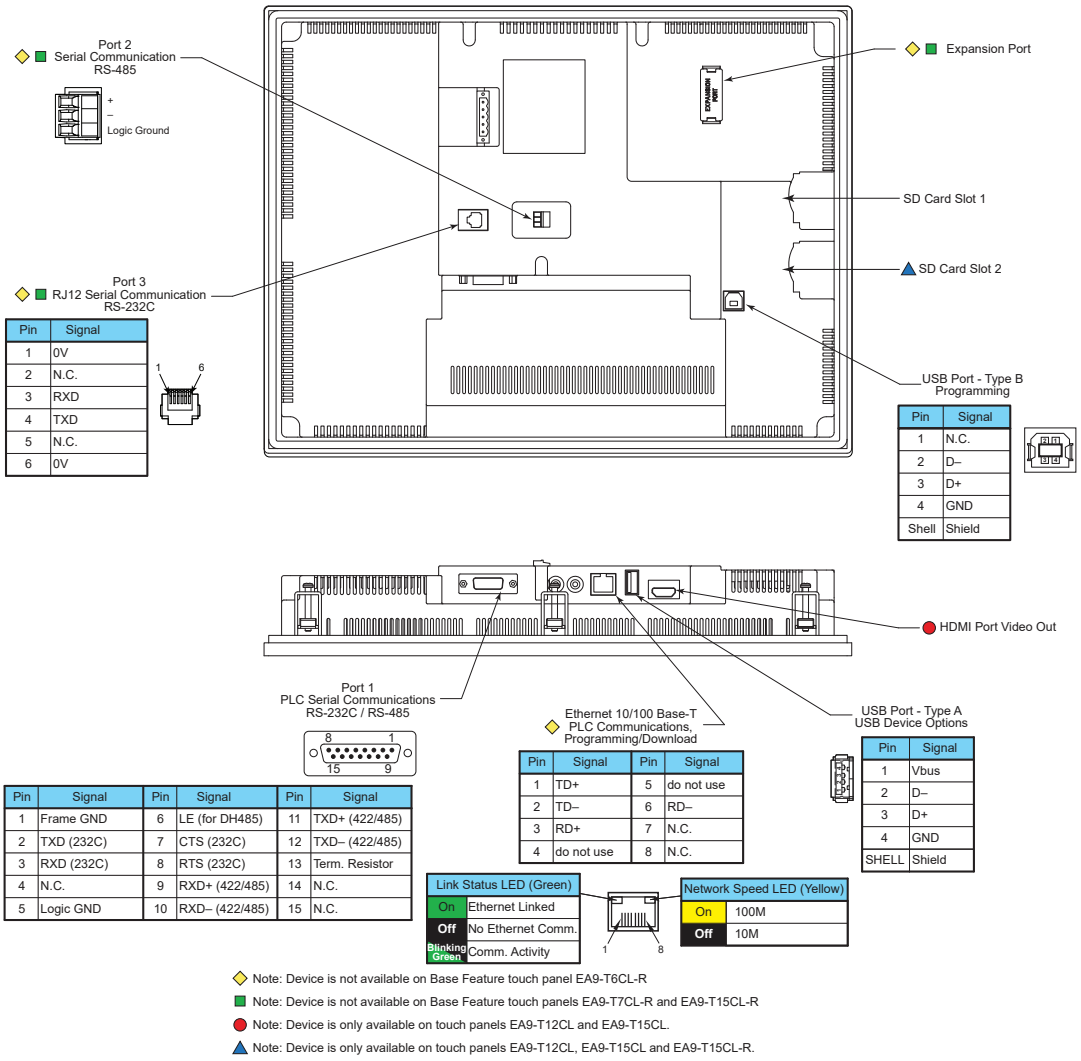
Ethernet Connectivity via a Hub or Switch



Ethernet Direct Connection



C-more Communication Ports



Pin	Signal
1	0V
2	N.C.
3	RXD
4	TXD
5	N.C.
6	0V

Pin	Signal
1	N.C.
2	D–
3	D+
4	GND
Shell	Shield

Pin	Signal	Pin	Signal	Pin	Signal
1	Frame GND	6	LE (for DH485)	11	TXD+ (422/485)
2	TXD (232C)	7	CTS (232C)	12	TXD– (422/485)
3	RXD (232C)	8	RTS (232C)	13	Term. Resistor
4	N.C.	9	RXD+ (422/485)	14	N.C.
5	Logic GND	10	RXD– (422/485)	15	N.C.

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

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

◇ Note: Device is not available on Base Feature touch panel EA9-T6CL-R

■ Note: Device is not available on Base Feature touch panels EA9-T7CL-R and EA9-T15CL-R

● Note: Device is only available on touch panels EA9-T12CL and EA9-T15CL.

▲ Note: Device is only available on touch panels EA9-T12CL, EA9-T15CL and EA9-T15CL-R.

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 yellow LEDs.

- The yellow LED indicates network speed – off for a 10 Mbps connection and illuminated for a 100 Mbps connection.
- The green LED indicates link status and illuminates when a link is established.

Note: EA6-T6CL-R does not include an Ethernet port, and does not have these capabilities.

Expansion Port

The expansion port supports the EA-ECOM module to provide a second Ethernet Port for all full featured models.

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 on all models and can be used to connect various USB HID (Human Input Device) devices to the panel, such as the following:

- USB flash drives (USB-FLASH)
- USB keyboards
- USB barcode scanners
- USB card scanners

C-more can log data to the USB flash 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

Port 1 - Connect to your serial controller network via Port 1. Port 1 is a 15-pin port that supports RS-232 or RS-422/485.

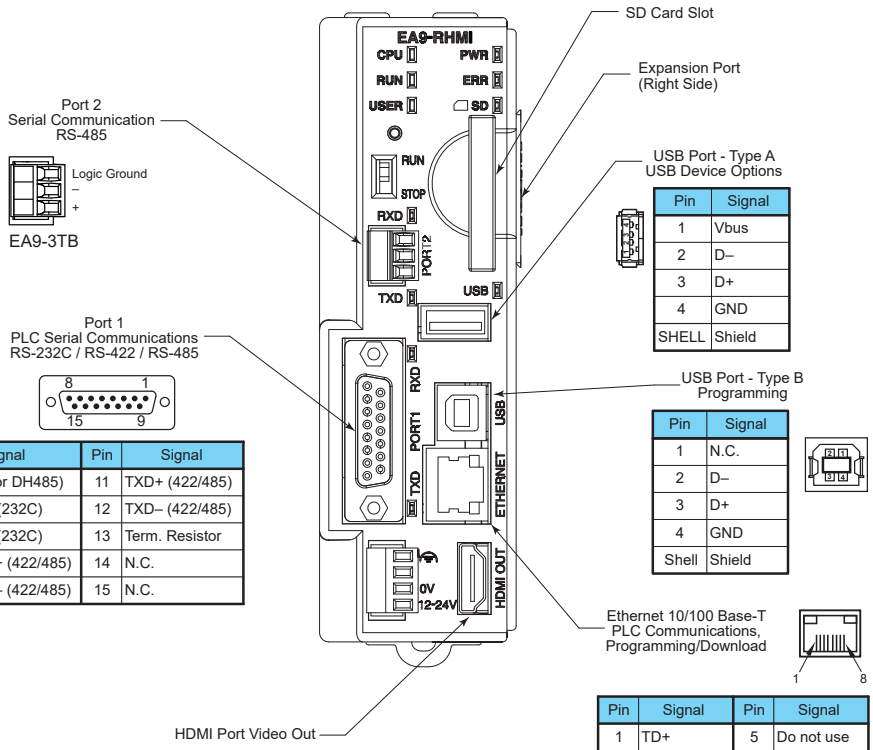
Port 2 - Connect your RS-485 network via Port 2. Port 2 is provided with a 3-wire removable terminal block.

Port 3 - Connect to your RS-232C device via Port 3. Port 3 is an RJ12 connection.

HDMI Video Out

EA9-T12CL and EA9-T15CL include an HDMI Type A port to provide video output to a projector or remote monitor.

C-more EA9-RHMI Communication Ports



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

Pin	Signal
1	N.C.
2	D–
3	D+
4	GND
Shell	Shield

Pin	Signal	Pin	Signal	Pin	Signal
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Pin	Signal	Pin	Signal
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3	RD+	7	N.C.
4	do not use	8	N.C.

Ethernet Port

The Ethernet port has several uses:

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The Ethernet port has an RJ-45 8-wire modular connector with green and yellow LEDs.

- The yellow LED indicates network speed – off for a 10 Mbps connection and illuminated for a 100 Mbps connection.
- The green LED indicates link status and illuminates when a link is established.

Expansion Port

The expansion port supports the EA-ECOM module to provide a second Ethernet Port.

USB Port B

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USB Port A*

The Universal Serial Bus (USB) Port A can be used to connect various USB HID (Human Input Device) devices to the panel, such as the following:

- USB touchscreen (ELO™ Single Touch Resistive/SAW, EETI eGalax Single Touch Resistive and pCap touchscreens)
- USB mouse
- USB keyboard
- USB flash drives (USB-FLASH)
- USB barcode scanner
- USB card scanner

C-more can log data to the USB flash drive as well as load projects to the panel from the pen drive. You can also back up project files and panel firmware.

* 500mA maximum current available. Powered USB hub may be required for some devices

Serial Port

Port 1 - Connect to your serial controller network via Port 1. Port 1 is a 15-pin port that supports RS-232 or RS-422/485.

Port 2 - Connect your RS-485 network via Port 2. Port 2 is provided with a 3-wire removable terminal block.

HDMI Out Port

EA9-RHMI includes an HDMI Type A port to provide video / audio output to a projector or remote monitor. Supported resolutions are...

- 640 x 480 (VGA) 60Hz
- 720 x 480 (SD) 60Hz
- 1024 x 768 (XGA) 60Hz
- 1280 x 720 (HD) 60Hz