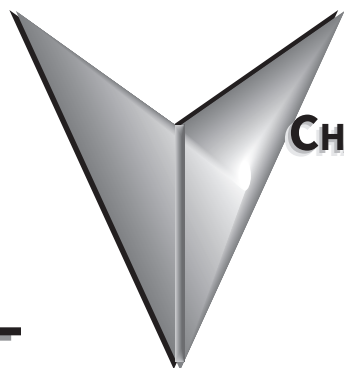


# GETTING STARTED

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## CHAPTER

# 1

### CONTENTS OF THIS CHAPTER

<i>Manual Overview</i> . . . . .	1-2
<i>The Purpose of this Manual.</i> . . . . .	1-2
<i>Who Should Read This Manual.</i> . . . . .	1-2
<i>Supplemental Publications</i> . . . . .	1-2
<i>Technical Support</i> . . . . .	1-2
<i>Conventions Used</i> . . . . .	1-3
<i>Key Topics for Each Chapter</i> . . . . .	1-3
<i>Product Overview</i> . . . . .	1-4
<i>Quick Start Steps</i> . . . . .	1-5
<i>Step 1 - Unpack and Inspect</i> . . . . .	1-5
<i>Optional Accessories</i> . . . . .	1-5
<i>Step 2 - Install Optional Hardware Assessories</i> . . . . .	1-6
<i>Step 3 - Become Familiar with Available Communication Ports</i> . . . . .	1-7
<i>Step 4 - Install the Programming Software and Develop a Project</i> . . . . .	1-9
<i>Step 5 - Connect Touch Panel to Computer.</i> . . . . .	1-10
<i>Step 6 - Provide Power to the Touch Panel</i> . . . . .	1-11
<i>Step 7 - Access the Touch Panel Setup Screens.</i> . . . . .	1-13
<i>Step 8 - Choose Touch Panel to Device Cables</i> . . . . .	1-14
<i>Step 9 - Connect Touch Panel to PLC</i> . . . . .	1-17

## MANUAL OVERVIEW

### ***The Purpose of this Manual***

Thank you for purchasing our **C-more®** Touch Panel family of products. This manual describes AutomationDirect.com's **C-more** Touch Panels, their specifications, included components, available accessories and provides you with important information for installation, connectivity and setup. The manual shows you how install, wire and use the products. It also helps you understand how to interface the panels to other devices in a control system.

This user manual contains important information for personnel who will install the touch panels and accessories, and for the personnel who will be programming the panel. If you understand control systems that make use of operating interfaces such as the **C-more** touch panels, our user manuals will provide all the information you need to get, and keep your system up and running.

### ***Who Should Read This Manual***

This manual contains important information for those who will install, maintain, and/or operate the **C-more®** Touch Panel family of products.

### ***Supplemental Publications***

If you are familiar with industrial control type devices, you may be able to get up and running with just the aid of the Quick Start Guide that is available for download at [www.automationdirect.com](http://www.automationdirect.com). You can also refer to the On-line help that is available in the **C-more** programming software for more information about programming the panel.

### ***Technical Support***

- *By Telephone:* 770-844-4200  
(Mon.-Fri., 9:00 a.m.-6:00 p.m. E.T.)
- *On the Web:* [www.automationdirect.com](http://www.automationdirect.com)

Our technical support group is glad to work with you in answering your questions. If you cannot find the solution to your particular application, or, if for any reason you need additional technical assistance, please call technical support at 770-844-4200. We are available weekdays from 9:00 a.m. to 6:00 p.m. Eastern Time.

We also encourage you to visit our web site where you can find technical and non-technical information about our products and our company. Visit us at [www.automationdirect.com](http://www.automationdirect.com).

**CONVENTIONS USED**




*NOTE: When you see the “notepad” icon in the left-hand margin, the paragraph to its immediate right will be a special note.*



*WARNING: WHEN YOU SEE THE “EXCLAMATION MARK” ICON IN THE LEFT-HAND MARGIN, THE PARAGRAPH TO ITS IMMEDIATE RIGHT WILL BE A WARNING. THIS INFORMATION COULD PREVENT INJURY, LOSS OF PROPERTY, OR EVEN DEATH (IN EXTREME CASES).*

**Key Topics for Each Chapter**

The beginning of each chapter will list the key topics that can be found in that chapter.

<b>GETTING STARTED</b>		<b>CHAPTER 1</b>
<hr/>		
<u>CONTENTS OF THIS CHAPTER</u>		
Manual Overview	.....	1-2
The Purpose of this Manual	.....	1-2
Who Should Read This Manual	.....	1-2
Supplemental Publications	.....	1-2
Technical Support	.....	1-2
Conventions Used	.....	1-3
Key Topics for Each Chapter	.....	1-3
Product Overview	.....	1-4
Quick Start Steps	.....	1-5
Step 1 - Unpack and Inspect	.....	1-5
Optional Accessories	.....	1-5
Step 2 - Install Optional Hardware Accessories	.....	1-6
Step 3 - Become Familiar with Available Communication Ports	.....	1-7
Step 4 - Install the Programming Software and Develop a Project	.....	1-9
Step 5 - Connect Touch Panel to Computer	.....	1-10
Step 6 - Provide Power to the Touch Panel	.....	1-11
Step 7 - Access the Touch Panel Setup Screens	.....	1-13
Step 8 - Choose Touch Panel to Device Cables	.....	1-14
Step 9 - Connect Touch Panel to PLC	.....	1-17

## PRODUCT OVERVIEW

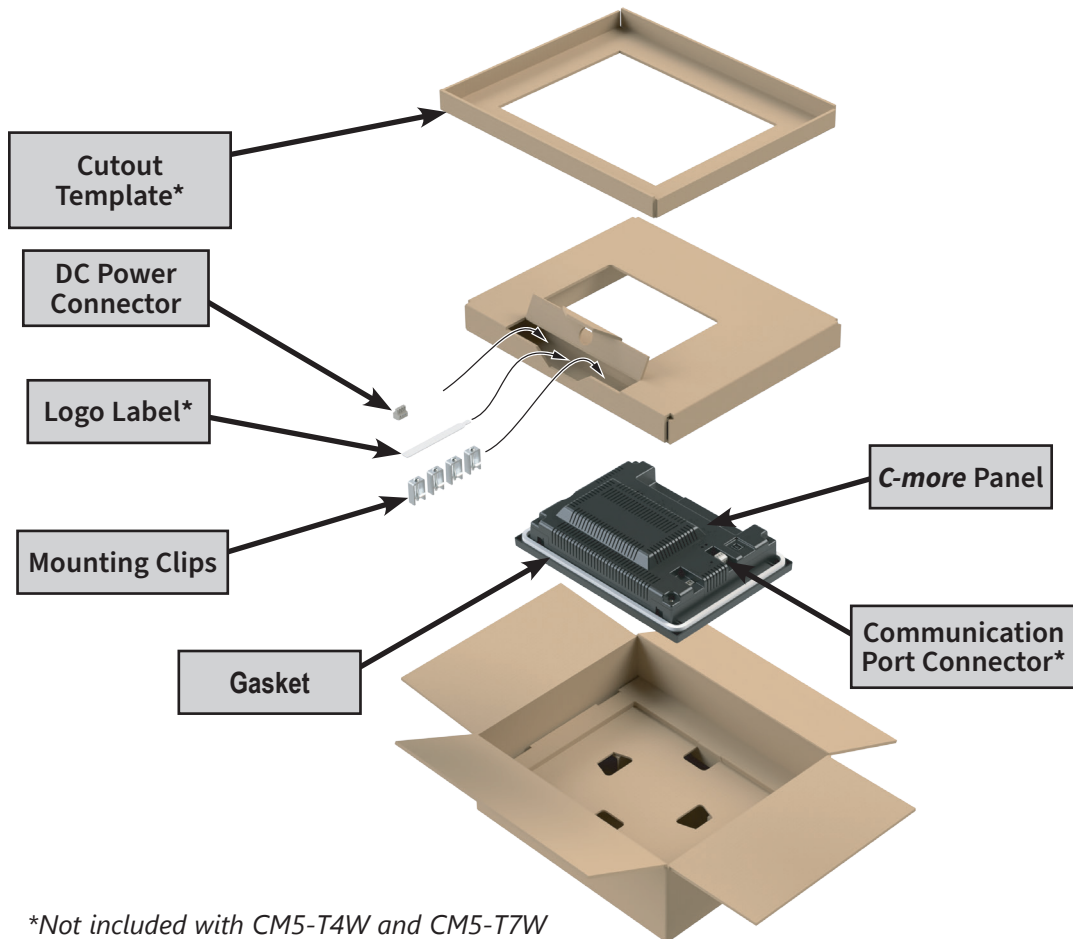
Some of the features designed into the product to provide excellent hardware and software are listed below.

- *Analog touch screen. 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.*
- *Plenty of memory and methods to get data in/out of the panel*
- *Overlapping active devices on the touch screen*
- *16.7-million colors for enhanced graphics*
- *Screen resolutions up to 1920 X 1080 pixel*
- *Built-in FTP client/server, E-mail client, Web server and MQTT Client*
- *User configurable LED on the front of the panel*
- *Built-in project simulation; test on PC while developing*
- *(2) Ethernet 10/100Base-T communications*
- *15 pin serial port with RS-232, RS422/485*
- *3-wire terminal block RS-485 port and RJ12 RS-232 port*
- *(3) USB-A ports for logging, backups, bar code reader, keyboard and other HID devices*
- *Programming via USB or Ethernet*
- *Animation of bitmaps and objects*
- *Thousands of built-in symbols and Windows 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. setup 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.*
- *Network time server / client*
- *JPEG and JPG format graphic object support for reduced project size*
- *Trend Data logging*
- *Internet Remote Access*
- *Customizable label on the front of the panel*

**QUICK START STEPS**

**Step 1 - Unpack and Inspect**

- A) Unpack the **C-more** Touch Panel from its shipping carton. Included in the carton are the following:
- **C-more** Touch Panel
  - DC power connector
  - 3-pin communication port connector
  - mounting clips
  - gasket
  - logo label\*
  - cutout template\*



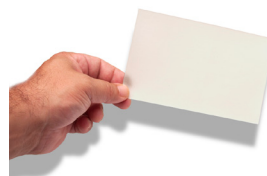
\*Not included with CM5-T4W and CM5-T7W

- B) Unpack any accessories that have been ordered such as a programming cable, communications cable, etc.
- C) Inspect all equipment for completeness. If anything is missing or damaged, immediately call the AutomationDirect® returns department @ 1-800-633-0405.

**Optional Accessories**



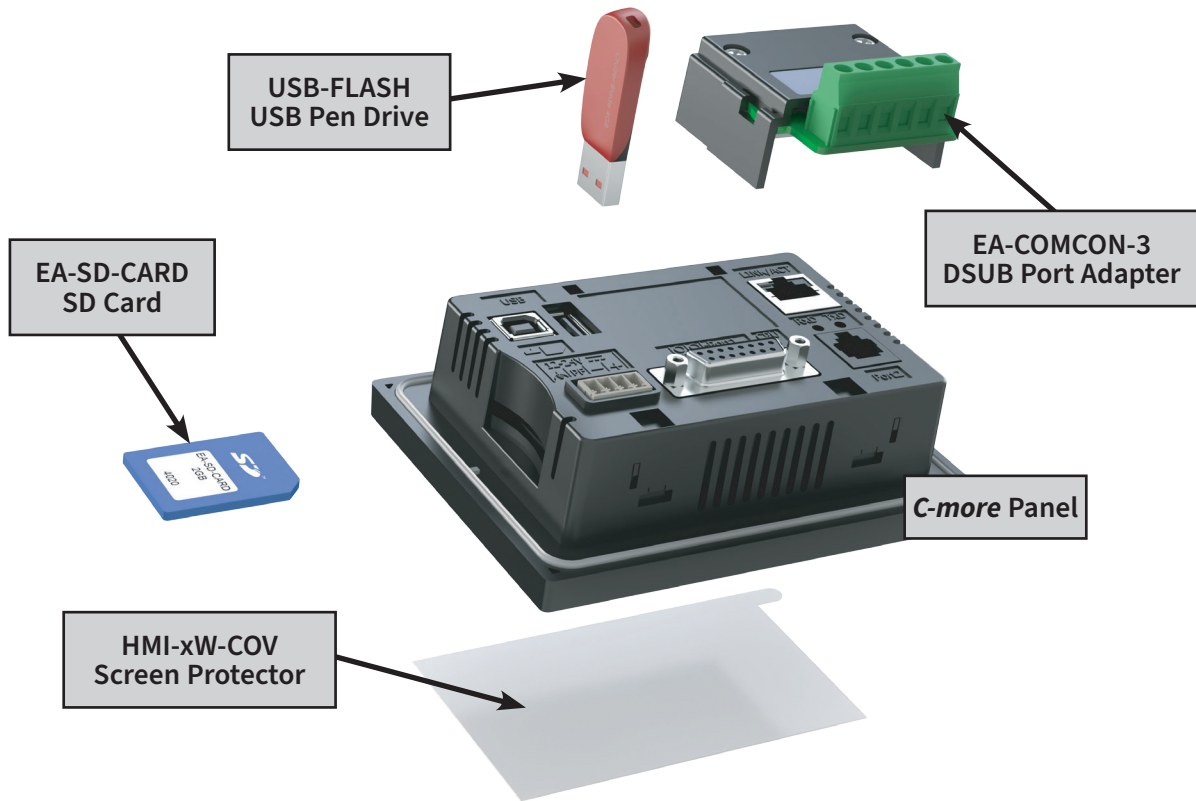
USB Pen Drive  
USB-FLASH



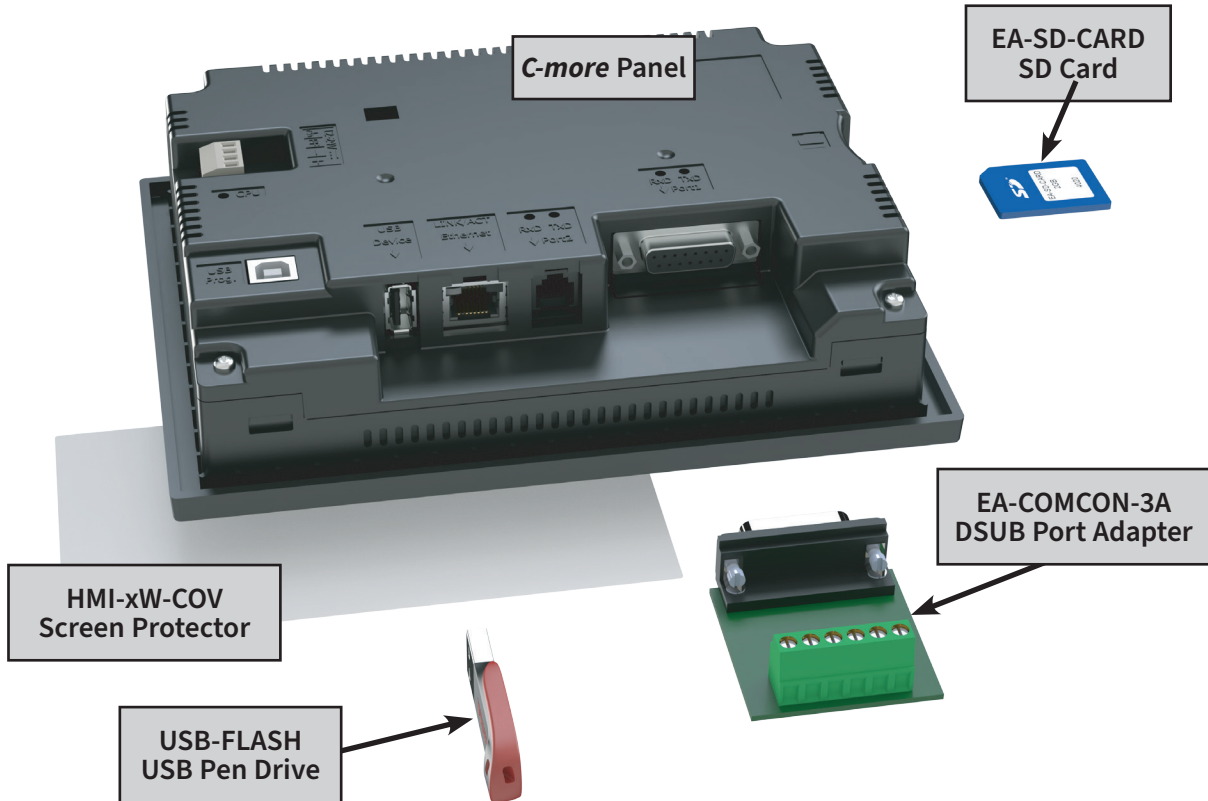
Protective Screen Cover  
HMI-x-COV

Step 2 - Install Optional Hardware Assessories

CM5-T4W

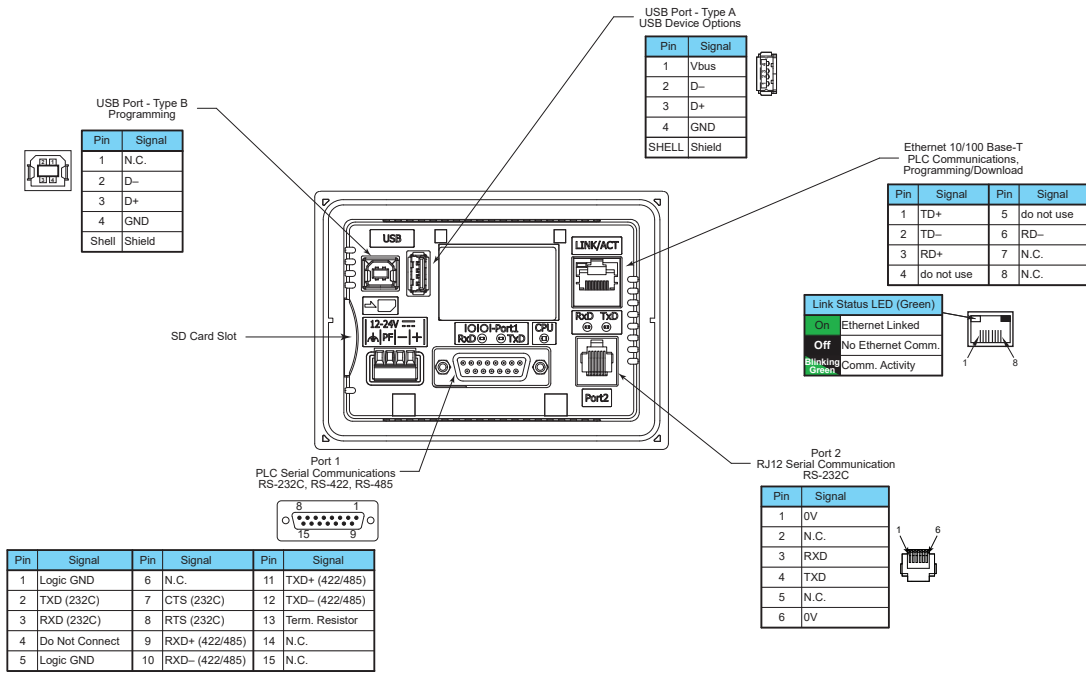


CM5-T7W, CM5-T10W, CM5-T12W, CM5-T15W, CM5-T22W

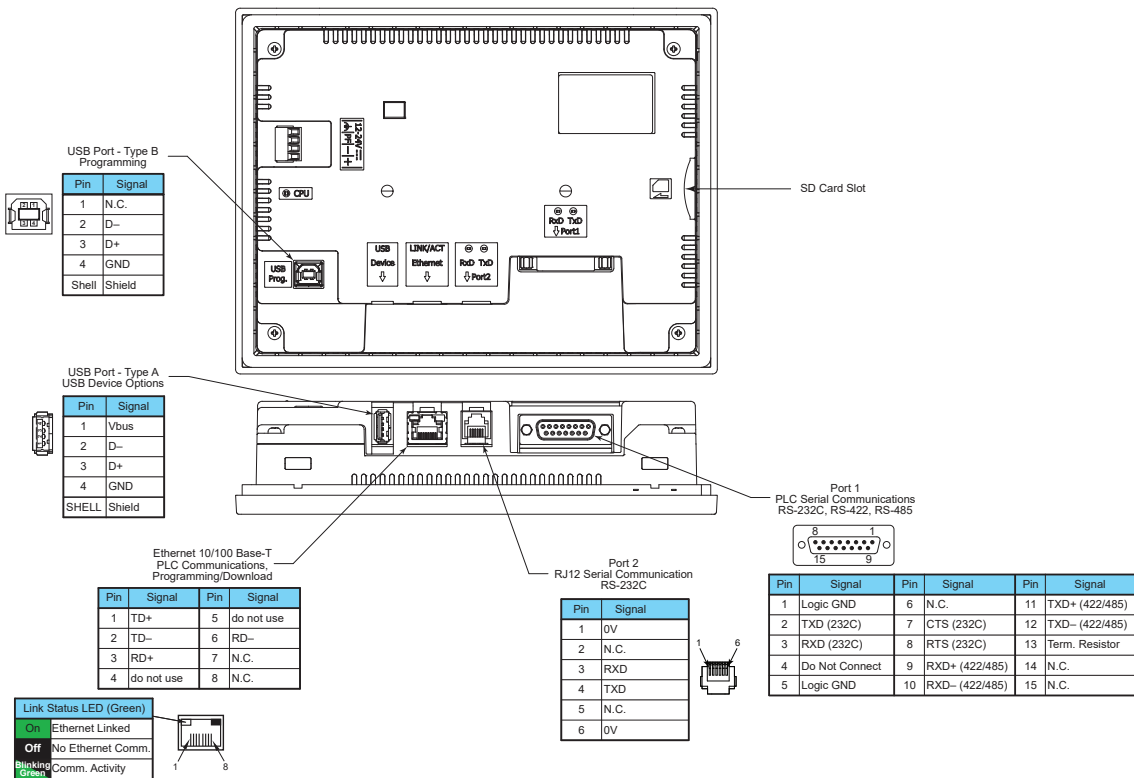


Step 3 - Become Familiar with Available Communication Ports

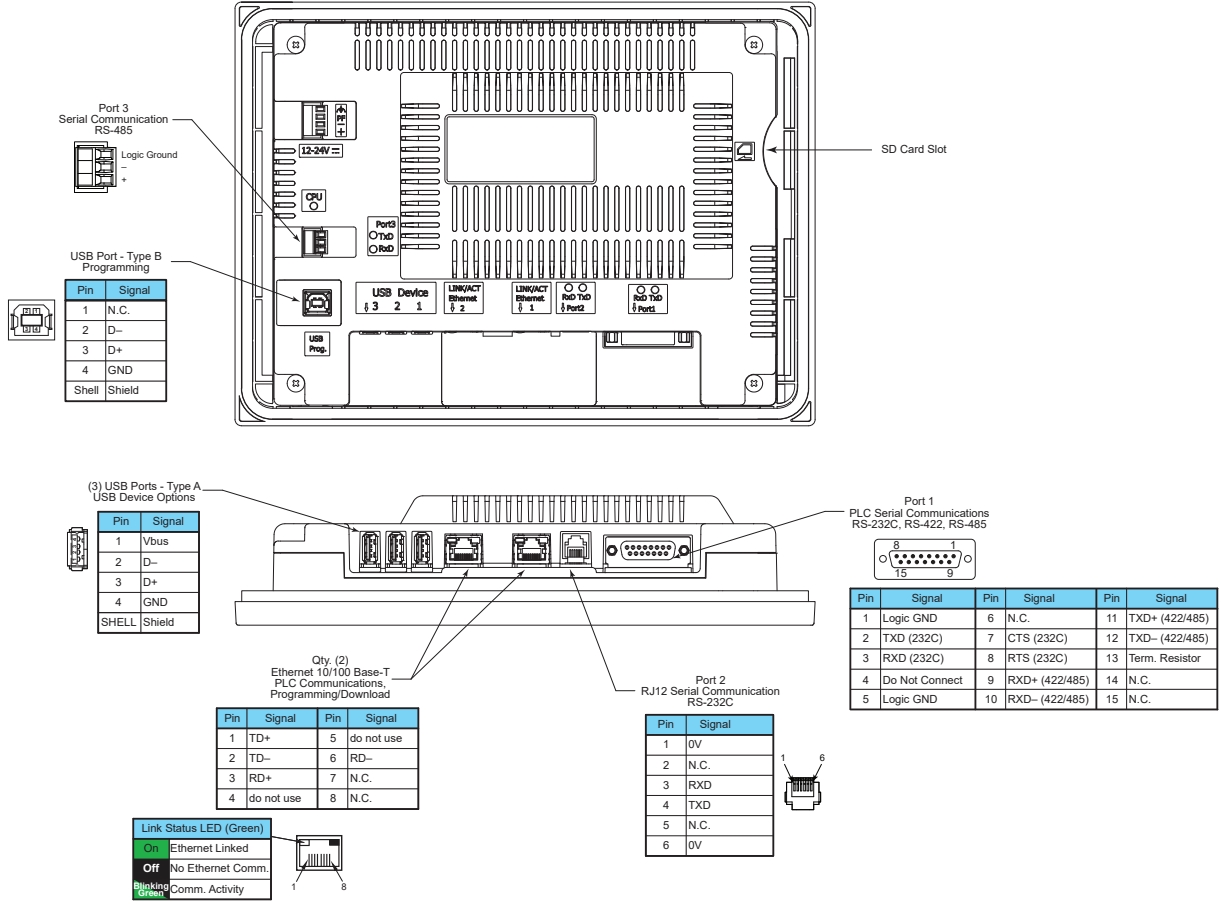
CM5-T4W



CM5-T7W



CM5-T10W, CM5-T12W, CM5-T15W and CM5-T22W





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**Step 4 - Install the Programming Software and Develop a Project**

Download the latest version of the **C-more** Programming Software, p/n CM5-PGMSW, from the AutomationDirect website. Refer to the AutomationDirect website for current minimum system requirements for installation.

For software download installation, unzip the downloaded file and navigate to the unzipped folder on the PC. Double-click on CM5\_Setup.exe and follow the instructions. Follow the screen prompts to download and install the **C-more** Programming Software.

If you need assistance during the software installation, call the AutomationDirect Technical Support team @ 770-844-4200.

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*NOTES: Regarding Ethernet access to a C-more panel. If you intend to take advantage of the methods of remote access to the panel, including the web server, PC remote access, FTP, iOS, Android app or MQTT, you need to consider the security exposure in order to minimize the risks to your process and your C-more panel.*

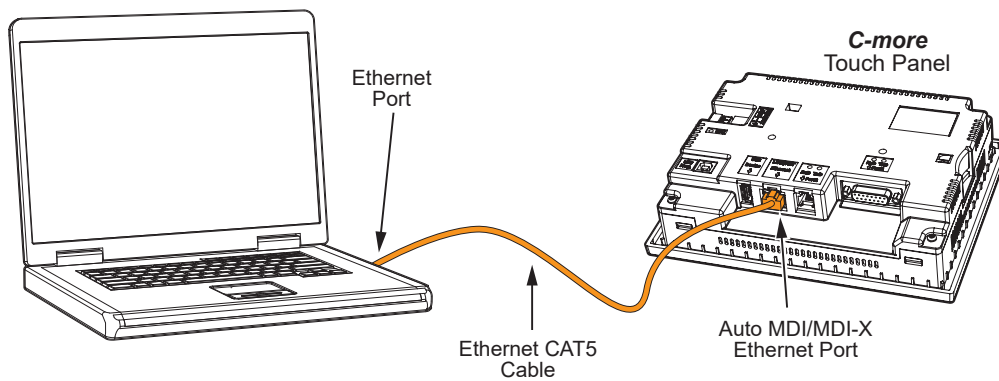
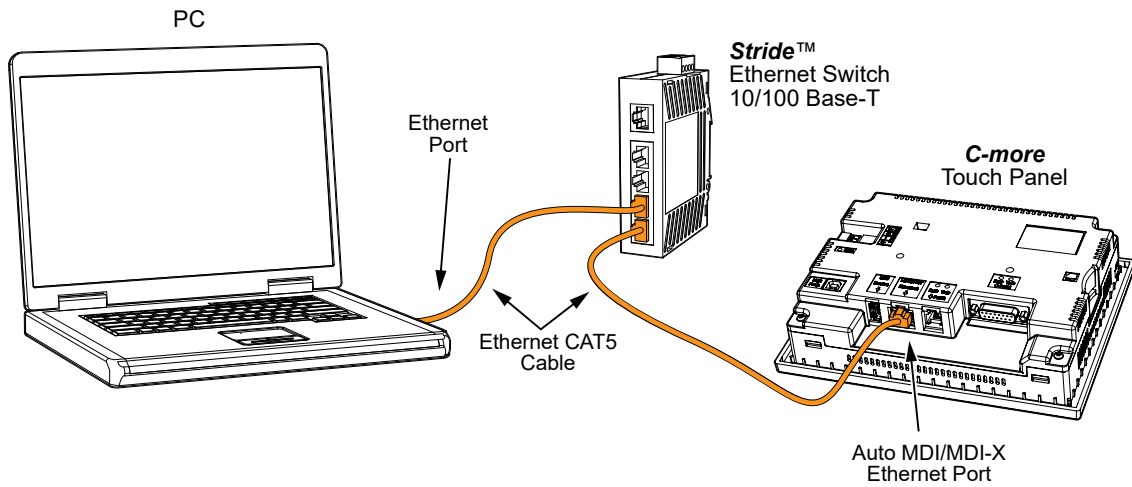
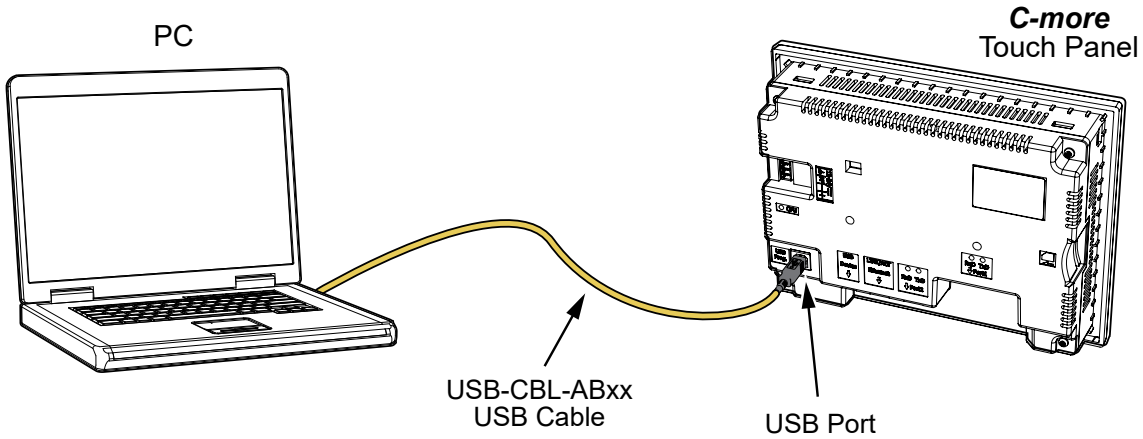


*Security measures may include password protection, changing the ports exposed on your network, including a VPN in your network, and other methods. Security should always be carefully evaluated for each installation. Refer to Appendix C - Security Considerations for Control Systems Networks.*

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**Step 5 - Connect Touch Panel to Computer**

- Connect a USB Programming Cable, such as p/n USB-CBL-AB15, from a USB type A port on the PC to the USB type B programming port on the **C-more** touch panel
- or connect the **C-more** touch panel and PC together either directly or via an Ethernet switch, and CAT5 Ethernet cables

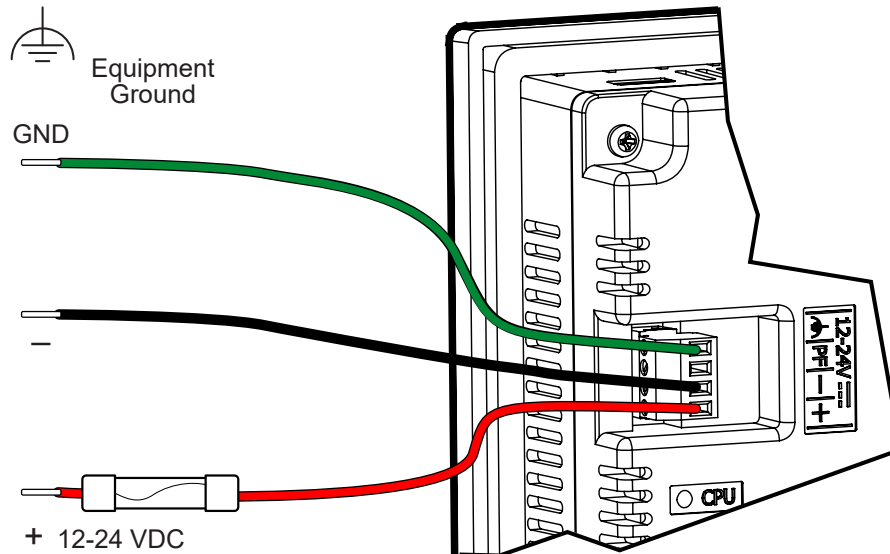


**Step 6 - Provide Power to the Touch Panel**

- Connect a dedicated 12-24 VDC Class 2 power supply to the DC connector on the rear of the **C-more** touch panel, include wiring the ground terminal to a proper equipment ground
- then turn on the power source and check the LED status indicators on the front and rear of the **C-more** touch panel for proper indication (see next page)



*NOTE: A dedicated power supply is recommended. If the power supply also feeds inductive loads such as solenoids or relays, the transients caused by these loads can affect the operation of the panel or damage panel components.*



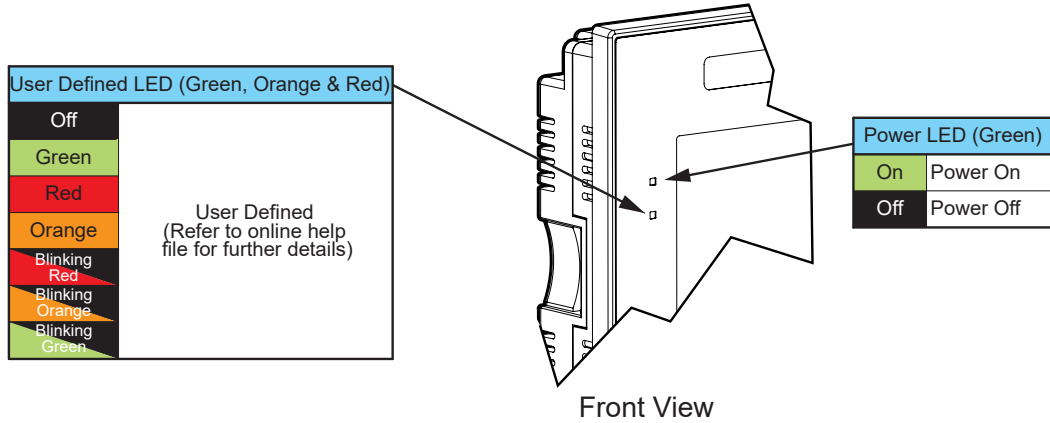
DC-CON Tightening Torque	
<b>Power connector screw torque</b>	35.4 oz-in (0.25 Nm)



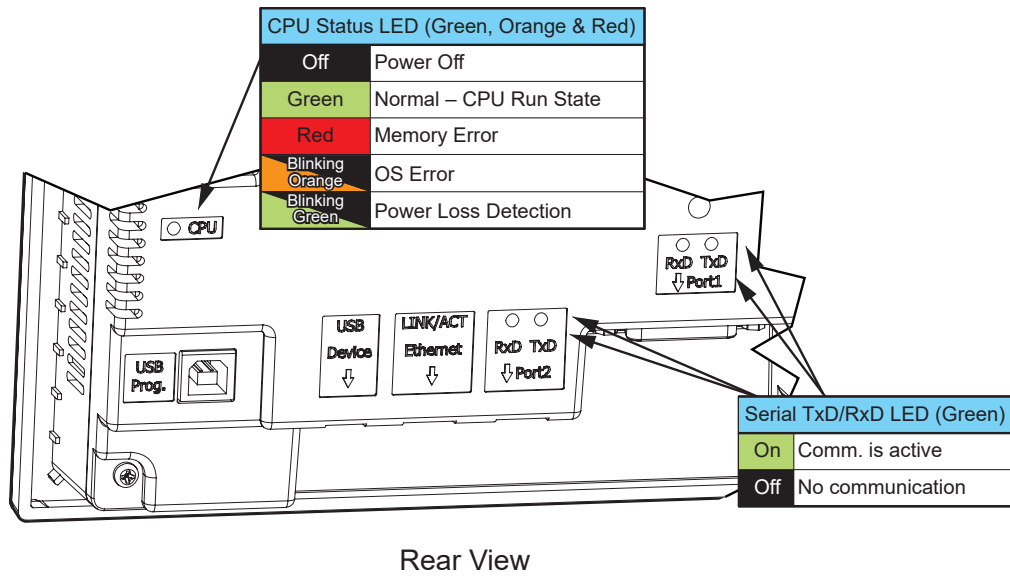
**WARNING:** USE 60 / 75°C COPPER CONDUCTORS ONLY. 16 - 24 AWG, STRIP LENGTH - 7MM [0.28"]

Step 6 - Provide Power to the Touch Panel (cont'd)

C-more LED Status Indicators

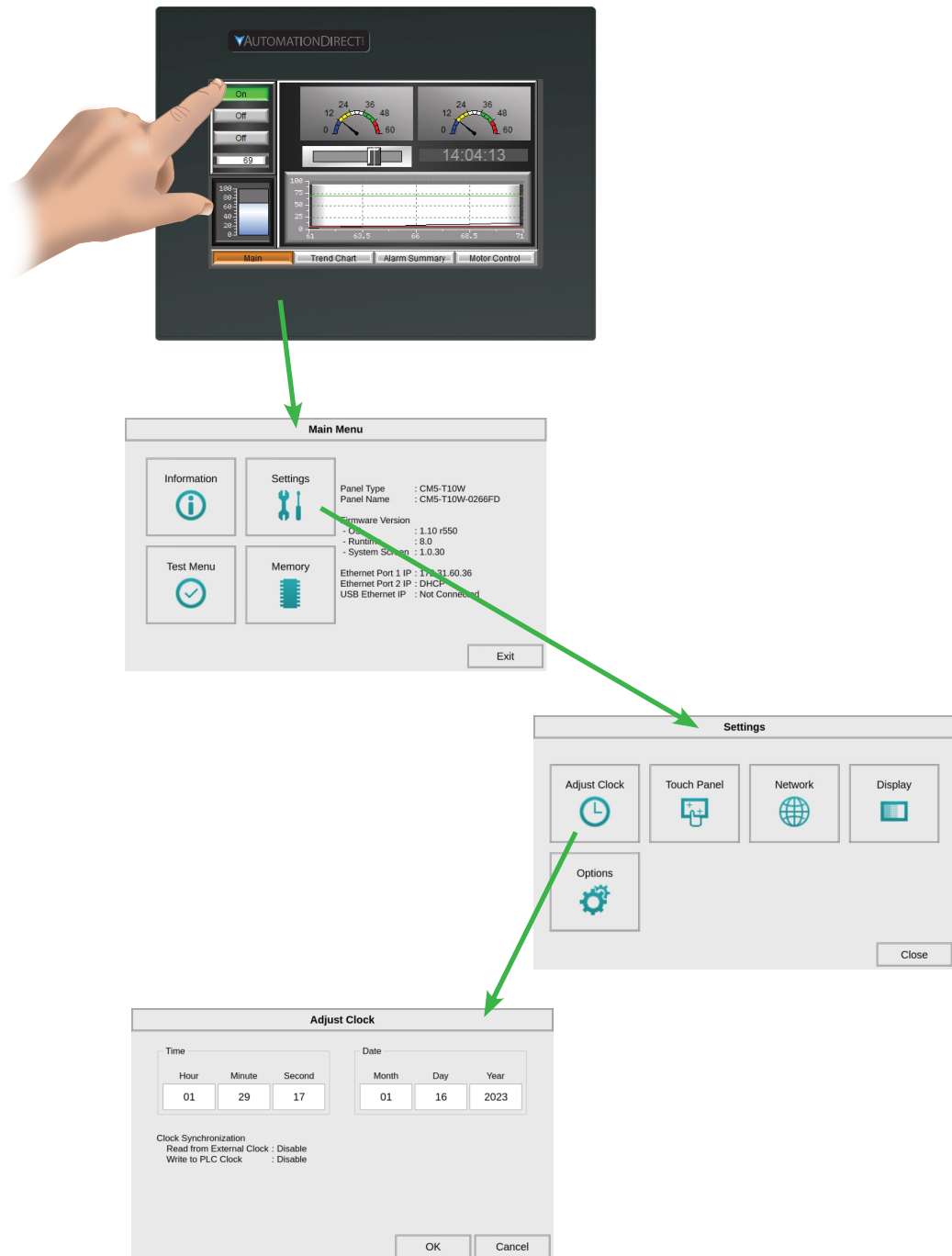


NOTE: CM5-T4W doesn't have a User Defined LED or Power LED.



**Step 7 - Access the Touch Panel Setup Screens**

- Access the Main Menu of the touch panel System Setup Screens by pressing the extreme upper left corner of the panel display area for three (3) seconds as shown below.
- Adjust the time and date for the panel by pressing the Setting button on the Main Menu, then press the Adjust Clock button on the Setting screen.
- Use the right pointing arrows for the time or date display to select the unit to change. Use the up and down arrows to increment or decrement the value for the selected unit.
- Press OK when done to accept the changes to the time and date in the touch panel or press Cancel to exit the Adjust Clock setup screen without making any changes.
- Press the Main Menu button on the Setting screen and then the Exit button on the Main Menu screen to return to the application screen.



**Step 8 - Choose Touch Panel to Device Cables**

The table below shows the PLCs, controllers and protocols supported by the **C-more** CM5. Ensure your controller and protocol are supported.

PLC Protocol Table				
Model		Protocols		
AutomationDirect	Productivity Series		Productivity Serial Productivity Ethernet	
	Do-more (BRX)	All	Do-more Serial Do-more Ethernet	
		CLICK	All	CLICK Serial
	C0-1x series		CLICK Ethernet	
	CLICK PLUS	C2-01CPU-x, C2-03CPU-x, All with C2-DCM		CLICK Serial
		All	CLICK Ethernet	
	DL05/DL06	All	K-Sequence <b>DirectNET</b>	
		H0-ECOM/H0-ECOM100	Modbus (Koyo addressing) <b>DirectLOGIC</b> Ethernet	
	DL105	All	K-Sequence	
	DL205	D2-230	K-Sequence	
		D2-240	K-Sequence <b>DirectNET</b>	
		D2-250/D2-250-1/D2-260/D2-262	K-Sequence	
			<b>DirectNET</b>	
			Modbus (Koyo addressing)	
		D2-240/D2-250-1/D2-260 Using DCM		<b>DirectNET</b>
		H2-ECOM/H2-ECOM100		Modbus (Koyo addressing) <b>DirectLOGIC</b> Ethernet
	DL305	D3-330/330P (Requires the use of a Data Communications Unit) D3-340		<b>DirectNET</b>
		D3-350	<b>DirectNET</b>	
			K-Sequence <b>DirectNET</b>	
			Modbus (Koyo addressing)	
		D3-DCM	<b>DirectNET</b> Modbus (Koyo addressing)	
	DL405	D4-430	K-Sequence <b>DirectNET</b>	
		D4-440	K-Sequence <b>DirectNET</b>	
		D4-450/D4-454	K-Sequence <b>DirectNET</b>	
			Modbus (Koyo addressing)	
		All with DCM		<b>DirectNET</b> Modbus (Koyo addressing)
		H4-ECOM/H4-ECOM100		<b>DirectLOGIC</b> 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)	
	GS Drives		GS Drives Serial GS Drives TCP/IP (GS-EDRV)	
	SOLO Temperature Controllers (models with serial communications)		SOLO Temperature Controller	

**Step 8 - Choose Touch Panel to Device Cables (cont'd)**

PLC Protocol Table (cont'd)		
Model		Protocols
<b>Allen-Bradley</b>	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 and SLC 5/05, 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	
<b>Modbus RTU</b>	Modbus RTU devices	Modbus RTU
<b>Modbus TCP/IP</b>	Modbus TCP/IP devices	Modbus TCP/IP
<b>GE</b>	90/30, 90/70, Micro 90, VersaMax Micro	SNPX
	90/30, Rx3i	SRTP Ethernet
<b>Mitsubishi</b>	FX Series	FX Direct
	Q02, Q02H, Q06H, Q12H, Q25H	Q CPU
	Q, QnA Serial	QnA Serial
	Q, QnA Ethernet	QnA Ethernet
<b>Modicon</b>	984 CPU, Quantum 113 CPU, AEG Modicon Micro Series 110 CPU: 311-xx, 411-xx, 512-xx, 612-xx	Modbus RTU
	Other devices using Modicon Modbus addressing	Modbus RTU
		Modbus TCP/IP
<b>Omron</b>	C200 Adapter, C500	Host Link
	CJ1/CS1 Serial	FINS
	CJ1/CS1 Ethernet	
<b>Siemens</b>	S7-200 CPU, RS-485 Serial	PPI
	S7-200 CPU, S7-300 CPU, S7-400, S7-1200, S7-1500 CPU Ethernet	Ethernet ISO over TCP

**Step 8 - Choose Touch Panel to Device Cables (cont'd)**

**Available cables to connect from PLC to C-more serial Port 1**

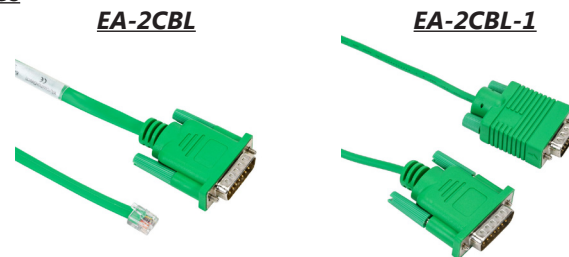
To use Serial communication through Port 1 of a **C-more** panel, consult the chart below for the proper cable. See Chapter 6: PLC Communications for wiring diagrams of additional user constructed cables.

Purchased Cable Description	Cable Part Number
AutomationDirect Productivity Series, Do-more, CLICK, <b>Direct</b> LOGIC PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 & H2-WINPLC (RS-232C)	<b>EA-2CBL</b>
<b>Direct</b> LOGIC (VGA Style) 15-pin port DL06, D2-250 (250-1), D2-260 (RS-232C)	<b>EA-2CBL-1</b>
<b>Direct</b> LOGIC PLC RJ-11 port, D3-340 (RS-232C)	<b>EA-3CBL</b>
<b>Direct</b> LOGIC DL405 PLC 15-pin D-sub port, DL405 (RS-232C)	<b>EA-4CBL-1</b>
<b>Direct</b> LOGIC PLC 25-pin D-sub port, DL405, D3-350, DL305 DCU and all DCM's (RS-232C)	<b>EA-4CBL-2</b>
Allen-Bradley MicroLogix 1000, 1100, 1200, 1400, 1500 (RS-232C)	<b>EA-MLOGIX-CBL</b>
Allen-Bradley SLC 5-03/04/05, ControlLogix, CompactLogix, FlexLogix DF1 port (RS-232C)	<b>EA-SLC-232-CBL</b>
Allen-Bradley PLC-5 DF1 port (RS-232C)	<b>EA-PLC5-232-CBL</b>
GE 90/30, 90/70, Micro 90, VersaMax Micro 15-pin D-sub port (RS-422A)	<b>EA-90-30-CBL</b>
MITSUBISHI FX Series 25-pin port (RS-422A)	<b>EA-MITSU-CBL</b>
MITSUBISHI FX Series 8-pin mini-DIN (RS-422A)	<b>EA-MITSU-CBL-1</b>
OMRON Host Link (C200 Adapter, C500) (RS-232C)	<b>EA-OMRON-CBL</b>



**NOTE:** The above list of pre-made communications cables may be purchased. See Chapter 6: PLC Communications for wiring diagrams of additional user constructed cables. Chapter 6 also includes wiring diagrams for the pre-made cables.

**Pre-made cable examples**



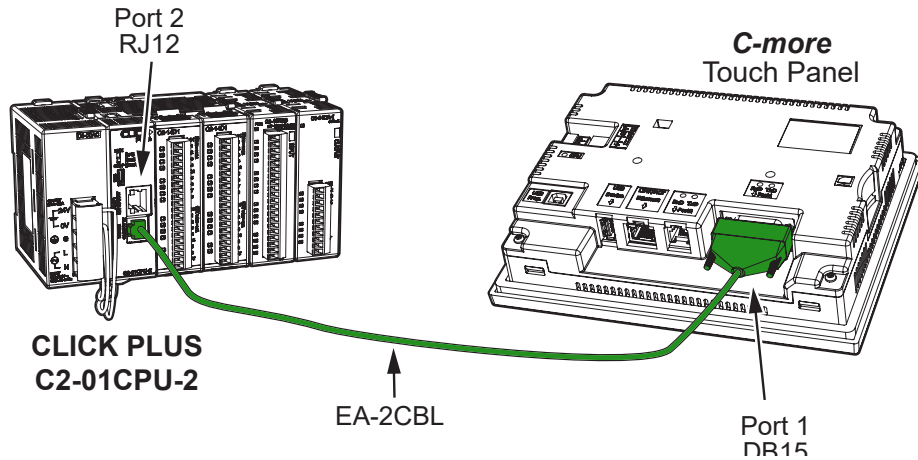


**Step 9 - Connect Touch Panel to PLC**

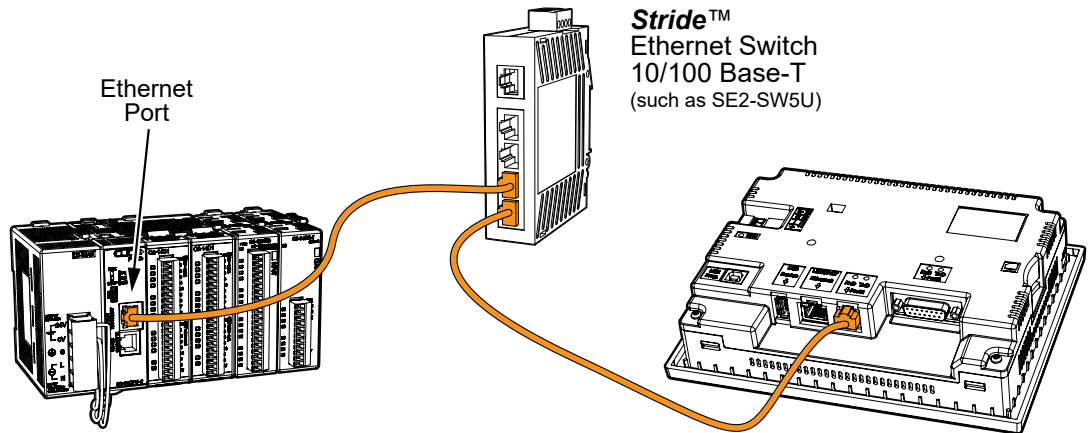
- Connect the serial communications cable between the **C-more** touch panel and the PLC
- or connect the **C-more** touch panel and PLC together either directly or via an Ethernet switch, and CAT5 Ethernet cables.

For further information on setting up communications between a **C-more** panel and a PLC, see the **C-more** programming help file topic *CM024: Creating a new Project in C-more Software*.

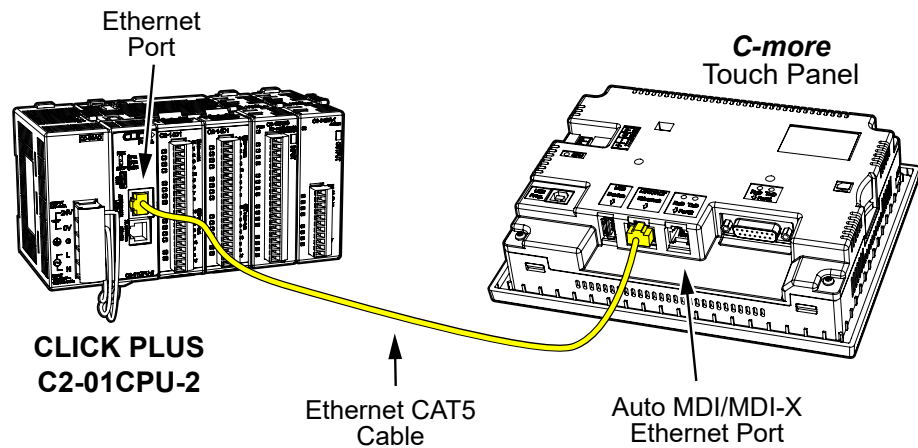
Serial



Ethernet via Switch



Ethernet



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PAGE