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FW MURPHY CPC4 Main Input-Output Module User Guide

**CPC4 Main Input-Output Module
User Guide**

Contents
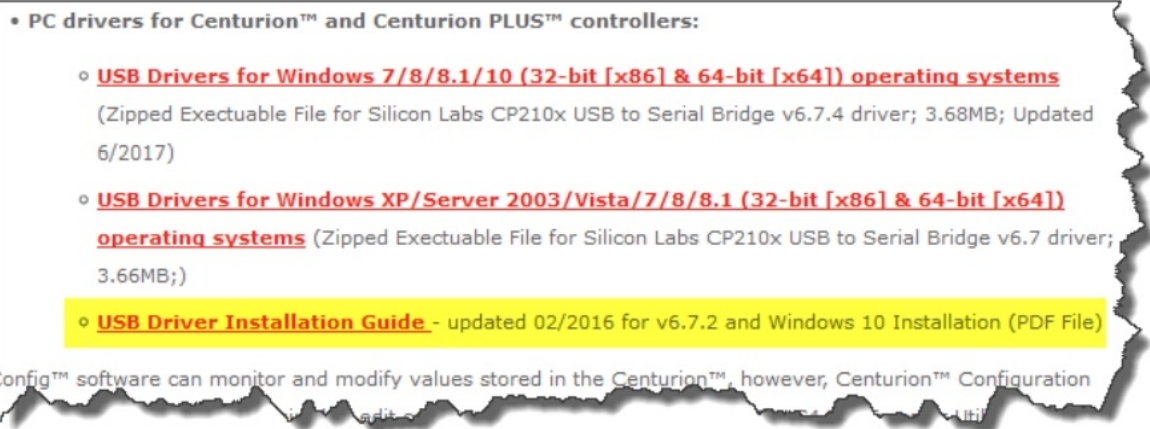
CPC4 Main Input-Output Module

1.0 Background

1.1 The Centurion PLUS Control system consists of a Centurion PLUS Core (CPC4-1) and an optional display.

1.2 The application software that represents the control logic is called Firmware and is transferred to the Centurion PLUS using the File Transfer Utility software and a USB connection. Contact FW Murphy to obtain the correct Core firmware and display file for your system.

1.3 The Centurion File Transfer software must be installed on the PC. Access the license agreement and installation from the web link below. **https://www.fwmurphy.com/resources-support/software-download**

1.4 The USB Drivers for FW Murphy devices must be installed on the PC and these are included with the software installer. The first time the Centurion is connected to your PC, the USB drivers will automatically install and a COM port will be assigned by your PC to the Centurion. For more information on USB driver installation, visit the website link above and download the USB Driver Installation Guide (in yellow) below.

- PC drivers for Centurion™ and Centurion PLUS™ controllers:
  - **USB Drivers for Windows 7/8/8.1/10 (32-bit [x86] & 64-bit [x64]) operating systems** (Zipped Exectuable File for Silicon Labs CP210x USB to Serial Bridge v6.7.4 driver; 3.68MB; Updated 6/2017)
  - **USB Drivers for Windows XP/Server 2003/Vista/7/8/8.1 (32-bit [x86] & 64-bit [x64]) operating systems** (Zipped Exectuable File for Silicon Labs CP210x USB to Serial Bridge v6.7 driver; 3.66MB;)
  - **USB Driver Installation Guide** - updated 02/2016 for v6.7.2 and Windows 10 Installation (PDF File)

1.5 Use the panel drawings or determine the required display software to install display files using the table below. The installation will be found at software installation from the web link below. **https://www.fwmurphy.com/resources-support/software-download**

| Display Model	Display File Type	Software needed to transfer to display
G306/G310	*.cd2	Crimson© 2.0 (see section 3.0)
G306/G310	*.cd3	Crimson© 3.0 (see section 3.0)
G07 / G10	*.cd31	Crimson© 3.1 (see section 3.0) M-VIEW Designer
M-VIEW Touch	*.met	© 3.1 (see section 3.0)
M-VIEW Touch	image.mvi	No software needed-Direct download via USB stick (see section 4.0)

Updating Centurion PLUS Core firmware (CPC4-1)

2.1 The software files will be provided by FW Murphy. After the files are obtained follow these steps to update the Centurion PLUS.

2.2 Connect the PC to the Centurion PLUS Core mounted inside the panel using a standard Type A to Type B USB cable.

2.3 Cycle power to the controller OFF and back to ON.

2.4 The Core is now ready to receive the download from the PC. The COP LED next to the USB port on the board will be ON steady to indicate the Centurion is in bootloader mode. If the LED is blinking, turn the power off, wait 10 seconds, and turn it back on to retry.


USB Port
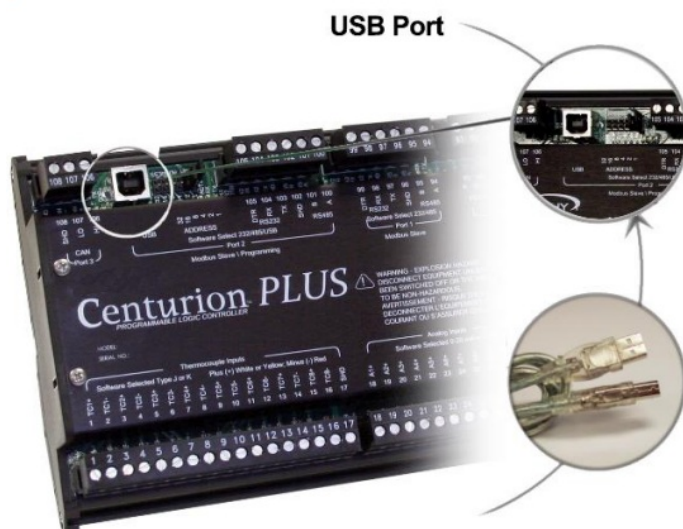
2.5 Launch the File Transfer Utility software by clicking the icon on the desktop.

2.6 Choose the C4 Firmware Update option. Click on the Update C4-1/CPC4-1 Controller Firmware option.
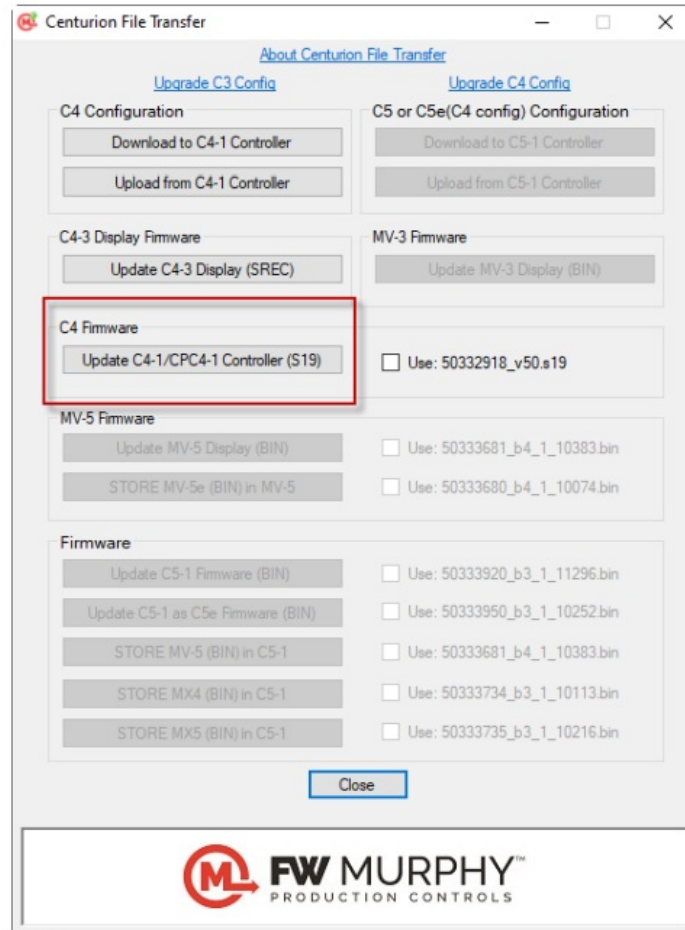
2.7 A new window will appear that allows navigation to the location of the Core CPC4-1 firmware file supplied by FW Murphy. Click OPEN. In the example below, the S19 firmware file is located on the desktop. Double click the S19 file.
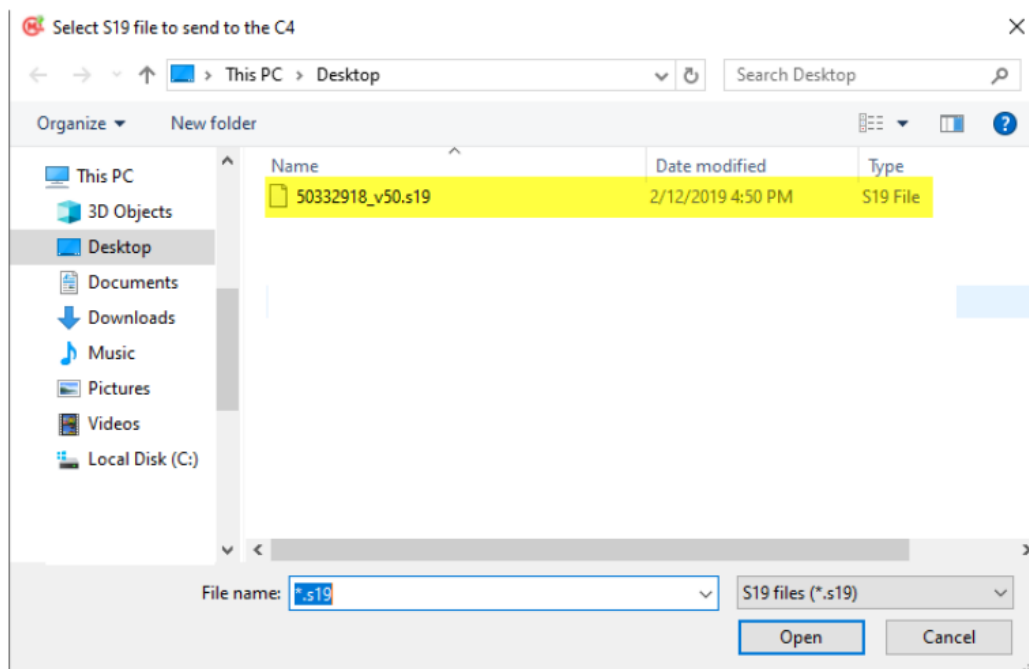
2.8 The Connect window appears. If unsure about these settings, click the SCAN button to scan the PC comm. ports for the correct Port number and baud rate settings*. Click CONNECT to proceed
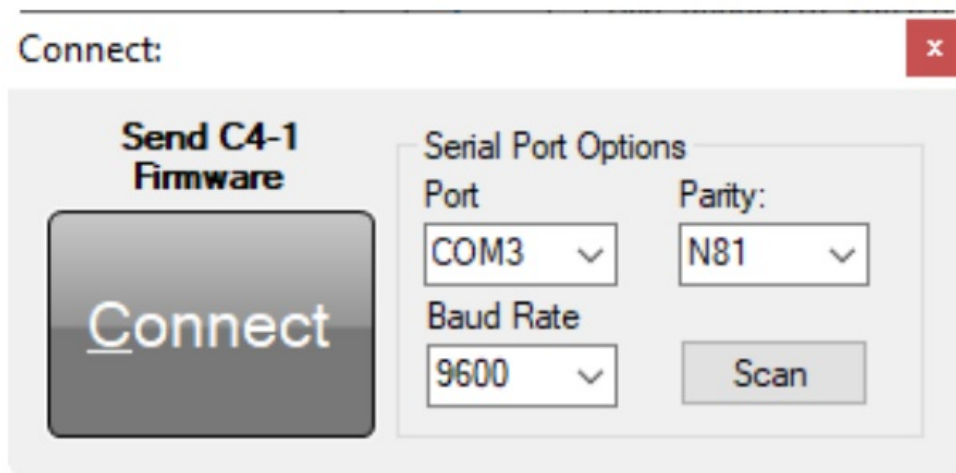

*If the SCAN button fails to detect the port number, pick the COM port assignment determined by the USB to Serial Bridge manually.
Refer to USB Driver Installation section 3 for instructions on determining the correct COM assignment for the PC.
2.9 The next window will appear to begin the transfer process.
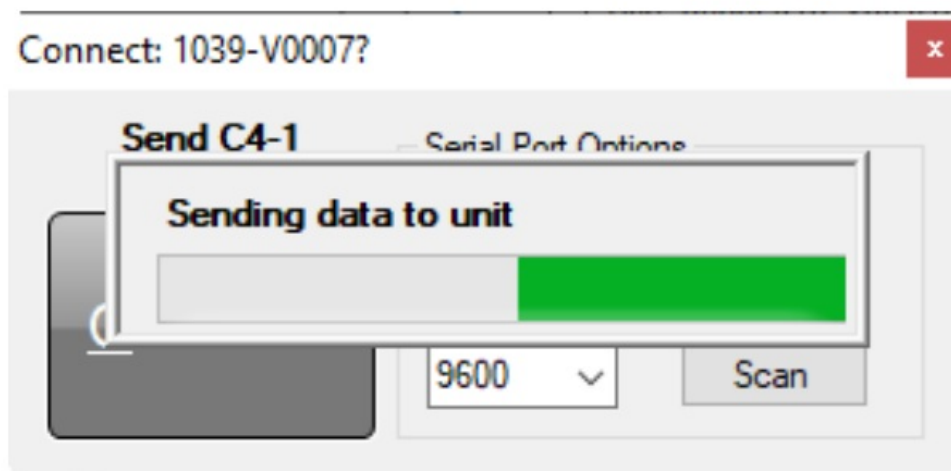

2.10 When the transfer operation is complete, the software will display DONE. Click OK to exit the window and complete the process.
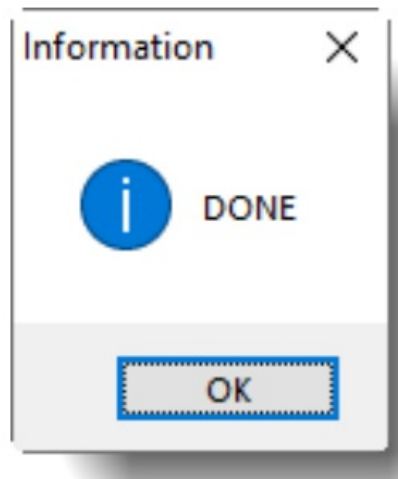
2.11 Remove the USB cable connected between the PC and the Core CPC4-1, then cycle power to the CPC4-1 OFF and back to ON to complete the firmware update process.

2.12 IMPORTANT: After installing the firmware, a factory default command must be performed using the Centurion PLUS Display. To access this page, press the MENU key on the HMI.
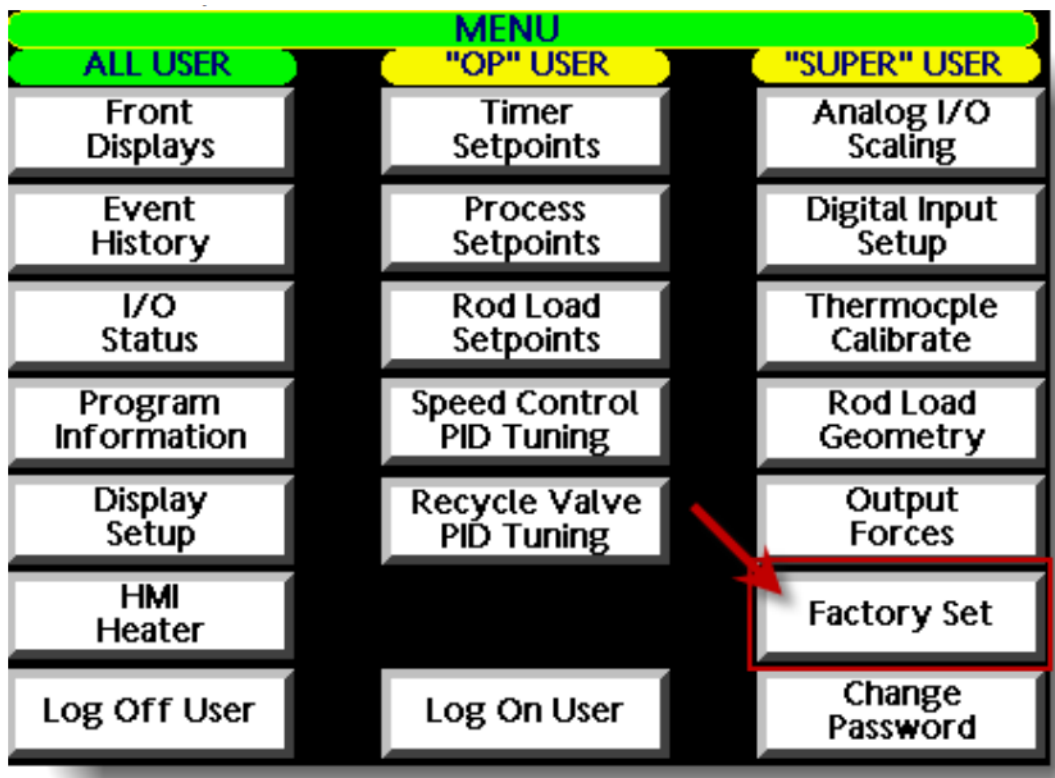

2.13 Next press the Factory Set button on this page. A prompt will appear requiring login using SUPER as the name and the Super user passcode. Refer to the sequence of operation for the panel for proper login credentials.

2.14 After a successful login, follow the display commands to restore the factory settings to the system after a firmware update.

Updating Display Database for G306/G310 series or Graphite series display using Crimson© 2.0, 3.0 or 3.1 Software

3.1 First ensure that the needed display Crimson© software has been installed as described above. This MUST be installed prior to attempting to connect the USB cable for proper driver detection and installation.

3.2 Connect the PC to the display's USB port using a standard Type A to Type B USB cable and apply power to the display. Locate the USB type A port on the display on the bottom.

Centurion PLUS Display Port Pinout
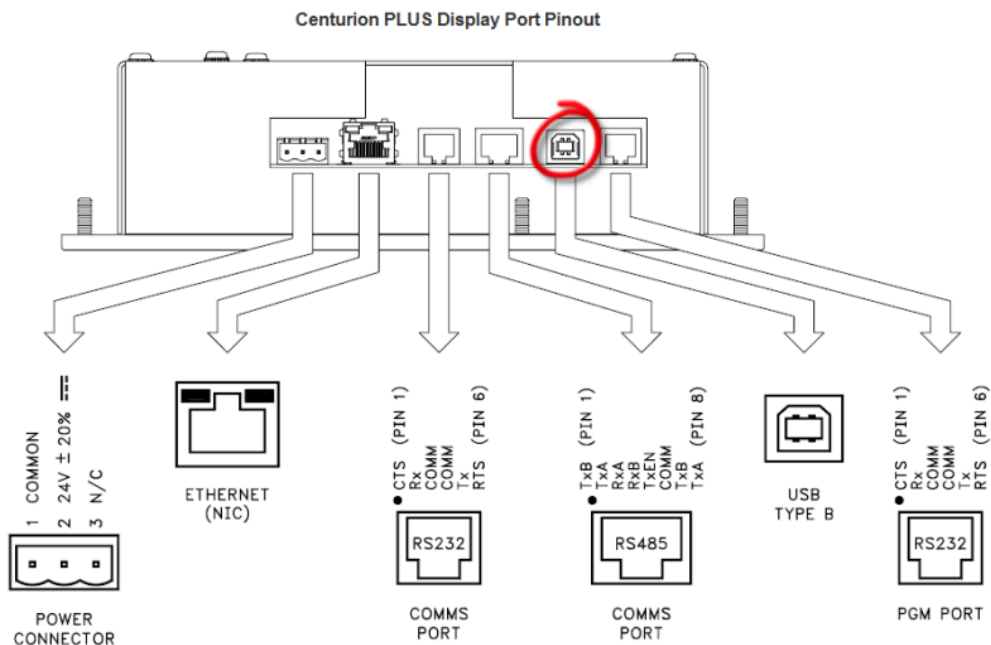
3.3 The first time that the PC is connected to the display, the USB driver must install on the PC. After the first installation, these steps will no longer be repeated.

3.4 New hardware will be found by the PC. This process can take time as the PC Operating system searches for the USB drivers for the **display.**


NOTE: Please wait until the new hardware is detected and installed, the process can take several minutes.

3.5 After the USB drivers are set up, run Crimson© software by selecting Crimson© from the Windows Start Menu, select Programs and find Red Lion Controls -> CRIMSON X. The version will vary based on what was needed for your Centurion PLUS system. (Windows 10 view similar photo on right.)
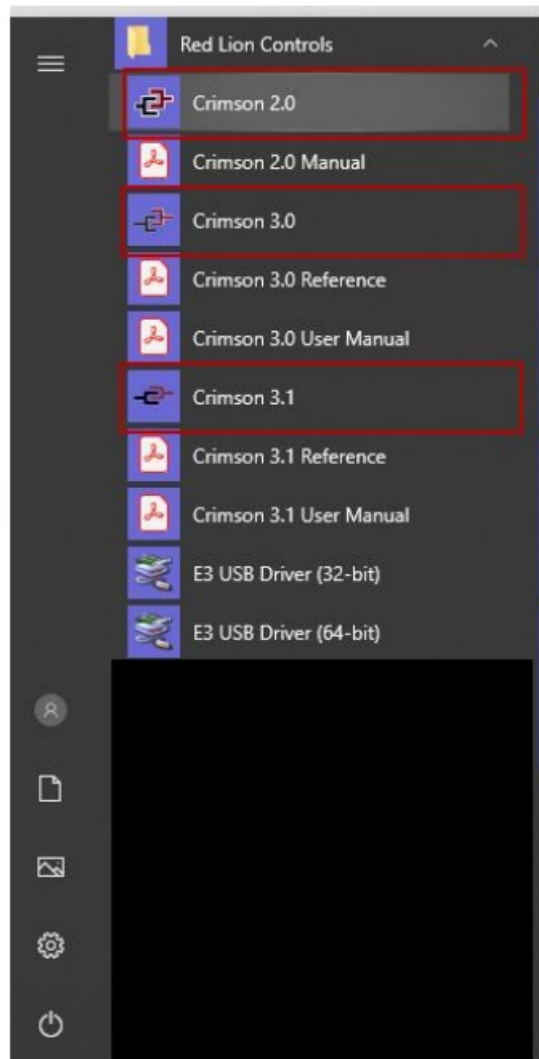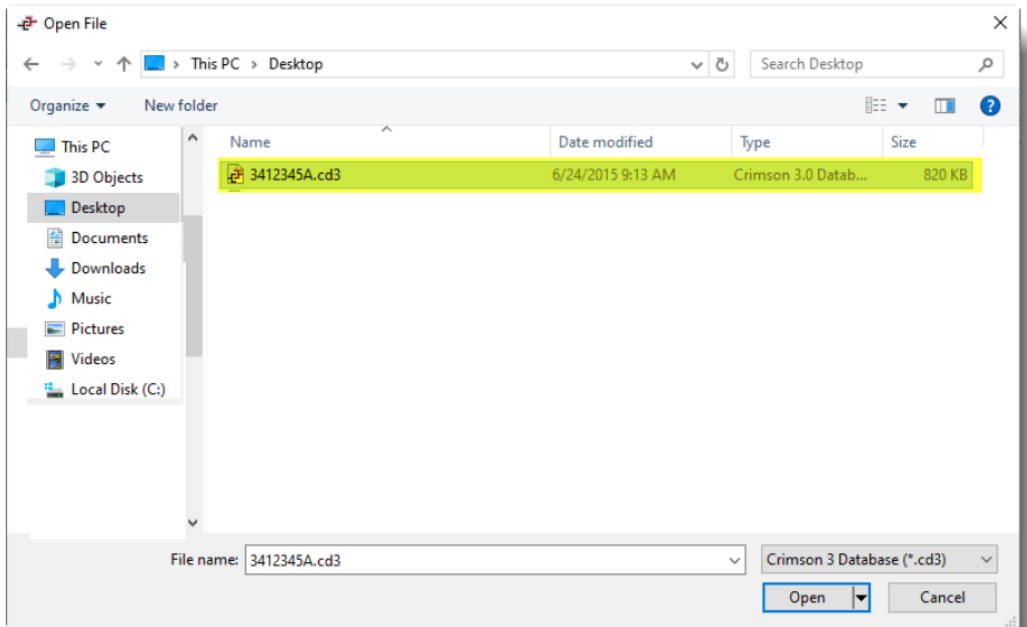
3.6 After the software runs, verity that the USB port as the download method. The download port can be selected via Link>Options menu (below).
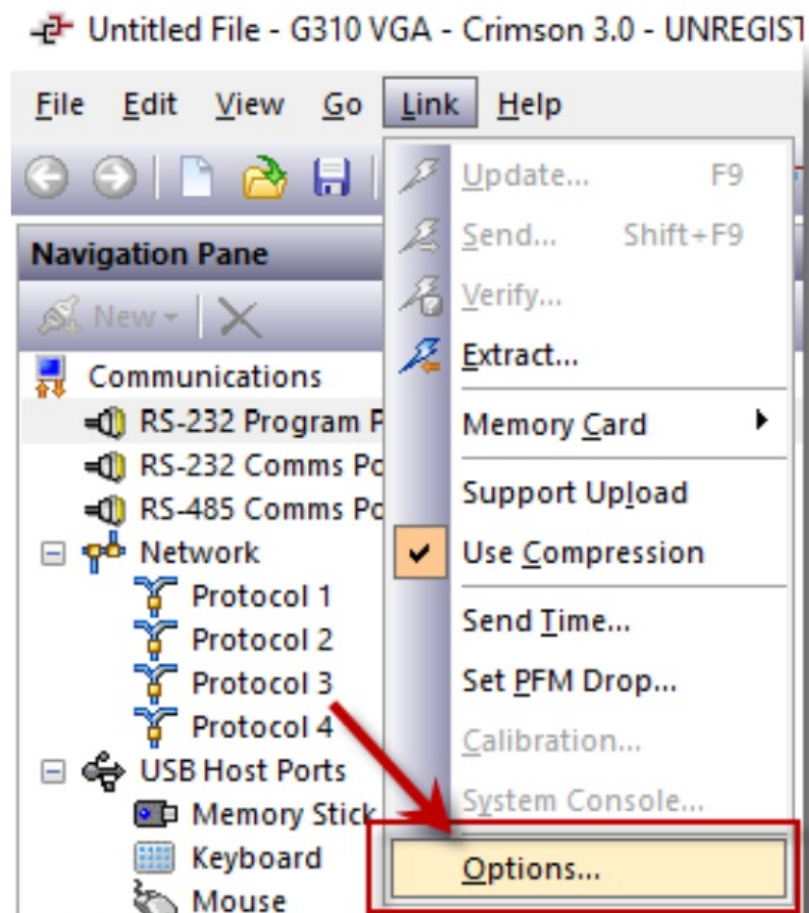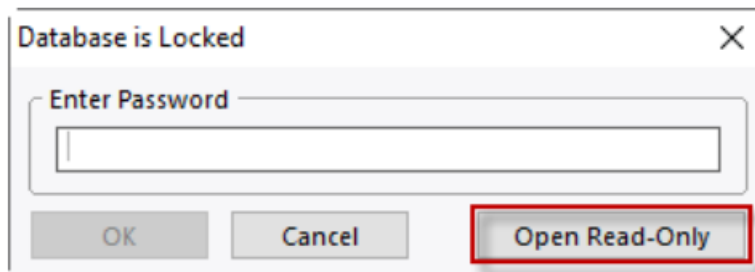
3.7 Next click on File menu and select OPEN.
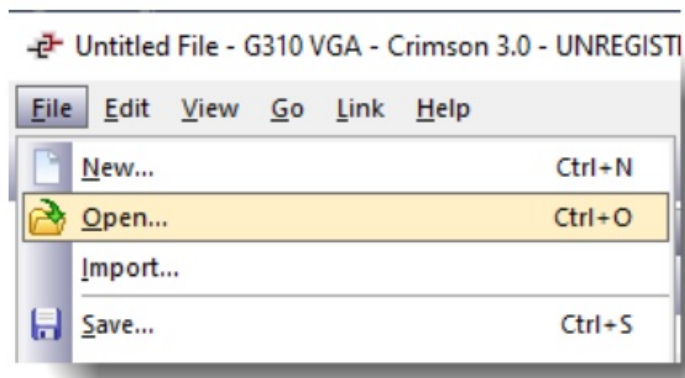
3.8 A new window appears that allows browsing. Find the display software file. In this example it is on the desktop (in yellow). Double click the file.

3.9 The Crimson© software will read and open the file. Most projects will have security on them. Click Open Read-Only to advance.

3.10 Click on the Link menu, and click SEND.
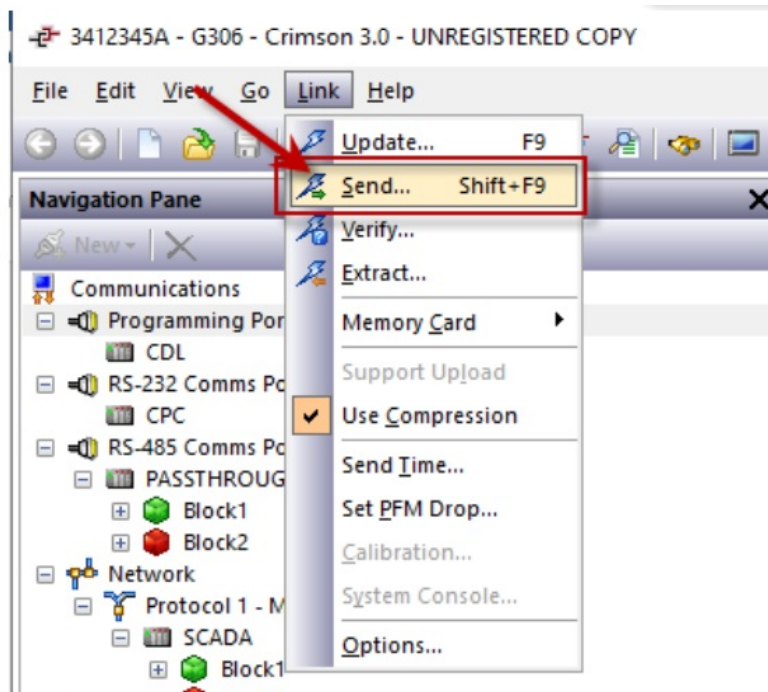
3.11 The transfer to the display will begin. Note this process will also update the firmware in the display if it is not the same as contained in the Crimson© software. Your display may reboot once or twice as new firwmare is loaded prior to the screen database file.

These series of messages will be seen through the transfer process of firmware and database

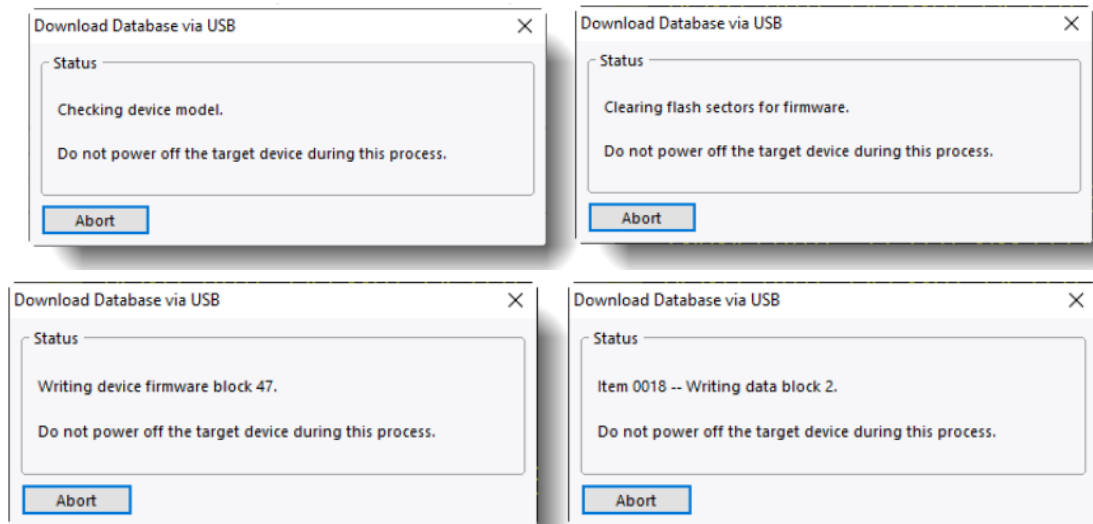| Download Database via USB ✕	Download Database via USB ✕
Status	Status
Checking device model.	Clearing flash sectors for firmware.
Do not power off the target device during this process.	Do not power off the target device during this process.
Abort	Abort
Download Database via USB ✕	Download Database via USB ✕
Status	Status
Writing device firmware block 47.	Item 0018 -- Writing data block 2.
Do not power off the target device during this process.	Do not power off the target device during this process.
Abort	Abort

3.12 When the download is complete, the Display will automatically reboot and run the new software. Close the Crimson © software and disconnect the USB cable.

Updating Display Database for M-VIEW® Touch Series Display Using USB Stick.

4.1 Save the image.mvi file to the root of a USB thumb drive. DO NOT CHANGE THE FILENAME. This process requires the file to be named "image.mvi".

4.2 NOTE: An SD Card must be installed on the display to complete this process. The thumb drive must be formatted as a Flash Disk USB Device for this procedure. You can check a thumb drive's format once it is plugged into a USB port on your PC; in Windows explorer, right click on the drive, click properties, then hardware. It must list as a Flash Disk USB Device. Any USBs formatted as UDisk Device will not work. The white USB FW Murphy USBs are formatted correctly for this process.

4.3 Insert the drive into either of the 2 USB ports on the bottom of the display.

4.4 The display will automatically detect and update the user database. This process will take approximately 4 minutes. After the process completes, the display will reprogram itself and reboot.

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Documents / Resources

FW MURPHY CPC4 Main Input-Output Module [pdf] User Guide
CPC4 Main Input-Output Module, CPC4, Main Input-Output Module, Input-Output Module,
Output Module, Module

References

- **Software Downloads - FW Murphy Production ControlsFW Murphy Production Controls**