

# FDI ELI50-CPW PCAP Touch Screen LCD Module User Guide

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#### Introduction

## **About ELI**

ELI® is Future Designs, Inc.'s family of long-life, plug-and-play embedded displays. ELI products are true modular embedded display solutions that require no engineering or lead-time. All ELI products are compatible with a wide range of single board computers including Raspberry Pi, Beaglebone Black and Windows-based units. FDI designed ELI as an embedded display option that requires minimal development time to help customers reach production quickly. Once a product is in production, FDI's 10 to 15-year ELI product availability guarantee helps ensure production schedules without the risk of expensive or time-consuming redesigns. Learn more about ELI at <a href="https://www.TeamFDI.com/ELI">https://www.TeamFDI.com/ELI</a>.

# **ELI Compatibility**

ELI products are compatible with most single board computers, PCs, and operating systems. See <a href="https://www.teamfdi.com/product-details/eli50-cpw">https://www.teamfdi.com/product-details/eli50-cpw</a> under the Compatibility tab for the results of FDI's compatibility tests with popular operating systems and platforms. Our results, as indicated in the table, demonstrate ELI's versatility but the table is not exhaustive. ELI products are designed to work with any single

board computer that has an HDMI or DP output. To submit a question about ELI's compatibility with a platform or operating system that is not included in the table, contact a member of the FDI support team at <a href="mailto:Support@teamfdi.com">Support@teamfdi.com</a>.

# **Required Equipment (Not Provided)**

- 1. HDMI Cable (Type A Male) to connect to the ELI for the video signal.
- 2. USB Cable (Mini USB Type B) to connect to the ELI for the touch screen operation.
- 3. 7.5V to 17.0V DC power supply
- 4. Your choice of Single Board Computer or PC, with HDMI or DP output and USB port for touch input.
- 5. Power Input Cable FDI P/N: ELI50-CPW-PIC, available from **DigiKey** or **Mouser**.
- 6. Or build your own Power Input Cable using these Items:
  - a. 2.1mm I.D. x 5.5mm O.D. Jack to Screw Terminal, DigiKey PN: 1528-1386-ND (1x)
  - b. 4-Pin, 1.5mm Molex connector for power input, Molex PN: 502578-0400 (1x)
  - c. 24AWG 450MM, Male-Male Molex Cables for power input (x4)
  - Red Molex PN: 2157102125
  - Black Molex PN: 2157101125

# Getting Started with ELI50-CPW

# A few notes prior to powering up your SBC:

- BeagleBone Black (and many other SBCs) will boot up and drive ELI without any software changes.
- For additional information for specific SBCs, see our ELI Software Users Manuals.
- For help with all your ELI needs, please visit TeamFDI.com/ELI.
- 1. Connect the HDMI cable from your SBC or PC to the ELI board. (J2)
- 2. Connect the Mini USB Type B cable between your SBC and the ELI50-CPW for touch input (P2). (See Figure below.)
- 3. Apply Power to ELI (J6) with a 7.5 to 17.0 VDC +/- 5% power supply such as the Digi-key PN: <u>1939-1462-ND</u> (Check the product website specification tab for this ELI to see the minimum power requirements.)
- 4. Power on your SBC.
- 5. The PWR LED (LED4) will illuminate red to indicate that power is applied by the power supply to the ELI unit.
- 6. The ELI display will power on and show the output from the SBC.
- 7. Verify that LCD 6V0 PWR LED (LED3, Yellow) and the LCD PWR LED (LED1, Orange) are on. These LEDs will be on if the HDMI is connected. However, this does not assure that the HDMI signal is valid for the resolution of the ELI50-CPW, just that the HDMI signal is present.
- 8. Verify that the Touch ACT LED (LED2, Green) is on. It should remain on until touch input is detected and then it will flicker and return to on once touch input is gone.

### **ELI50-CPW Connections**

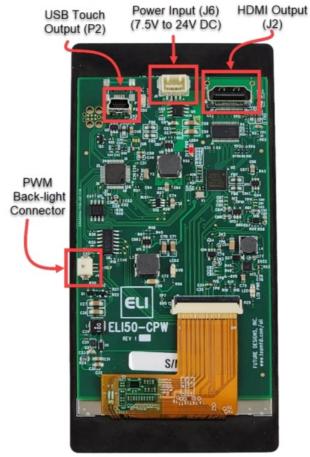


Figure 1. Power is supplied via the 4-pin terminal block J6.

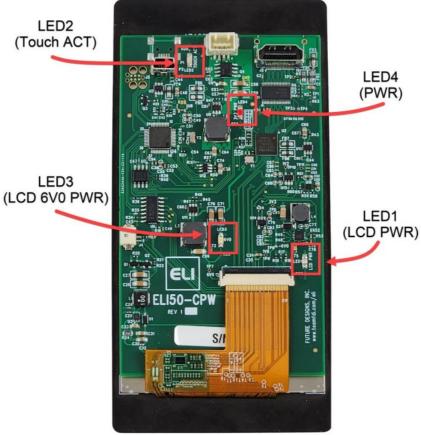


Figure 2. LED visual

# **Support**

FDI Document PN: MA00107 Revision 1.0, 11/20/2023



#### **Documents / Resources**



FDI ELI50-CPW PCAP Touch Screen LCD Module [pdf] User Guide ELI50-CPW PCAP Touch Screen LCD Module, ELI50-CPW, PCAP Touch Screen LCD Module,

## References

- FDI ELI FDI Future Designs Inc.
- FU ELI FDI Future Designs Inc.
- Support FDI Future Designs Inc.
- 0 368 Adafruit Industries LLC | Connectors, Interconnects | DigiKey
- D ELI50-CPW-PIC Future Designs Inc. | Computer Equipment | DigiKey
- UR9HE2000C9P-F(R6B) GlobTek, Inc. | Power Supplies External/Internal (Off-Board) | DigiKey

Touch Screen LCD Module, Screen LCD Module, LCD Module, Module

- D 2157101125 Molex | Cable Assemblies | DigiKey
- D 2157102125 Molex | Cable Assemblies | DigiKey
- D\_5025780400 Molex | Connectors, Interconnects | DigiKey
- MELI50-CPW-PIC Future Designs, Inc. (FDI) | Mouser Europe
- ELI FDI Future Designs Inc.
- 5.0" PCAP Touch Screen LCD Module ELI50-CPW FDI Future Designs Inc.
- User Manual

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