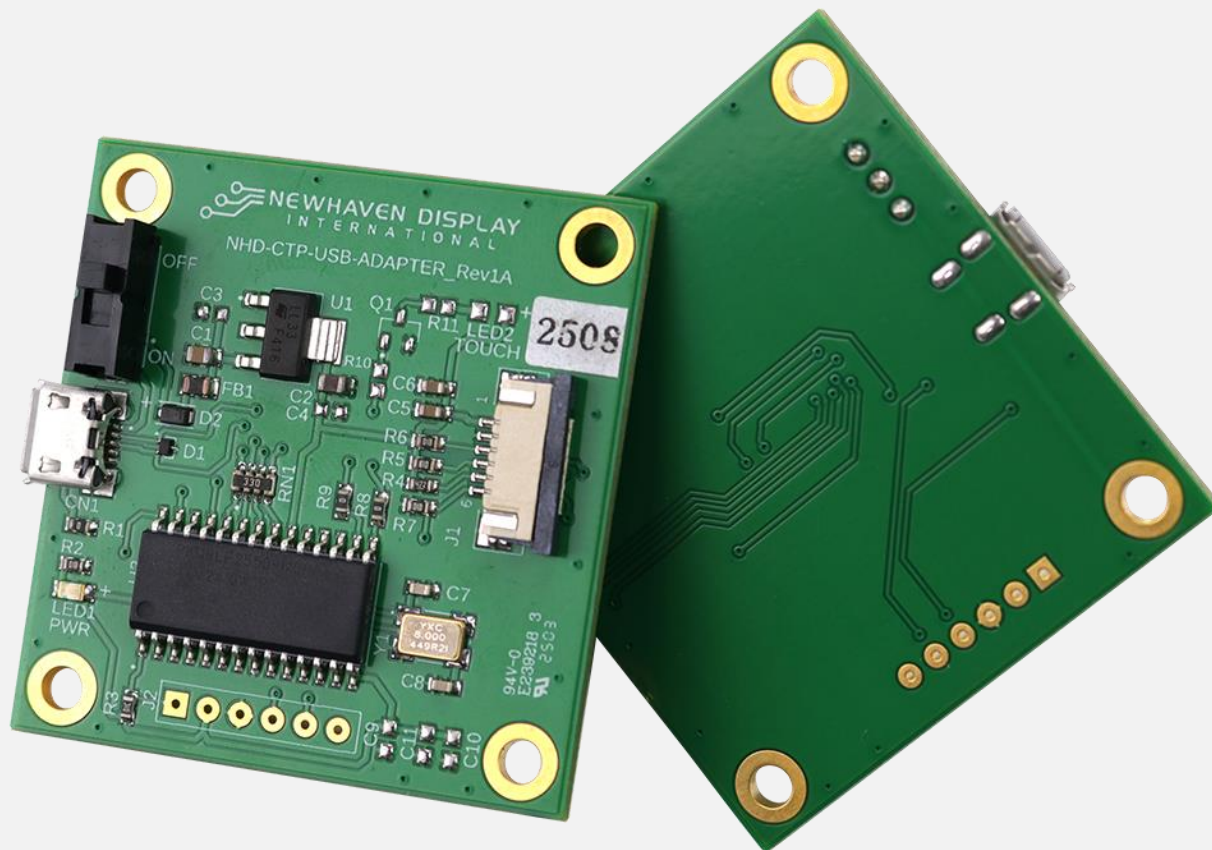


NHD-CTP-USB-ADAPTER Board



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Overview



When paired with our standard Capacitive Touch displays, the NHD-CTP-USB-ADAPTER board provides a streamlined approach to touch development. This adapter board is designed for use with any of the following touchscreen resolutions:

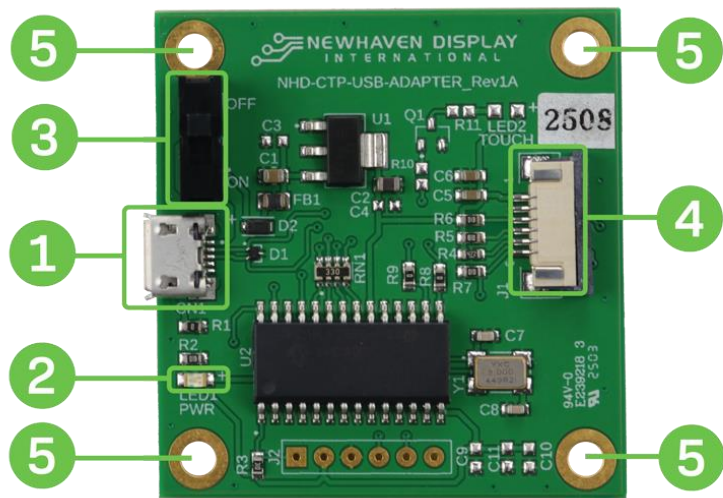
- **640 x 480 Pixels:** NHD-CTP-USB-ADAPTER-640480
- **800 x 480 Pixels:** NHD-CTP-USB-ADAPTER-800480
- **1024 x 600 Pixels:** NHD-CTP-USB-ADAPTER-1024600

This I2C to USB adapter board offers a simple way to connect a capacitive touchscreen display to a Raspberry Pi application, a Windows/Windows Embedded PC monitor, or a touchscreen HMI running Linux or another embedded system. Its plug-and-play design allows you to begin touch panel development right away.

Supported Capacitive TFT Modules

Part Number	Resolution	Touch Panel Type	Touch Panel Interface	Controller
NHD-3.5-640480EF-MSXP-CTP	640 x 480 Pixels	Capacitive	I ² C	FT5426G
NHD-4.3-800480CF-ASXP-CTP	800 x 480 Pixels	Capacitive	I ² C	FT5426G
NHD-4.3-800480EZ-ASXP-CTP		Capacitive	I ² C	FT5426G
NHD-5.0-800480AF-ASXP-CTP		Capacitive	I ² C	FT5426G
NHD-5.0-800480TF-ATXL#-CTP		Capacitive	I ² C	FT5426G
NHD-7.0-800480AF-ASXP-CTP		Capacitive	I ² C	FT5426G
NHD-7.0-800480EF-ASXV#-CTP		Capacitive	I ² C	FT5426G
NHD-7.0-800480AF-LSXP-CTP		Capacitive	I ² C	FT5426G
NHD-7.0-1024600AF-LSXP-CTP	1024 x 600 Pixels	Capacitive	I ² C	FT5426G
NHD-10.1-1024600BF-ASXP-CTP		Capacitive	I ² C	FT5536U
NHD-10.1-1024600BF-LSXP-CTP		Capacitive	I ² C	FT5536U

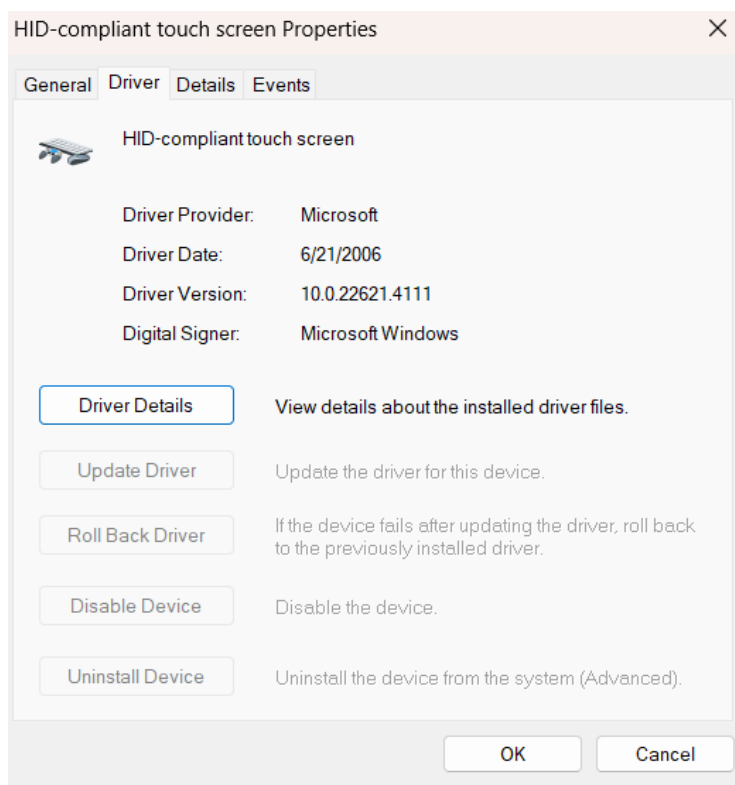
Interface Description



Num.	Description
1)	(CN1) Micro-USB (Type-B) Connector Supplies power to the adapter board and connects the Capacitive Touch Panel to a USB input as a USB-HID device.
2)	(LED1) LED Indicator for Power A green LED that illuminates when power is supplied to the adapter board.
3)	(S1) ON-OFF Switch Controls power to the adapter board. Be sure to switch OFF power before replacing the touch panel.
4)	(J1) Touch Panel Connector A 6-pin Molex connector for attaching the Capacitive Touch Panel to the adapter board.
5)	Mounting Holes Four mounting holes are provided for securing the board to a chassis or enclosure.

Connecting with Windows 10/11

Connecting the NHD-CTP-USB-ADAPTER board to a Windows system is fully plug-and-play. Begin by connecting a micro-USB cable from your PC to the CN1 connector on the PCB adapter board. Turn ON switch S1. The green LED (PWR) will illuminate once power is supplied. After the capacitive touch panel is connected via USB, Windows will automatically detect the device and install the necessary drivers.



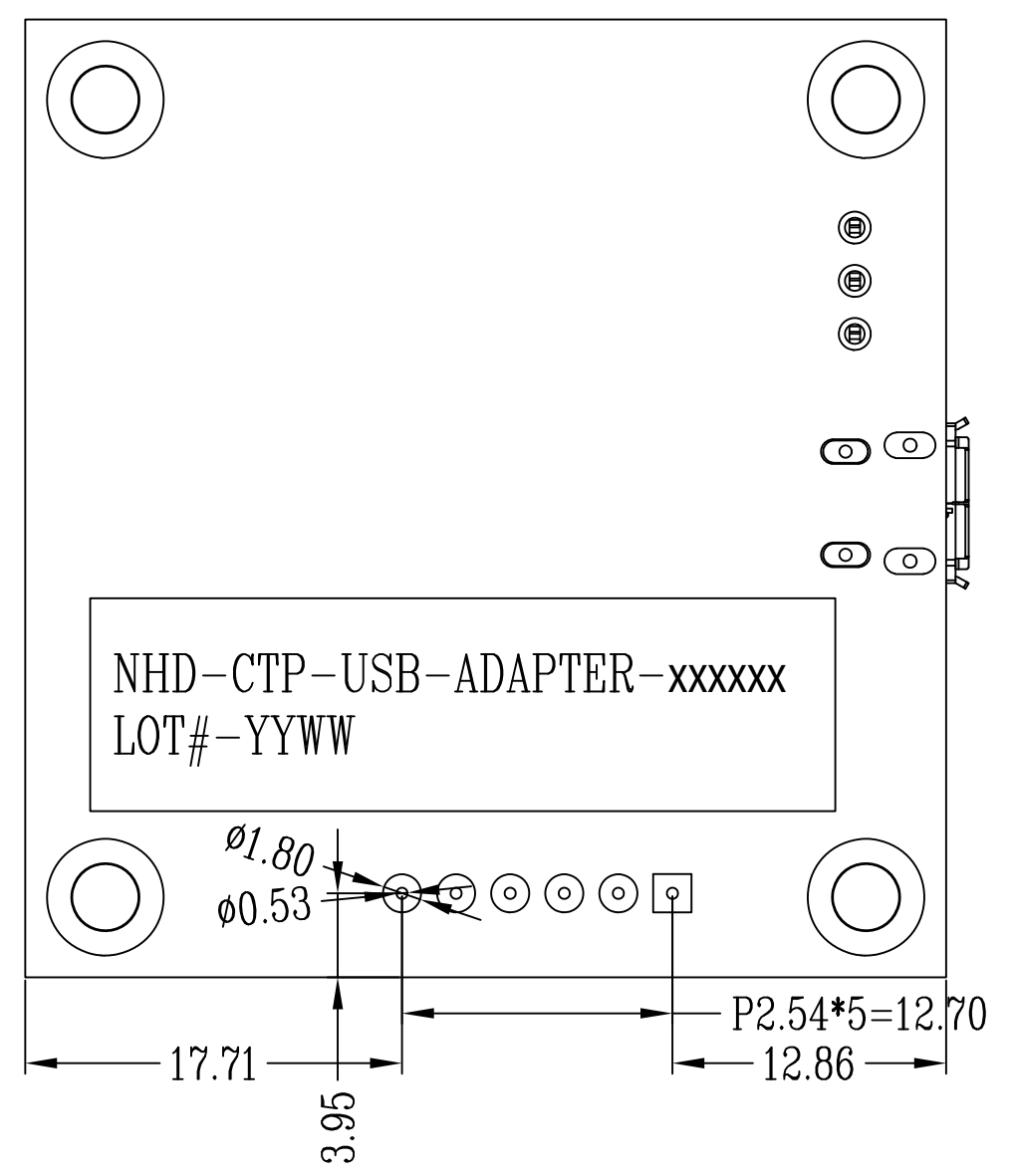
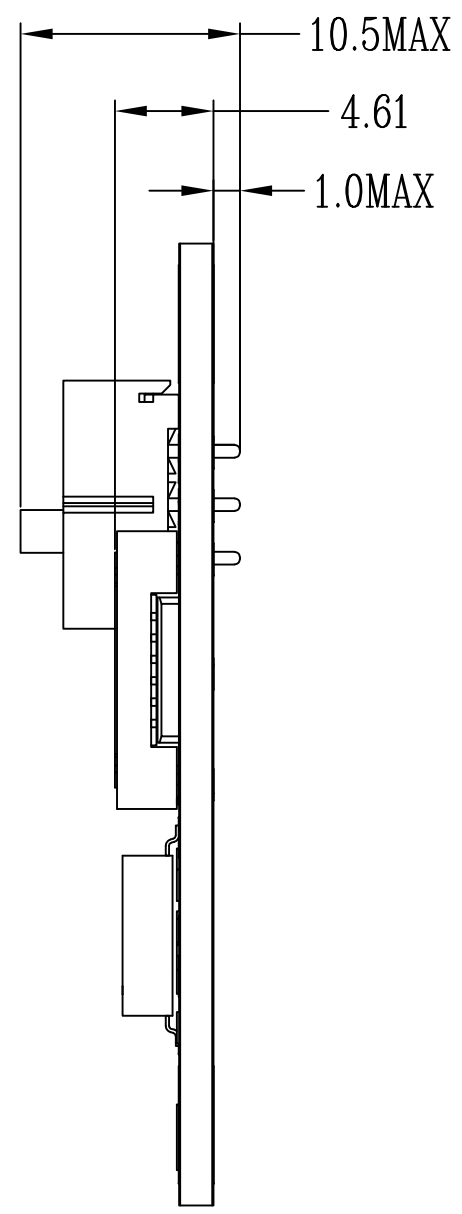
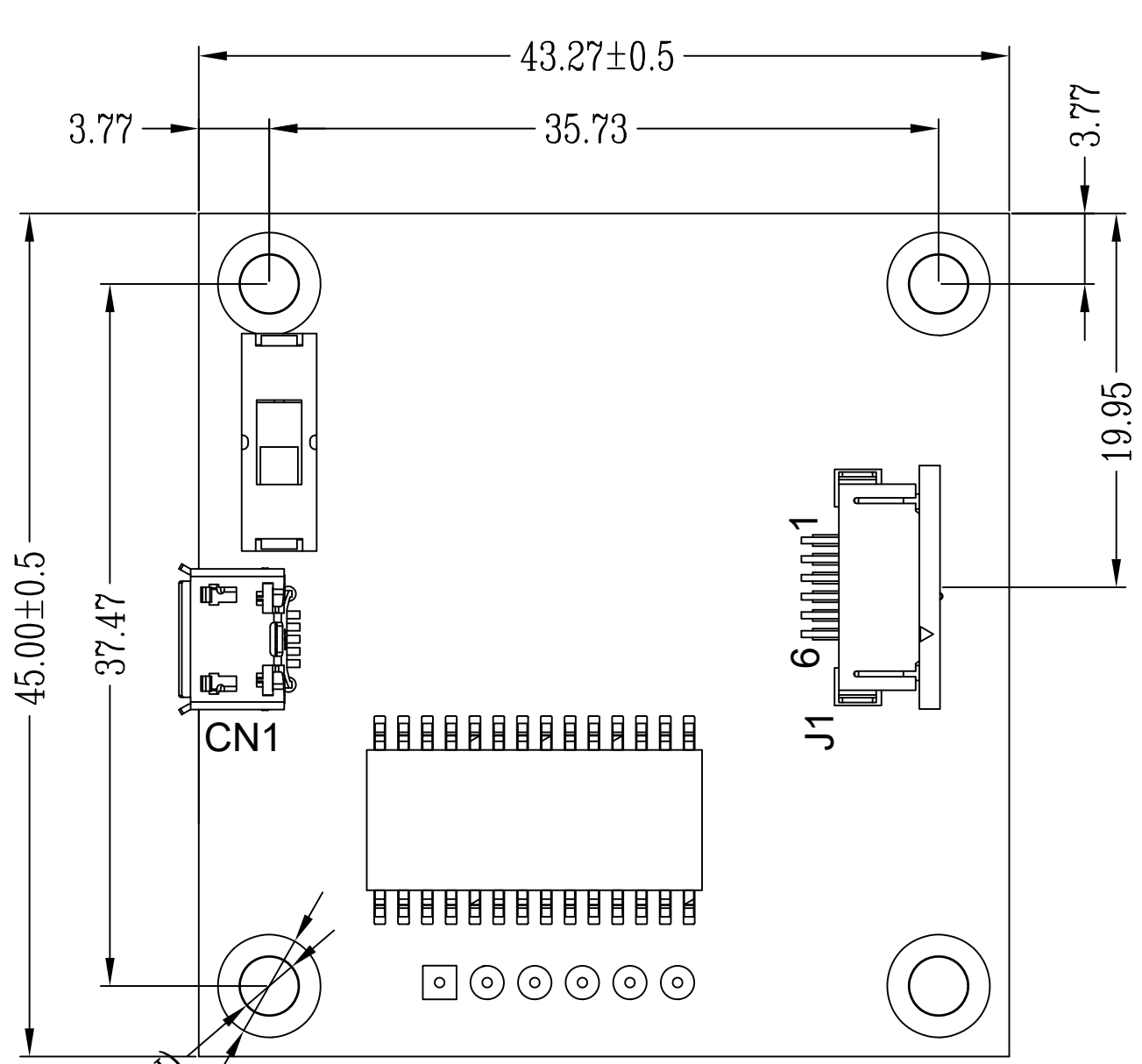
Verify Drivers for touch is the most recent.

Connecting with Linux

Connecting our NHD-CTP-USB-ADAPTER board to a Linux system is fully plug-and-play. You can plug directly the micro-USB cable from the Linux system to the CN1 connector onto the PCB. Turn ON the switch S1. The green LED (PWR) will illuminate when the board has power supplied to it. Once the capacitive touch panel is connected to the system via USB, Linux system will automatically detect without needing any drivers.



Mechanical Drawing



Standard Tolerance: (Unless otherwise specified) Linear: ±0.3mm	 NEWHAVEN DISPLAY INTERNATIONAL	
	Drawing/Part Number: NHD-CTP-USB-ADAPTER-xxxxxx	Revision: -
Unless otherwise specified: • Dimensions are in Millimeters • Third Angle Projection 	Drawn By: K. Lewis	Approved By: K. Lewis
	Drawn Date: 04/30/2025	Approved Date: 04/30/2025
This drawing is solely the property of Newhaven Display International, Inc. The information it contains is not to be disclosed, reproduced or copied in whole or part without written approval from Newhaven Display.		

Quality Information

Test Item	Content of Test	Test Condition	Note
High Temperature storage	Endurance test applying high storage temperature over an extended period.	+80°C , 96hrs	2
Low Temperature storage	Endurance test applying low storage temperature over an extended period.	-30°C , 96hrs	1,2
High Temperature Operation	Endurance test under electrical stress (voltage & current) combined with high thermal stress over an extended period.	+70°C , 96hrs	2
Low Temperature Operation	Endurance test under electrical stress (voltage & current) combined with low thermal stress over an extended period.	-20°C , 96hrs	1,2
High Temperature / Humidity Operation	Endurance test under electrical stress (voltage & current) with high temperature and high humidity conditions.	+60°C , 90% RH , 96hrs	1,2
Thermal Shock resistance	Endurance test under electrical stress (voltage & current) across a cycle of low and high thermal stress.	-20°C,30min -> 25°C,5min - >70°C,30min = 1 cycle 10 cycles	
Vibration test	Endurance test simulating vibration during transport and operation	10-55Hz , 15mm amplitude. 60 sec in each of 3 directions X,Y,Z For 15 minutes	3
Static electricity test	Endurance test applying electrostatic discharge.	VS=800V, RS=1.5kΩ, CS=100pF One time	

Note 1: No condensation should be observed.

Note 2: Tests conducted after 4 hours of storage at 25°C, 0% RH.

Note 3: Test performed directly on the product, not inside a container.

Precautions for Using LCDs/LCMs

See Precautions at <https://newhavendisplay.com/specs/precautions.pdf>

Document Revision History

Revision	Date	Comments
1	7/8/25	Initial release