



Zwingenstrasse 6-8, A-2380 Perchtoldsdorf

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Arduino UNO Q Touch Display Installation Manual

Version: V1.0 Date: September 2026

1. Product Overview

This touch display is designed specifically for the Arduino UNO Q and must be used with our Carrier board. The display uses the MIPI-DSI interface for video signal transmission and the I2C interface for capacitive touch functionality, making it suitable for embedded HMI, smart terminals, industrial control, and other applications.

Before using this display, please ensure that the Arduino UNO Q and Carrier board have been assembled, and the corresponding display and touch drivers have been installed.

2. Package Contents

Please verify that the following items are included in the package:

No.	Item	Quantity
1	Touch Display (with ribbon cable)	1 pc
2	Mounting Screws (M2.5x6mm)	6 pcs (4 used, 2 spare)
3	Installation Manual	1 pc
4	Anti-static Bag	1 pc

3. Pre-Installation Preparation

3.1 Required Materials

Please prepare the following materials before installation:

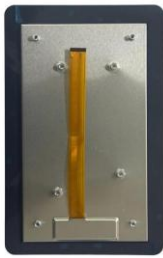
- Touch Display x 1
- Carrier board x 1
- Arduino UNO Q x 1



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- Type-C Data Cable x 1
- Mounting Screws x 4 (M2.5x6mm)

The materials are shown below:



Touch Display



Carrier board



Arduino UNO Q



Type-C Cable



Screws

3.2 Precautions

WARNING: The touch display is a precision electronic device. Before installation, please discharge static electricity from your body (by touching a grounded metal object) to avoid damaging the display or touch controller.

WARNING: Do not touch the gold fingers of the display ribbon cable with bare hands, as sweat may cause corrosion and poor contact.

WARNING: Do not bend or pull the display ribbon cable during installation. The minimum bend radius is 5mm; excessive bending may cause cable damage.

WARNING: All installation operations must be performed with the power OFF. Never plug or unplug the display ribbon cable while powered on.

4. Installation Steps

4.1 Connect the Display Ribbon Cable

Step 4.1: Connect the touch display ribbon cable to the MIPI-DSI interface (CN5) on the Carrier board.

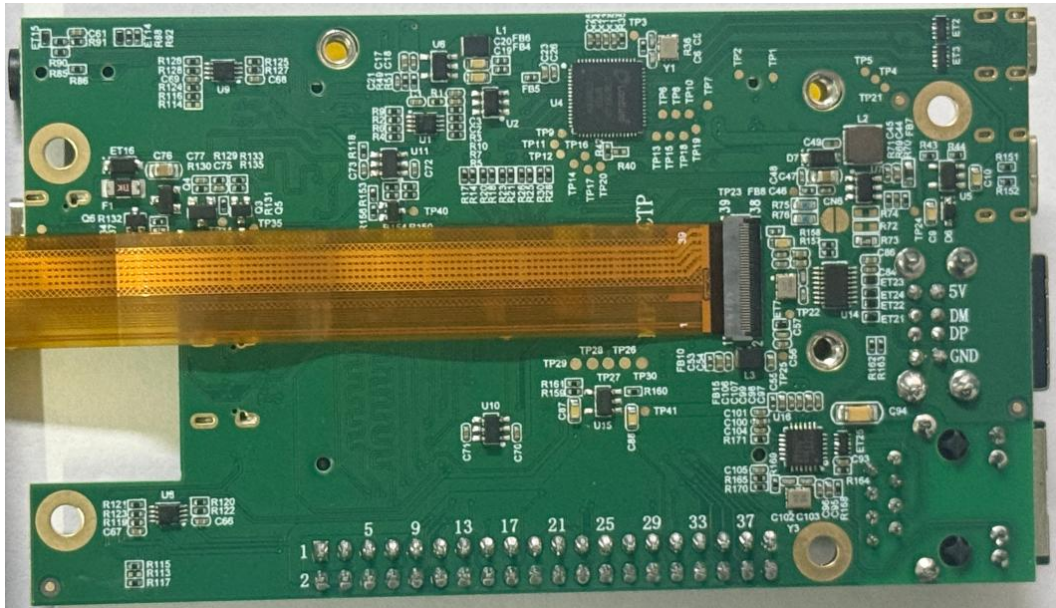
Key points:

- The gold fingers of the ribbon cable should face the PCB (i.e., gold fingers facing down).



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- Gently flip up the black latch with your hand.
- Insert the ribbon cable from the opposite side of the black latch. Gently push it in until it stops.
- After confirming the cable is fully inserted, press the black latch down to secure the cable.



NOTE: When inserting the cable, keep it straight and do not insert at an angle, as this may damage the connector pins.

4.2 Secure the Carrier board to the Display

Step 4.2: Secure the Carrier board to the touch display using screws.

Key points:

- Align the screw holes on the Carrier board with the screw posts on the back of the touch display.
- Use 4 pieces of M2.5x6mm screws to secure the board to the display.
- Tighten the screws diagonally and gradually. Apply moderate force to avoid stripping threads or damaging the display.



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4.3 Install the Arduino UNO Q

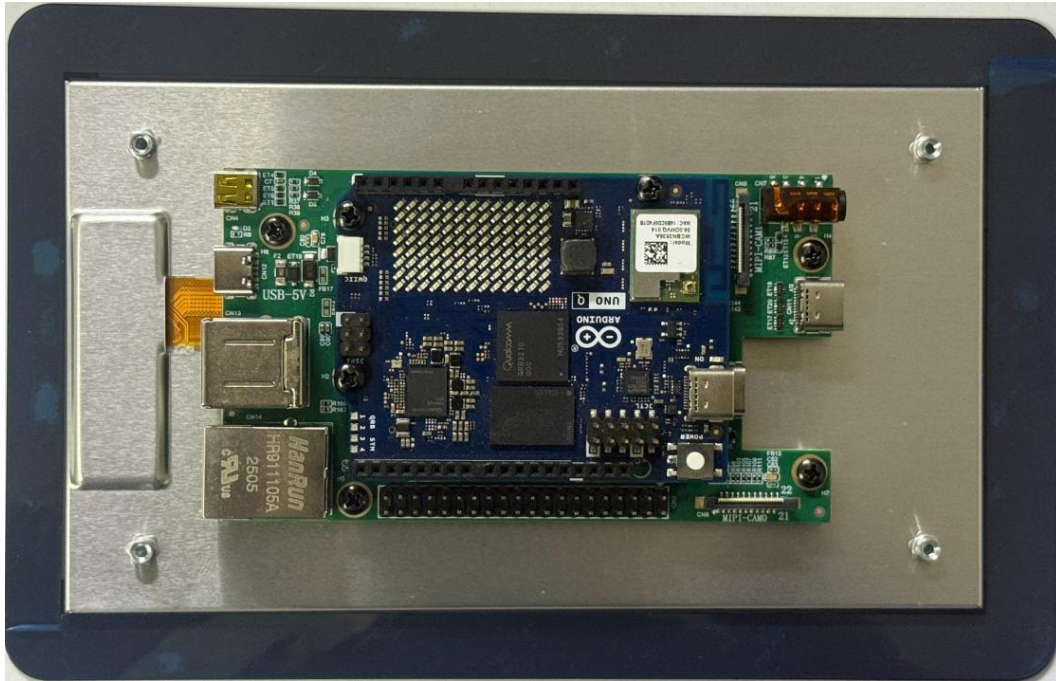
Step 4.3: Install the Arduino UNO Q onto the Carrier board.

Key points:

- Ensure the Type-C connector on the Arduino UNO Q board aligns with the Type-C cutout on the Carrier board.
- Align the pin headers of the Arduino UNO Q board with the connector sockets on the Carrier board, then press down firmly until fully seated.
- Secure the Arduino UNO Q with screws.



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WARNING: When installing the Arduino UNO Q, ensure the pins are fully aligned before pressing. Never insert at an angle, as this may bend or damage the pins.

4.4 Connect the Type-C Data Cable

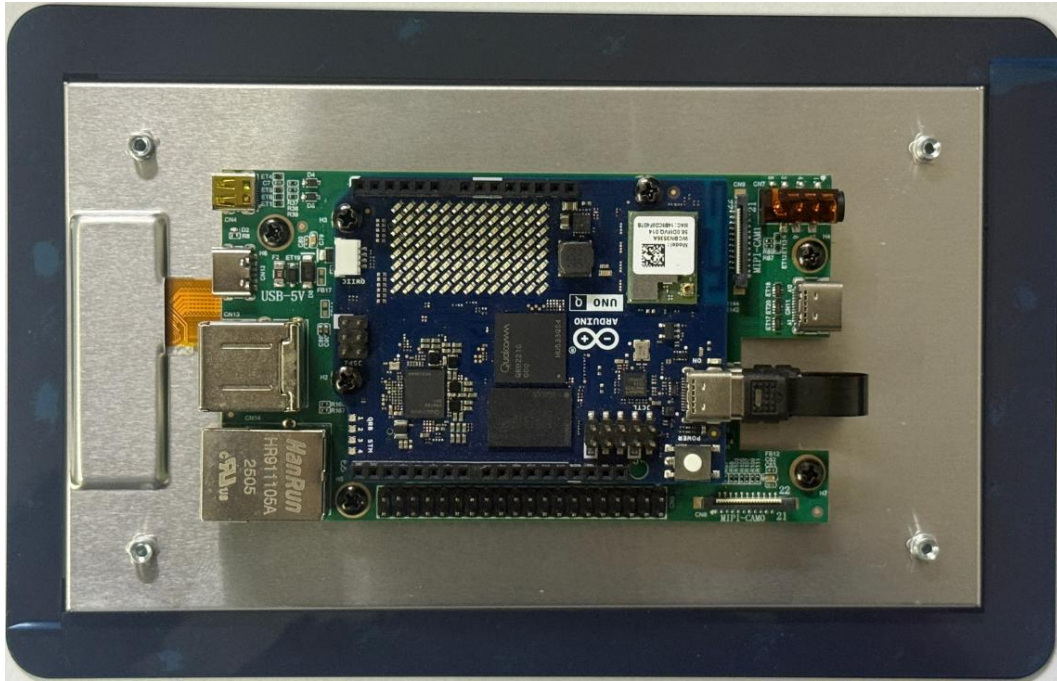
Step 4.4: Connect the Type-C data cable.

Key points:

- First, plug one end of the Type-C cable into the Type-C interface on the Carrier board (CN10, USB Type-C TO Arduino).
- Then, plug the other end into the Type-C interface on the Arduino UNO Q development board.



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NOTE: The Type-C cable carries USB signals between the Carrier board and the Arduino UNO Q board. Ensure both ends are firmly connected.

4.5 Post-Installation Check

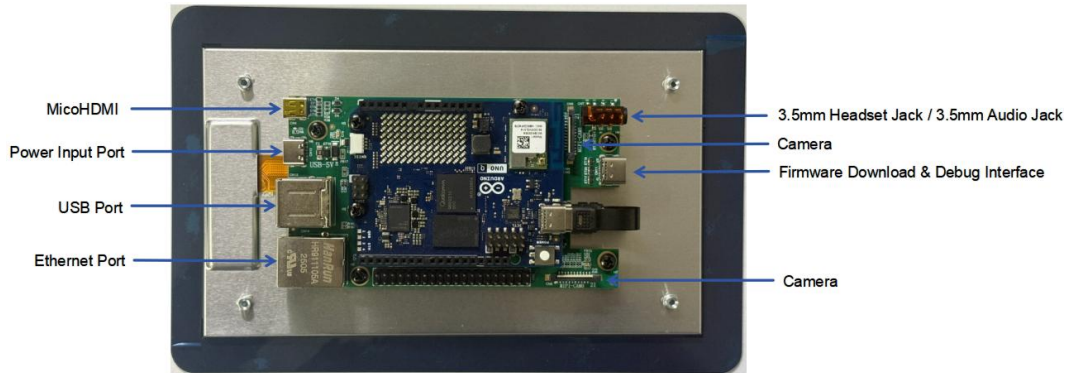
Step 4.5: Verify that the installation is correct.

After installation, please check the following items:

- The display ribbon cable is firmly inserted and the black latch is secured.
- All 4 screws between the Carrier board and display are tightened.
- The Arduino UNO Q is fully inserted into the Carrier board connector and secured with screws.
- Both ends of the Type-C data cable are firmly connected.



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5. Display and Touch Function Verification

5.1 Prerequisite: Complete Display Driver Configuration

WARNING: After installing the touch display, it will NOT light up automatically upon power-on. You must first complete the display and peripheral driver package installation and display driver configuration according to Chapter 5 "Software and Firmware Configuration" in the Carrier Board User Manual. Only then will the display light up and function properly.

Please refer to the Carrier Board User Manual for the following steps:

- 5.3 Flash Core System Firmware (if kernel version is not 7.0.0)
- 5.4 Install Display and Peripheral Driver Package
- 5.5 Configure Display Driver

NOTE: After driver configuration is complete, the system will automatically restart. At this point, the display should light up and show the system desktop.

5.2 Connect Power

WARNING: You MUST plug in the 5V/2A power adapter first, then connect the USB cable to the computer. The order must not be reversed!

Use a 5V/2A power adapter plugged into the power interface (CN12) on the Carrier board to power the entire system.

5.3 Verify Display Function

After completing the driver configuration and restarting, the display should light up normally and show the system desktop. If the display works correctly, the MIPI-DSI interface is connected properly and the driver configuration is successful.



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NOTE: If the display does not light up, please first confirm that all driver configuration steps in the Carrier Board User Manual have been completed, then check that the ribbon cable is firmly connected.

5.4 Verify Touch Function

After the display is working, touch the screen with your finger to verify touch functionality:

- Tap desktop icons to confirm touch response is normal.
- Swipe across the screen to confirm touch tracking is smooth, with no jumping or drifting.
- Test multi-touch (e.g., pinch-to-zoom) to confirm multi-touch works.

NOTE: Touch functionality communicates via the I2C interface. If there is no touch response, please check the ribbon cable connection or confirm that the driver package has been correctly installed.

6. Important Notes

6.1 ESD Protection

The touch display is sensitive to electrostatic discharge. Please note the following:

- Discharge static electricity from your body before installation.
- Avoid rapidly rubbing the display surface in dry environments.
- Store the display in the anti-static bag when not in use for extended periods.

6.2 Ribbon Cable Care

The display ribbon cable is a fragile component. Please note:

- Do not repeatedly bend the cable. The minimum bend radius is 5mm.
- Always open the connector latch before removing the cable. Never pull it out by force.
- If the cable is damaged, do not attempt to replace it yourself. Contact your supplier.

6.3 Power Requirements

WARNING: You MUST use a power adapter rated 5V/2A or higher. Insufficient power may cause display flickering, touch failure, or system instability.

WARNING: Power-on sequence: plug in the power adapter first, then the USB cable. Power-off sequence is reversed: unplug the USB cable first, then the power adapter.



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6.4 Operating Environment

Operating Temperature: -20C ~ 70C

Storage Temperature: -30C ~ 80C

Operating Humidity: 10% ~ 90% (non-condensing)

WARNING: Do not use in humid, dusty, or strong electromagnetic interference environments, as these may affect display and touch performance.

7. FAQ and Troubleshooting

Symptom	Troubleshooting
Display does not light up at all	1. Check that the power adapter is rated 5V/2A and is firmly connected; 2. Check that the display ribbon cable is firmly inserted with gold fingers facing the correct direction; 3. Confirm the display driver is properly installed; 4. Try reinserting the ribbon cable and restarting the device.
Display lights up but no image / garbled screen	1. Check that the cable is fully inserted; reinsert if necessary; 2. Inspect the cable for bends or damage; 3. Confirm the display driver configuration matches the screen resolution.
Touch completely unresponsive	1. Check that the ribbon cable is firmly connected; 2. Confirm the touch driver is properly installed; 3. Check for I2C address conflicts with other devices; 4. Restart the device and test again.
Touch drifting / jumping points	1. Check that the power supply is stable; voltage fluctuations may cause touch anomalies; 2. Clean the display surface to remove water or oil; 3. Move away from sources of strong electromagnetic interference; 4. Recalibrate touch (if supported by the system).
Display works but some areas do not respond to touch	1. Check for poor contact on corresponding cable pins; 2. The area may have been damaged by physical pressure on the touch layer; 3. Contact your supplier for inspection and repair.
Screen flickering	1. Check that the power adapter has sufficient power (5V/2A or higher recommended); 2. Check that the ribbon cable is not loose; 3. Reduce screen brightness to see if the issue improves.



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If the above methods do not resolve the issue, please contact your supplier for technical support.

8. Interface Reference

For detailed interface functions, pin definitions, and electrical specifications of the Carrier board, please refer to the Carrier Board User Manual.

Display connector: CN5 (MIPI-LCD & CTP, 41-Pin)

Touch communication interface: I2C (integrated in the CN5 ribbon cable)

9. Disclaimer

WARNING: This product is covered by the manufacturer's warranty under normal use conditions. However, the manufacturer shall NOT be liable for product damage caused by the following improper human operations:

- Installation, wiring, or operation not performed in accordance with the steps and methods specified in this manual.
- Plugging or unplugging the display ribbon cable or other interfaces while powered on.
- Excessive bending, pulling, or damaging of the display ribbon cable.
- Using a power adapter that does not meet the required specifications (non 5V/2A).
- Product exposure to water, moisture, drops, or physical force.
- Unauthorized disassembly, modification, or repair of the product.
- Use or storage in environments exceeding the specified operating temperature or humidity ranges.

For any questions, please contact your supplier for technical support.