

NEXTION NX4832K035

NEXTION NX4832K035 Enhanced HMI Display User Manual

Model: NX4832K035

1. INTRODUCTION

This manual provides essential information for the proper setup, operation, and maintenance of your NEXTION NX4832K035 Enhanced Human Machine Interface (HMI) Display. Please read this manual thoroughly before using the device to ensure optimal performance and longevity.

2. PRODUCT OVERVIEW

The NEXTION NX4832K035 is a 3.5-inch Enhanced HMI display, designed for use in various embedded control systems. It features a resistive touch panel, allowing for direct user interaction. This display simplifies the development of graphical user interfaces (GUIs) for microcontrollers like Arduino and Raspberry Pi, communicating via serial port. The included case provides protection for the display module.

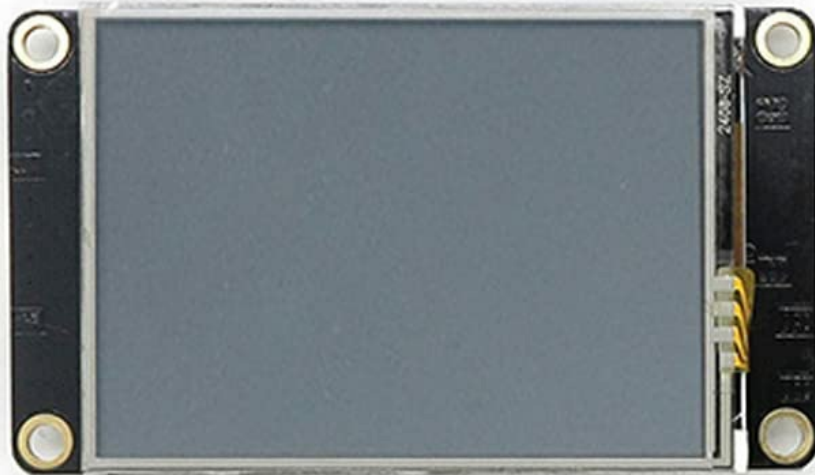


Figure 1: NEXTION NX4832K035 Enhanced HMI Display with protective case.

3. FEATURES

- **Display Size:** 3.5-inch diagonal screen.
- **Resolution:** 480x320 pixels.
- **Touch Type:** Resistive Touch Panel for direct user input.
- **Memory:** 32 MB Flash memory for user data and GUI projects.
- **Operating System:** Runs on the NEXTION NX operating system.
- **Connectivity:** Serial (UART) interface for communication with host microcontrollers.
- **Integrated Case:** Provides protection and a finished look for the display module.
- **Enhanced Series:** Offers advanced features and improved performance over basic models.

4. PACKAGE CONTENTS

Verify that all items are present in your package:

- 1 x NEXTION NX4832K035 Enhanced HMI Display
- 1 x Protective Case (Black)
- 1 x Connection Cable (typically a 4-pin serial cable)

5. SETUP

5.1 Hardware Connection

1. **Identify Ports:** Locate the serial communication ports (TX, RX, GND, VCC) on both the NEXTION display and your host microcontroller (e.g., Arduino, Raspberry Pi).
2. **Connect Power:** Connect the VCC pin of the NEXTION display to the 5V or 3.3V power supply of your microcontroller (refer to your microcontroller's specifications for compatible voltage). Connect the GND pin to the ground of your microcontroller.
3. **Connect Serial Data:** Connect the TX (Transmit) pin of the NEXTION display to the RX (Receive) pin of your microcontroller. Connect the RX (Receive) pin of the NEXTION display to the TX (Transmit) pin of your microcontroller.
4. **Secure Case:** If not already assembled, carefully place the NEXTION display into its protective case, ensuring all connections remain accessible and secure.

5.2 Software Configuration

1. **Install NEXTION Editor:** Download and install the official NEXTION Editor software from the NEXTION website (nextion.tech/download/). This software is used to design your HMI graphical interface.
2. **Create HMI Project:** Use the NEXTION Editor to design your desired user interface, including buttons, text fields, progress bars, and other graphical elements.
3. **Upload Project:** Compile your HMI project in the NEXTION Editor and upload it to the display via a USB-to-TTL serial adapter (not included) or directly through your microcontroller if it supports in-system programming. Ensure the correct COM port and baud rate are selected during upload.
4. **Microcontroller Code:** Write or adapt code for your host microcontroller to communicate with the NEXTION display via serial commands. The NEXTION protocol is well-documented and libraries are available for popular platforms like Arduino.

6. OPERATING INSTRUCTIONS

6.1 Powering On

Once the hardware connections are secure and the HMI project is uploaded, apply power to your host microcontroller. The NEXTION display will power on and load the programmed HMI interface.

6.2 Interacting with the Display

Interact with the display using the resistive touch panel. Tapping on buttons or input fields will send corresponding commands or data to your host microcontroller via the serial interface. The microcontroller can then process these inputs and send commands back to the NEXTION display to update its interface.

6.3 Communication Protocol

The NEXTION display communicates using a simple serial protocol. Commands are sent as ASCII strings or hexadecimal values, terminated by specific end characters. Refer to the NEXTION instruction set documentation for a complete list of commands and their usage.

7. MAINTENANCE

7.1 Cleaning

To clean the display surface, use a soft, lint-free cloth. If necessary, slightly dampen the cloth with water or a mild, non-abrasive screen cleaner. Avoid using harsh chemicals, alcohol, or abrasive materials, as these can damage the screen or case.

7.2 Storage

When not in use, store the display in a cool, dry place, away from direct sunlight and extreme temperatures. Keep it in its protective case to prevent scratches and physical damage.

7.3 Handling

Handle the display by its edges. Avoid applying excessive pressure to the screen, especially the resistive touch panel, as this can cause damage.

8. TROUBLESHOOTING

- **Display Not Powering On:**
 - Check power connections (VCC and GND) to ensure they are correctly wired and receiving adequate voltage (typically 5V or 3.3V).
 - Verify the power supply of your host microcontroller is active.
- **No Display Output / Blank Screen:**
 - Ensure an HMI project has been successfully uploaded to the display. If not, upload a basic project using the NEXTION Editor.
 - Check for any error messages during the project upload process.
- **Touch Screen Not Responding:**
 - Perform a touch calibration if available in your HMI project or through specific NEXTION commands.
 - Ensure the screen surface is clean and free from obstructions.
 - Verify that the HMI project includes touch events for the interactive elements.
- **Communication Errors with Microcontroller:**
 - Double-check the TX/RX wiring between the NEXTION display and your microcontroller (TX to RX, RX to TX).
 - Confirm that the baud rate configured in your microcontroller's code matches the baud rate set in your NEXTION HMI project.
 - Ensure your microcontroller's serial port is correctly initialized and not being used by other processes.
 - Verify that the serial commands sent from the microcontroller adhere to the NEXTION communication protocol.

9. SPECIFICATIONS

Feature	Specification
Model Name	NX4832K035
Screen Size	3.5 Inches
Resolution	480x320 pixels
Touch Type	Resistive
Memory Storage Capacity	32 MB Flash

Feature	Specification
Operating System	NX
Connectivity Technology	GPIO, USB (via adapter)
Case Color	Black
Item Weight	3.87 ounces (approx. 110g)
Package Dimensions	10.47 x 3.03 x 1.34 inches

10. WARRANTY AND SUPPORT

The NEXTION NX4832K035 display is covered by a standard manufacturer's warranty. For specific warranty terms and conditions, please refer to the official NEXTION website or contact your point of purchase.

For technical support, documentation, and community forums, please visit the official NEXTION website: nextion.tech. The online community and extensive documentation are valuable resources for project development and troubleshooting.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question