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> NEXTION NX8048P050-011R-Y Intelligent HMI Display User Manual

## NEXTION NX8048P050-011R-Y

# NEXTION NX8048P050-011R-Y Intelligent HMI Display User Manual

Model: NX8048P050-011R-Y

## 1. INTRODUCTION

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This manual provides essential information for the proper installation, operation, and maintenance of your NEXTION NX8048P050-011R-Y Intelligent Human Machine Interface (HMI) Display. The NX8048P050-011R-Y is a 5-inch resistive touch display designed for various control and visualization applications. Please read this manual thoroughly before using the device to ensure safe and efficient operation.



Figure 1: NEXTION NX8048P050-011R-Y Intelligent HMI Display. This image shows the front view of the 5-inch display module, highlighting its screen and bezel.

## 2. SAFETY INFORMATION

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Observe the following safety precautions to prevent damage to the device or injury to yourself:

- Do not expose the device to extreme temperatures, humidity, or direct sunlight.
- Ensure the power supply voltage matches the device's requirements (5 Volts).
- Avoid dropping or subjecting the device to strong impacts.
- Do not attempt to disassemble or modify the device. Refer all servicing to qualified personnel.
- Keep the device away from liquids and corrosive substances.

## 3. PACKAGE CONTENTS

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Upon opening the package, verify that all items are present and undamaged:

- NEXTION NX8048P050-011R-Y HMI Display Module
- Connection Cable (typically a 4-pin serial cable)
- Quick Start Guide (may be included)

Note: Specific accessories may vary. Please check the product packaging for a complete list.

## 4. PRODUCT FEATURES

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The NEXTION NX8048P050-011R-Y HMI Display offers the following key features:

- **Display Size:** 5.0 Inches
- **Resolution:** 800 x 480 pixels
- **Touch Type:** Resistive Touch Screen
- **Brightness:** 300 cd/m<sup>2</sup>
- **Voltage:** 5 Volts DC
- **Aspect Ratio:** 1.66:1
- **Screen Surface:** Glossy
- Integrated microcontroller for HMI functionality

## 5. SPECIFICATIONS

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Attribute	Value
Model Number	NX8048P050-011R-Y
Brand	NEXTION
Screen Size	5 Inches
Resolution	800 x 480
Aspect Ratio	1.66:1
Voltage	5 Volts
Image Brightness	300 cd/m <sup>2</sup>
Screen Surface Description	Glossy
Product Dimensions	7.09 x 4.72 x 1.57 inches
Item Weight	11.7 ounces

## 6. SETUP

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Follow these steps to set up your NEXTION HMI Display:

1. **Power Connection:** Connect the provided power cable to the display's power input and to a compatible 5V DC power source. Ensure the power source can provide sufficient current for the display.
2. **Data Connection:** Connect the serial communication cable (e.g., UART) from your host microcontroller or computer to the display's serial port. Ensure correct TX/RX connections.
3. **Software Configuration:**
  - Download and install the official NEXTION Editor software from the manufacturer's website.
  - Create or load your HMI project file (.HMI) using the NEXTION Editor.

- Compile the project and upload it to the display via the serial connection or an SD card, following the software's instructions.
4. **Initial Power On:** Once the project is uploaded, power on the display. The programmed interface should appear.

## 7. OPERATING INSTRUCTIONS

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The NEXTION NX8048P050-011R-Y operates based on the HMI project loaded onto it. Interaction primarily occurs via the resistive touch screen.

- **Touch Input:** Use a finger or a stylus to interact with on-screen buttons, sliders, text input fields, and other graphical elements defined in your HMI project.
- **Communication:** The display communicates with your host device (e.g., Arduino, Raspberry Pi) via the serial port. Commands and data are sent and received according to the protocol defined in your HMI project and host code.
- **Power Cycle:** To restart the display, disconnect and reconnect the 5V power supply.

## 8. MAINTENANCE

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Proper maintenance ensures the longevity and optimal performance of your display.

- **Cleaning the Screen:** Gently wipe the screen with a soft, lint-free cloth. For stubborn smudges, slightly dampen the cloth with water or a mild, non-abrasive screen cleaner. Do not spray cleaner directly onto the screen.
- **Storage:** When not in use, store the display in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Firmware Updates:** Periodically check the NEXTION official website for firmware updates for your display model. Follow the provided instructions carefully for any update procedures.

## 9. TROUBLESHOOTING

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If you encounter issues with your display, refer to the following common problems and solutions:

- **No Power/Display:**
  - Verify the 5V power supply is correctly connected and functional.
  - Check all cable connections for looseness or damage.
  - Ensure the power source provides adequate current.
- **Display Shows Blank Screen or Old Project:**
  - Confirm that your HMI project was successfully uploaded to the display.
  - Try re-uploading the project.
  - Ensure the SD card (if used for upload) is properly formatted and contains the correct .tft file.
- **Touch Screen Unresponsive:**
  - Perform a power cycle (disconnect and reconnect power).
  - Ensure the screen is clean and free of debris.
  - Verify that the HMI project includes touch calibration if necessary.
- **Communication Issues with Host Device:**
  - Check serial port connections (TX/RX).

- Verify baud rates match between the display and the host device.
- Ensure the host device's code is correctly sending and receiving commands.

For further assistance, refer to the official NEXTION documentation or support forums.

## 10. WARRANTY AND SUPPORT

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NEXTION products are typically covered by a limited manufacturer's warranty. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official NEXTION website.

For technical support, documentation, and software downloads, please visit the official NEXTION support portal or contact their customer service directly. When seeking support, please have your product model number (NX8048P050-011R-Y) and purchase information readily available.