NX8048P050-011R

Overview

Nextion is a Human Machine Interface （HMI） solution combining an onboard processor and memory touch display with Nextion Editor software for HMI GUI project development. Using the NEXTION Editor software, you can quickly develop the HMI GUI by drag-and-drop components (graphics, text, button, slider etc.) and ASCII text-based instructions for coding how components interact at the display side. Nextion HMI display connects to peripheral MCU via TTL Serial (5V, TX, RX ,GND) to provide event notifications that peripheral MCU can act on, the peripheral MCU can easily update progress and status back to Nextion display utilizing simple ASCII text-based instructions.

The Intelligent Series products have more powerful hardware in terms of MCU, Flash storage and SRAM compared with Basic Series and Enhanced Series. What's more and new? The audio, video and animation play functions enrich user's project HMI interaction. The Intelligent Series supports advanced software features and functions such as transparent components, page loading effect, component Move and Drag .etc.

Package include: Nextion NX8048P050-011R HMI Display*1, XH2.54 4P wire*1, power supply test board*1.
Note: the small power supply test board and connecting wire inside the package allow you to test if the electrical supply is enough or not. See the image below on how to use it.
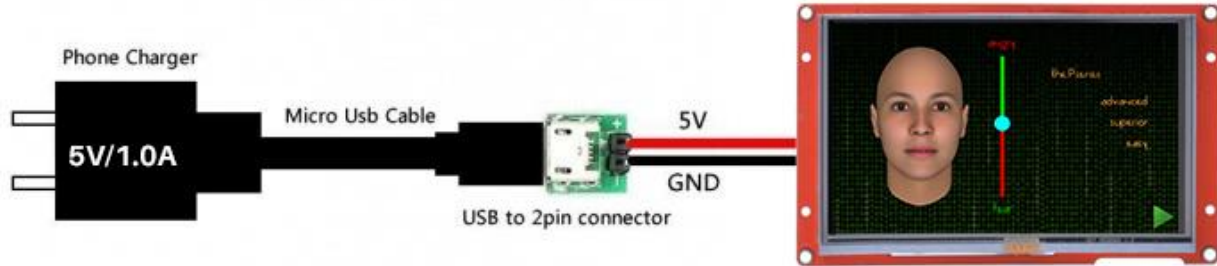
Caution:

Working under insufficient power supply condition will damage the Nextion model easily.

Blurred screen? Flashing? You may be suffering from power shortages. Power off at the first possible moment. No more repeated attempts to damage your Nextion model.

A small connector is included in the package. Please try to power Nextion with your phone charger through the connector to check if Nextion works well.

A high quality usb cable is required.

Nextion Models

Nextion Type	Intelligent Series
Nextion Models	NX8048P050-011R (5.0 inch resistive touchscreen without enclosure)

Specifications

	Data	Description
Color	65K 65536 colors	16 bit 565, 5R-6G-5B
Layout size	136.9mm(L)×84mm(W)×5.8mm(H)	NX8048P050-011R
Active Area (A.A.)	120.7mm(L)×75.8mm(W)	
Visual Area (V.A.)	108.00mm(L)×64.80mm(W)	
Resolution	800×480 pixel	Also can be set as 800×480
Touch type	Resistive	
Touches	> 1 million	
Backlight	LED	
Backlight lifetime (Average)	>30,000 Hours	

Brightness	300nit	0% to 100%, the interval of adjustment is 1%
Weight	130g	

Electronic Characteristics

	Test Conditions	Min	Typical	Max	Unit
Operating Voltage		4.65	5	6.5	V
Operating Current	VCC=+5V, Brightness is 100%	–	220	–	mA
	SLEEP Mode	–	170	–	mA
Power supply recommend：**5V, 1.0A, DC**					

Working Environment & Reliability Parameter

	Test Conditions	Min	Typical	Max	Unit
Working Temperature	5V, Humidity 60%	-20	25	70	°C
Storage Temperature		-30	25	85	°C
Working Humidity	25°C	10%	60%	90%	RH

Interfaces Performance

	Test Conditions	Min	Typical	Max	Unit
Serial Port Baudrate	Standard	2400	9600	921600	bps
Output High Voltage (TXD)	IOH=1mA	3.0	5.0	Vin	V
Output Low Voltage(TXD)	IOL=-1mA		0.1	0.2	V
Input High Voltage(RXD)		3.0	5.0	Vin	V
Input Low Voltage(RXD)		-0.7	0.0	1.3	V
Serial Port Mode	3.3V/5.0V TTL				

Serial Port	4Pin_2.54mm
USB interface	NO
SD card socket	Yes (FAT32 format), support maximum 32G Micro SD Card * microSD card socket is exclusively used to upgrade Nextion firmware /HMI design
Extended IO	8 Digital extended GPIO
	IO0-IO7 support input, output and component binding event
	IO6-IO7 support PWM
RTC	built-in RTC support (Battery type: CR1220)

Vin: the input voltage of power supply

Memory Features

Memory Type	Test Conditions	Min	Typical	Max	Unit
FLASH Memory	Store fonts and images			120	MB
User Storage	EEPROM			1024	BYTE
RAM Memory	Store variables			512	KB
Instruction Buffer	Instruction Buffer			4096	BYTE

Audio Features

Speaker	Parameter	Min	Typical	Max	Unit
Power	–	0.5	–	1.5	W
Audio Connector Type：1.25T-2-2A (1.25mm pitch 2-pin housing)					

* NX8048P050-011R do not have speaker in the package.