Overview

Nextion is a seamless Human Machine Interface (HMI) solution that provides a control and visualisation interface between a human and a process, machine, application or appliance. Nextion is mainly applied to IoT or consumer electronics field. It is the best solution to replace the traditional LCD and LED Nixie tube. With the Nextion Editor software, users are able to create and design their own interfaces for Nextion display.

The Nextion Enhanced series are more powerful compared to the Nextion Basic series. In addition to a faster MCU clock, the Enhanced series support: built-in RTC, 1K EEPROM for user data, 8 digital GPIO, larger Flash capacity, and more RAM (for models 3.5" and higher).

Package includes: Nextion Display, connecting wire, a power supply test board.

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.
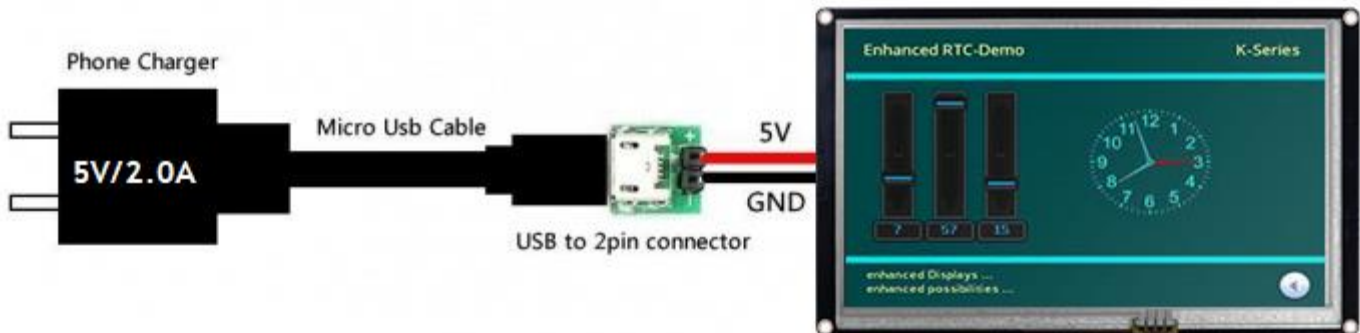
Nextion Models

Nextion Type	Enhanced Series
Nextion Models	NX8048K070_011N (N: No touch)
	NX8048K070 (Resistive touchscreen without enclosure)
	NX8048K070_011R (Resistive touchscreen with enclosure)
	NX8048K070_011C (C: Capacitive Multi-touch screen with enclosure)

Specifications

	Data	Description
Color	64K 65536 colors	16 bit 565, 5R-6G-

		5B
Layout size	181(L)×108(W)×7.7(H)	NX8048K070_011N
	181(L)×108(W)×9.3(H)	NX8048K070
	181(L)×108(W)×9.3(H)	NX8048K070_011R
	181(L)×108(W)×9.3(H)	NX8048K070_011C
Active Area (A.A.)	164.90mm(L)×100.00mm(W)	
Visual Area (V.A.)	154.08mm(L)×85.92mm(W)	
Resolution	800×480 pixel	Also can be set as 480×800
Touch type	Resistive	
Touches	> 1 million	
Backlight	LED	
Backlight lifetime (Average)	>30,000 Hours	
Brightness	250nit (NX8048K070_011N)	0% to 100%, the interval of adjustment is 1%
	230 nit (NX8048K070_011R)	0% to 100%, the interval of adjustment is 1%
Weight	216g (NX8048K070_011N)	
	268g (NX8048K070)	
	598g (NX8048K070_011R)	
	598g (NX8048K070_011C)	

Electronic Characteristics

	Test Conditions	Min	Typical	Max	Unit
Operating Voltage		4.75	5	7	V
Operating Current	VCC=+5V, Brightness is 100%	–	510	–	mA
	SLEEP Mode	–	15	–	mA
Power supply recommend：**5V, 2.0A, 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	115200	bps
Output High Voltage	IOH=-1mA	3.0	3.2		V
Output Low Voltage	IOL=1mA		0.1	0.2	V
Input High Voltage		2.0	3.3	5.0	V
Input Low Voltage		-0.7	0.0	1.3	V

Serial Port Mode	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 * IO pin / ports are not exclusive, limit current draw to 1mA recommended
	IO4-IO7 support PWM
RTC	built-in RTC support (Battery type: CR1220)

Memory Features

Memory Type	Test Conditions	Min	Typical	Max	Unit
FLASH Memory	Store fonts and images			32	MB
User Storage	EEPROM			1024	BYTE
RAM Memory	Store variables			8192	BYTE
Instruction Buffer	Instruction Buffer			1024	BYTE

108.00(OUTSIZE)
101.60
100.00(LCD OUTSIZE)
85.92(LCD AA)
4.00
4.78

4-φ3.20
8.05
3.92

181.00(OUTSIZE)
174.60
164.9(LCD OUTSIZE)
154.08(LCD AA)

800(H) * 3(RGB) x 480(V)
Viewing Direction
TFT 7.0"

6.90
8.05

9.30
4.00

TP1.45
7.45±0.2
PCB1.60±0.1
6.00
TF2.00

21.45
14.85
15.00

7.80
15.18
46.41
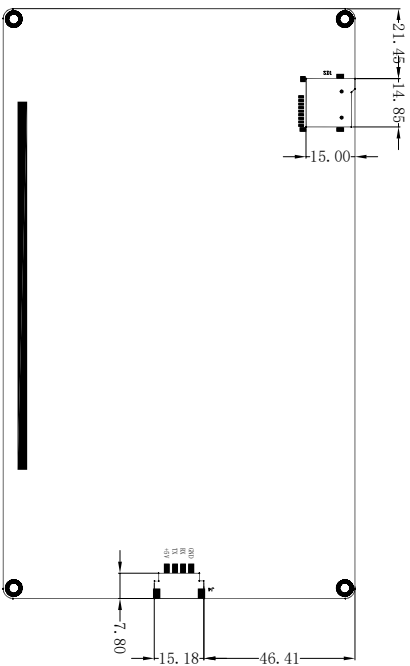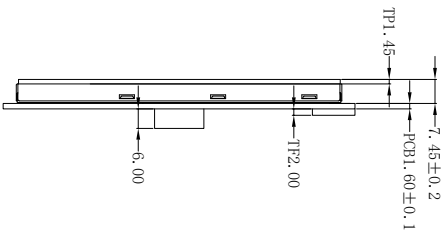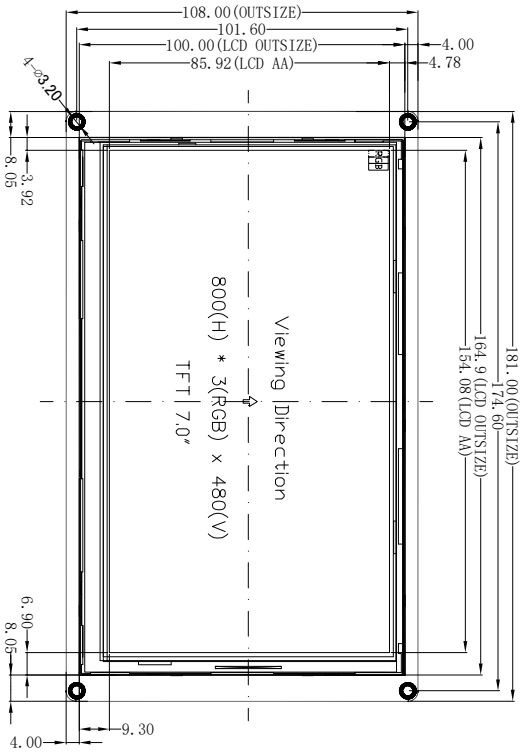
NEXTION

PRODUCT NO.	DWN		
NX8048K070	CHK		
	APP		
REVVISON:2.0			

UNIT: mm

TOLERANCES: ±0.2mm