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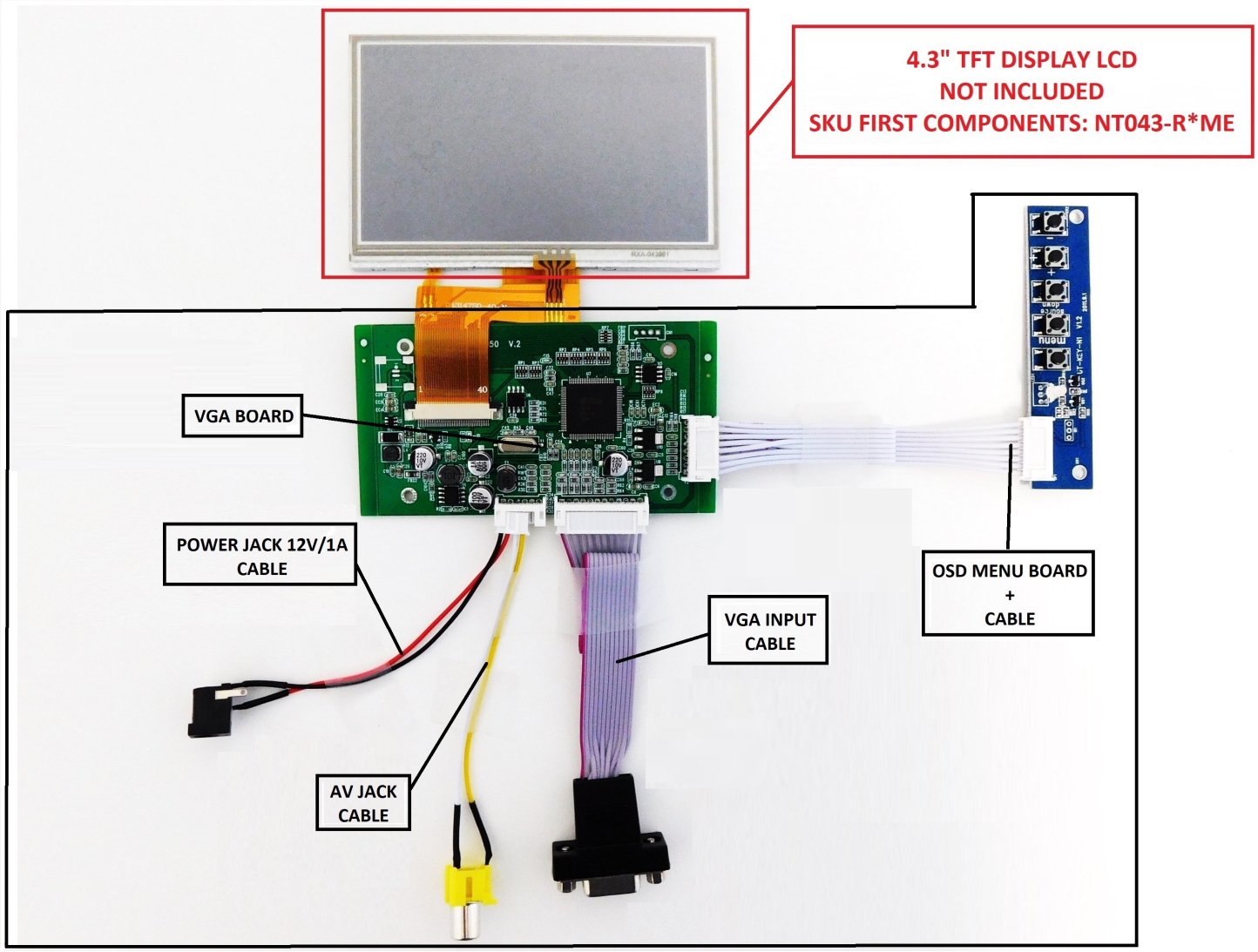
User Guide

VGABOARD_NT043*ME_40P

Thank you

for purchasing VGABOARD_NT043*ME_40P

Please check the demo kit contents in the black box below once you open the packaging



Kit Assembling Guide:
1) Connect the VGA BOARD to the PC (OFF) through VGA CABLE.
2) Connect the Display to the VGA BOARD through FFC Cable 40 pin.
3) Power ON the VGA BOARD by connecting the Power Adapter 12V/1A to the Jack.
4) Power ON the PC.

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1. Scope of application

This board is used for 4.3" TFT LCD display with 40pin FPC connection.

2. Product function description

2.1 CVBS1, CVBS2, VGA signal input

2.2 Power input: DC +12V

2.3 Multi-function OSD Operations

2.4 (Optional) Remote Control function

3. Signal input standards

3.1 CVBS: 1.0Vp-p75Ω

3.2 VGA 800x600 640x480 800x480 resolution(refresh rate 60-70)

Next Vision Display
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4. Work environment

4.1 Operating temperature: -10℃ ~ +70℃

4.2 Working humidity: 90%RH (no condensation)

5. Save the environment

5.1 Storage temperature: -20℃ ~ +70℃

5.2 Storage humidity: 90%RH (no condensation)

6. Power supply requirements (10.1 inch) HDMI signal (Ta=25℃)

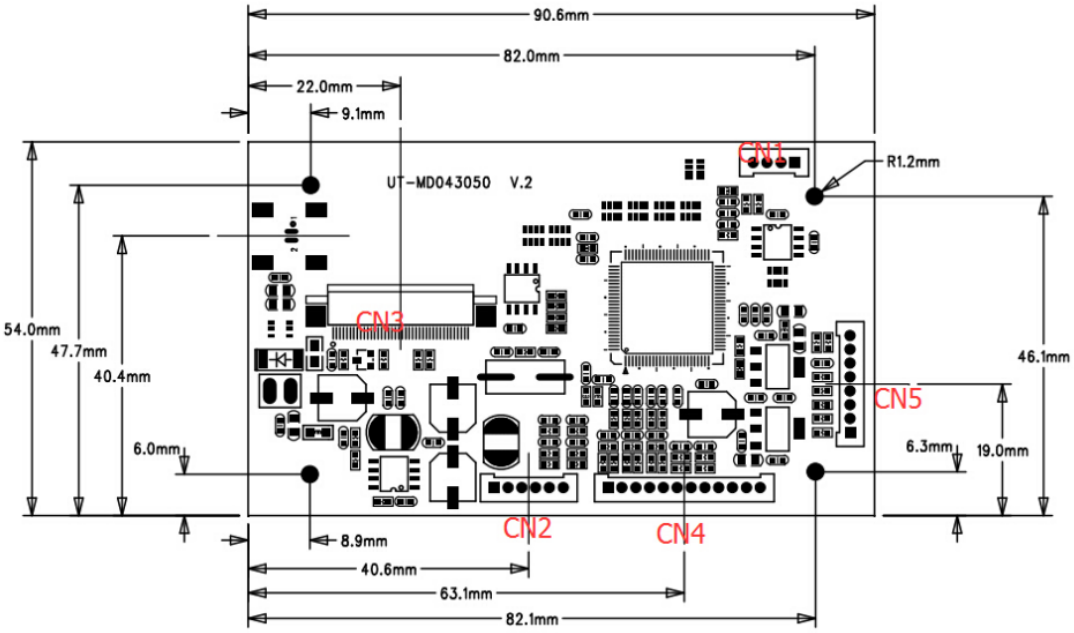
project	The minimum value	Typical values	The maximum	unit
Working voltage	+9V	+ 12	+14	V
Working current	130	100	70	mA

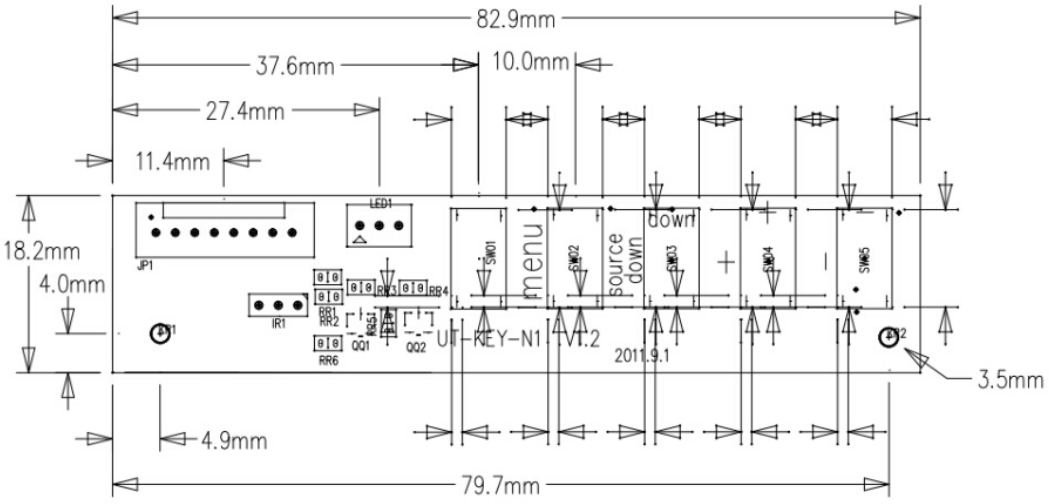
7. Product specifications

7.1 Main components:

No.	Component Name	Material specifications	manufacturers	The number of	note
1	The main IC	SSD001	Mstar	1PCS	U7
		PM25LV010		1PCS	U5
2	crystals	12.000 MHz	HongKang/Coates	1PCS	Y1

7.2 Product appearance, structure and physical picture (unit :mm)





7.3 Product Interface Definition

Pin No.	Symbol	Function
1	VLED-	Power for LED backlight cathode
2	VLED+	Power for LED backlight anode
3	GND	Power ground
4	VDD	Power voltage
5	R0	Red data (LSB)
6	R1	Red data
7	R2	Red data
8	R3	Red data
9	R4	Red data
10	R5	Red data
11	R6	Red data
12	R7	Red data (MSB)
13	G0	Green data (LSB)
14	G1	Green data
15	G2	Green data
16	G3	Green data
17	G4	Green data
18	G5	Green data
19	G6	Green data
20	G7	Green data (MSB)
21	B0	Blue data (LSB)
22	B1	Blue data
23	B2	Blue data
24	B3	Blue data
25	B4	Blue data
26	B5	Blue data
27	B6	Blue data
28	B7	Blue data (MSB)
29	GND	Power ground
30	CLK	Pixel clock
31	DISP	Display on/off
32	NC	No connection
33	NC	No connection
34	DE	Data Enable
35	NC	No Connector
36	GND	Power ground
37	NC	No Connector
38	NC	No Connector
39	NC	No Connector
40	NC	No Connector

Next Vision Display
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CN2	6P/ 2.0mm	
1	+12V	power supply
2	DGND	Ground
3	CVBS	AV input
4	AGN	Signalground
5	CVBS1	AV input
6	AGN	Signal ground

CN4	VGA input 12PIN/2.0mm	
1	GND	NC
2	VS	vertical synchronization
3	HS	horizontal synchronization
4	GND	NC
5	R+	Red signal
6	GND	Ground
7	G+	Green signal
8	GND	Ground
9	B+	Blue signal
10	GND	Ground
11	SDA	I2C channel
12	SCL	I2C channel

Next Vision Display
Brighten The Future

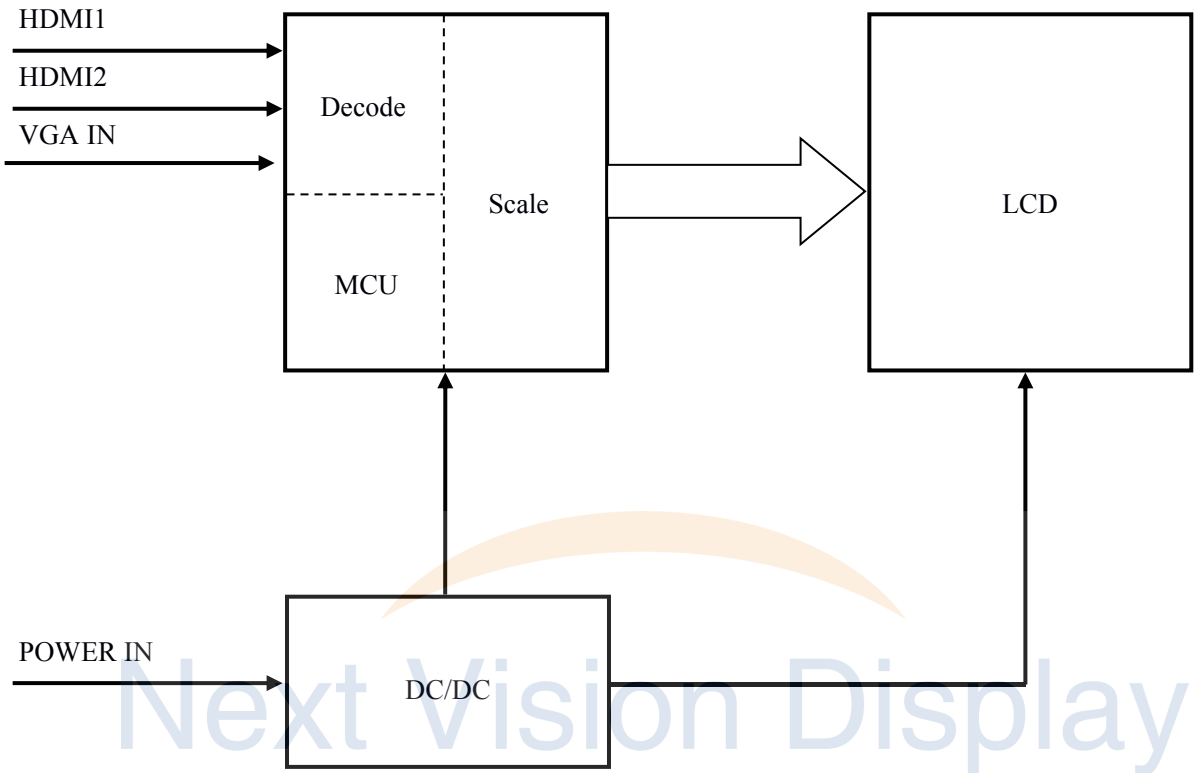
CN5	keyboard 8PIN/2.0mm	
1	GND	NC
2	VS	vertical synchronization
3	HS	horizontal synchronization
4	GND	NC
5	R+	Red signal
6	GND	Ground
7	G+	Green signal
8	GND	Ground

CN1	debug connector 4P/ 2.0mm	
1	+5V	power supply
2	GND	Ground
3	TX	serial output
4	RX	serial input

J1	Backlight connector	
1	LED+	LED voltage anode
2	LED-	LED voltage cathod

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8. Electrical circuit



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9. Basic operation instructions

9.1 Key Operation:

There are five operation keys including POWER, MENU, SOURCE, LEFT and RIGHT.(optional 6 keys, conventional 5 keys)

9.1.1 Key Definitions:

POWER: Press the POWER button to POWER on.In the boot state, press the POWER button to POWER off.

SOURCE: If the OSD menu does not appear, switch to the SOURCE. If the OSD menu exists, press ESC

MENU: the main MENU, MENU appears in the click for the selection of the confirm key

+ : Indicates DOWN when a menu is not selected, and LEFT when a menu is selected

- : Indicates UP when a menu is not selected. Indicates RIGHT when a menu is selected

9.1.2 Remote control operation: no remote control function is normally provided

Remote control has POWER, MENU, LEFT, RIGHT, SOURCE five operation keys, and the operation is the same as the key operation

10. Reliability test

Class don't	A pilot project	Test conditions	Number of test	To determine the benchmark
save The environment test	High temperature test	96 hr + 70 ℃	2	Normal after normal temperature
	Low temperature test	- 20 ℃ 96 hr	2	
work The environment test	High temperature test	96 hr + 60 ℃	2	The experimental process should work normally
	Low temperature test	- 10 ℃ 96 hr	2	
Cold start Try to check	Cold start test	After storage at -10℃ for 40 minutes, it should be started once, after storage for 2 hours, it should be started four times (every 5 minutes), after storage for 4 hours, it should be restarted four times (every 5 minutes), and after storage for 8 hours, it should be checked whether it can be started normally.	2	
Thermal cycle Try to check	Thermal cycle test	- $\xrightarrow{30}$ 25 ℃ $\xrightarrow{30}$ 60 ℃ Work continuously for 30 cycles	2	
Constant temperature and humidity test		+60℃ 90%RH continuous operation for 24 hours	2	

Remark:

1. The test should be carried out without condensation;

2, after the test should be placed in the test box, at room temperature and humidity, 24 hours after the product can be taken;

11. Inspection standard of shipment

NO.	Check the project	Inspection methods	Sampling level	Inspection level
1	Electrical properties	GB2828-2003	II	Serious faults: CR=0
2	size			Major disadvantages: AQL=0.65
3	Appearance and packaging			Minor disadvantages: AQL=1.0

Environmental requirements and precautions

◆ Extrusion and bending are forbidden
Keep away from static electricity and water
◆ Relative humidity: 10% ~ 90%
◆ Storage humidity: 5% ~ 95%
◆ Storage temperature: -20~ +70℃
Operating temperature: -10~ +60℃
◆ Cooling mode: ventilation
◆ The product can not be subjected to water droplets or splashes, and the equipment can not be placed such as vases filled with liquid objects
◆ Good ventilation is required when the product is used
◆ Specifications are for reference only

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