

LC-GD43VGA

open frame monitor with VGA and Video input

4.3", resolution 480xRGBx272

1. Profile:

GD43QMD-H 4.3" color TFT lcd module is composed by driver board LQ035NC111AD-HW and 4.3" digital TFT display: GTH043I9W1. This module provides users with Video and VGA signal input and automatic identifying and converting of NTSC/PAL systems, built-in OSD(on-screen display) function, and the OSD menu offers adjustment of brightness, contrast and color.

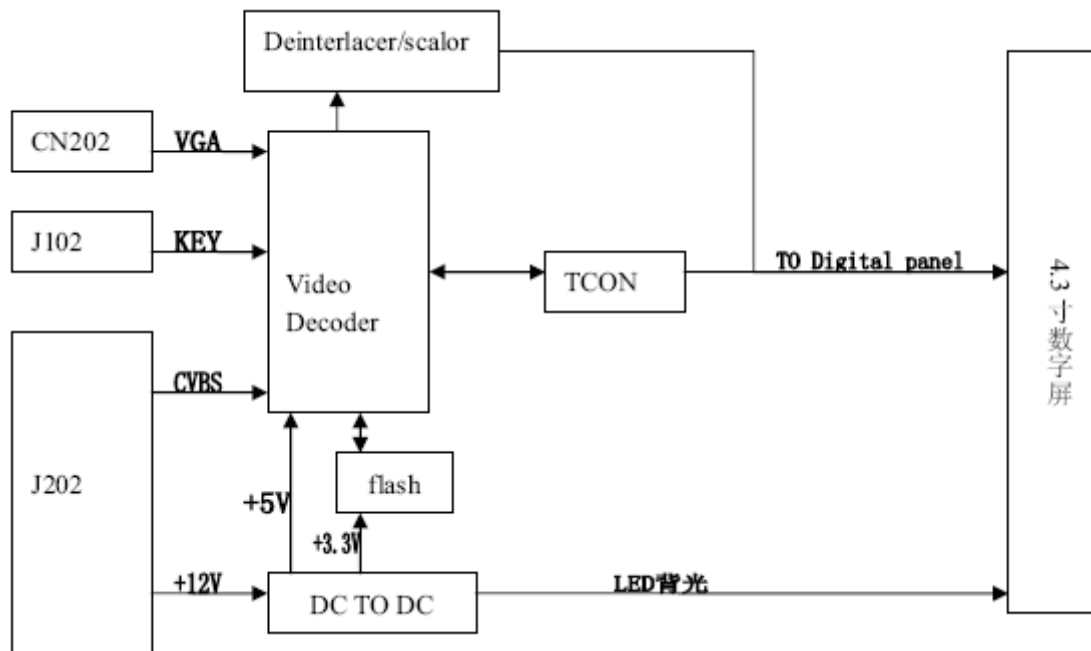
2. Application:

- Office electronic equipment
- Apparatus & measurement appliance
- Machinery
- Audiovisual (Display for car、Portable DVD、Long-distance terminal、Lcd TV)
- Home appliance (Video door phone、Video telephone)

3. Main Parameter:

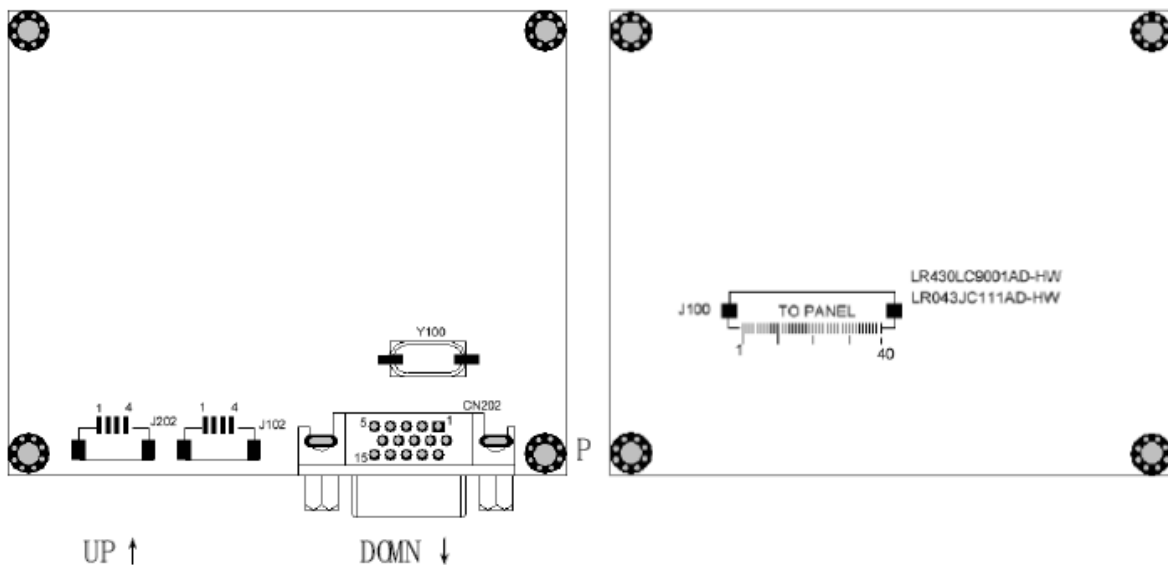
- Product Name: 4.3" TFT LCD module
- Product Model: GD43QMD-H
- TFT Display: 4.3 " TFT LCD display: GTH043I9W1
- Backlight: LED
- Resolution: 480×RGB×272
- Luminance: 500 cd/m²
- View angle (U/D/L/R): (75/75/60/70)
- Power supply voltage : DC9~15V (Type12V 280mA±20mA)
- Active Area(mm): 95.04(H)x53.85(V)
- Outside dimension of display(mm): 105.5(W)×67.2(H) ×2.9(D)
- Structural dimension of PCB(mm): 80(W)×67.1 (H) ×15(D)
- Operation temperature: -20~70℃
- Relative humidity: 5~95% RH
- Storage temperature: -30℃~+80℃

4. Block Diagram:



supports graphic resolutions of 640x480 in VGA-mode

5. Wiring Diagram :



5.1 OSD-Keybaord, connected to J102



Pin No.	Symbol	Input/Output	Definition	Remark
SW4	SOURCE	I	AV Switch	
SW5	POWER	I		
SW6	MENU	I		
SW7	+	I	Up	
SW8	-	I	Down	

6. Connection Definition of Driver Board :

6.1 J202

Pin No.	Symbol	Input/Output	Pin No Description	Remark
1	+12V	I	+12V Input	
2	GND	-	ground	
3	GND	-	ground	
4	CVBS	I	Video input	

6.2 J102

Pin No.	Symbol	Input/Output	Pin No Description	Remark
1	NC			
2	GND	-	ground	
3	SAR0	I	key board input	
4	SAR1	I	key board input	

6.3 CN202

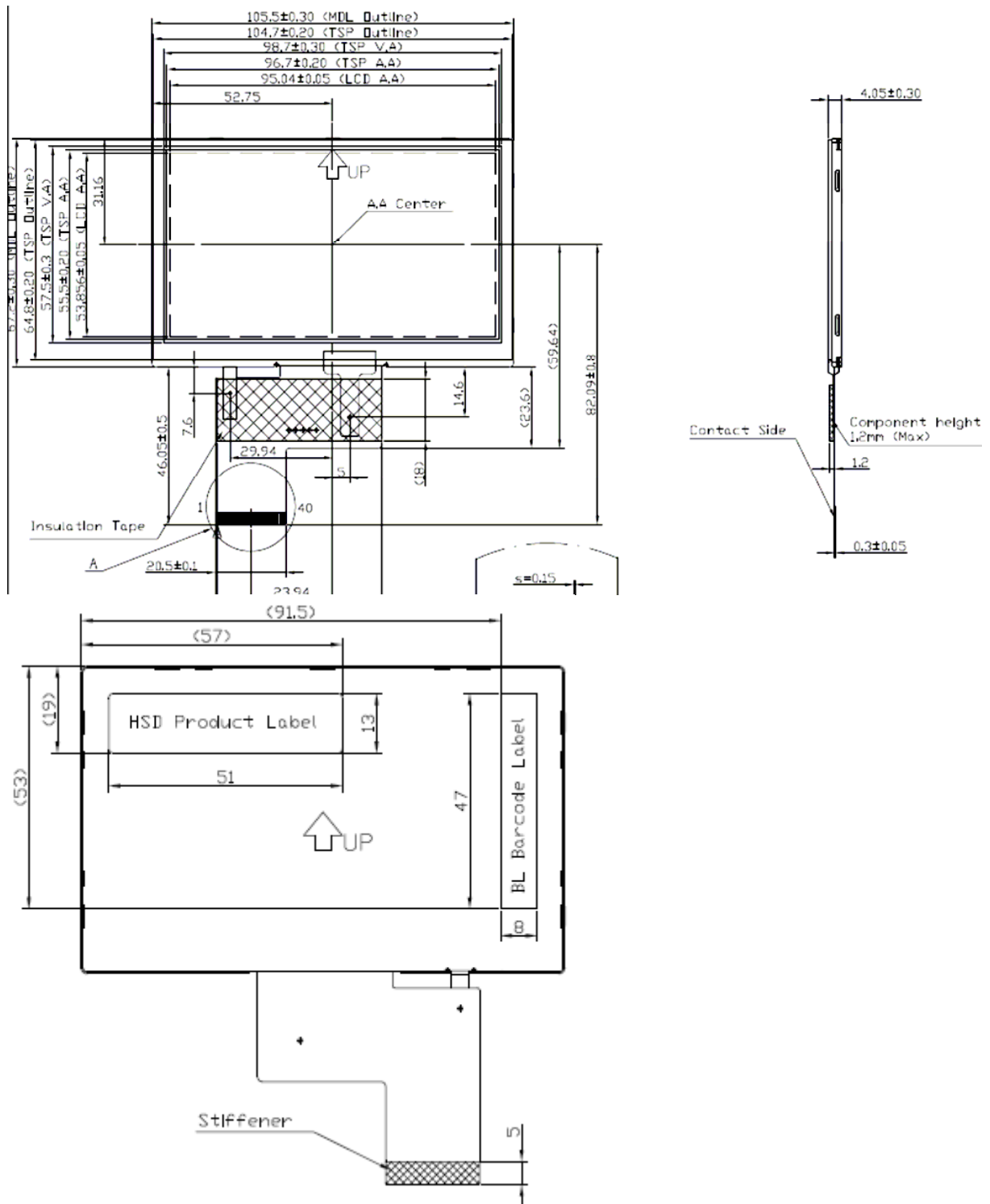
Pin No.	Symbol	Input/Output	Pin No Description	Remark
1	red	I	red Signal input	
2	green	I	green Signal input	
3	blue	I	blueSignal input	
4	NC		NC	
5	NC		NC	
6	red ground	-		
7	green ground	-		
8	blue ground	-		
9	NC		NC	
10	ground	-		
11	NC		NC	
12	NC		NC	
13	H sync	I		
14	V sync	I		
15	NC		NC	

6.4 J100

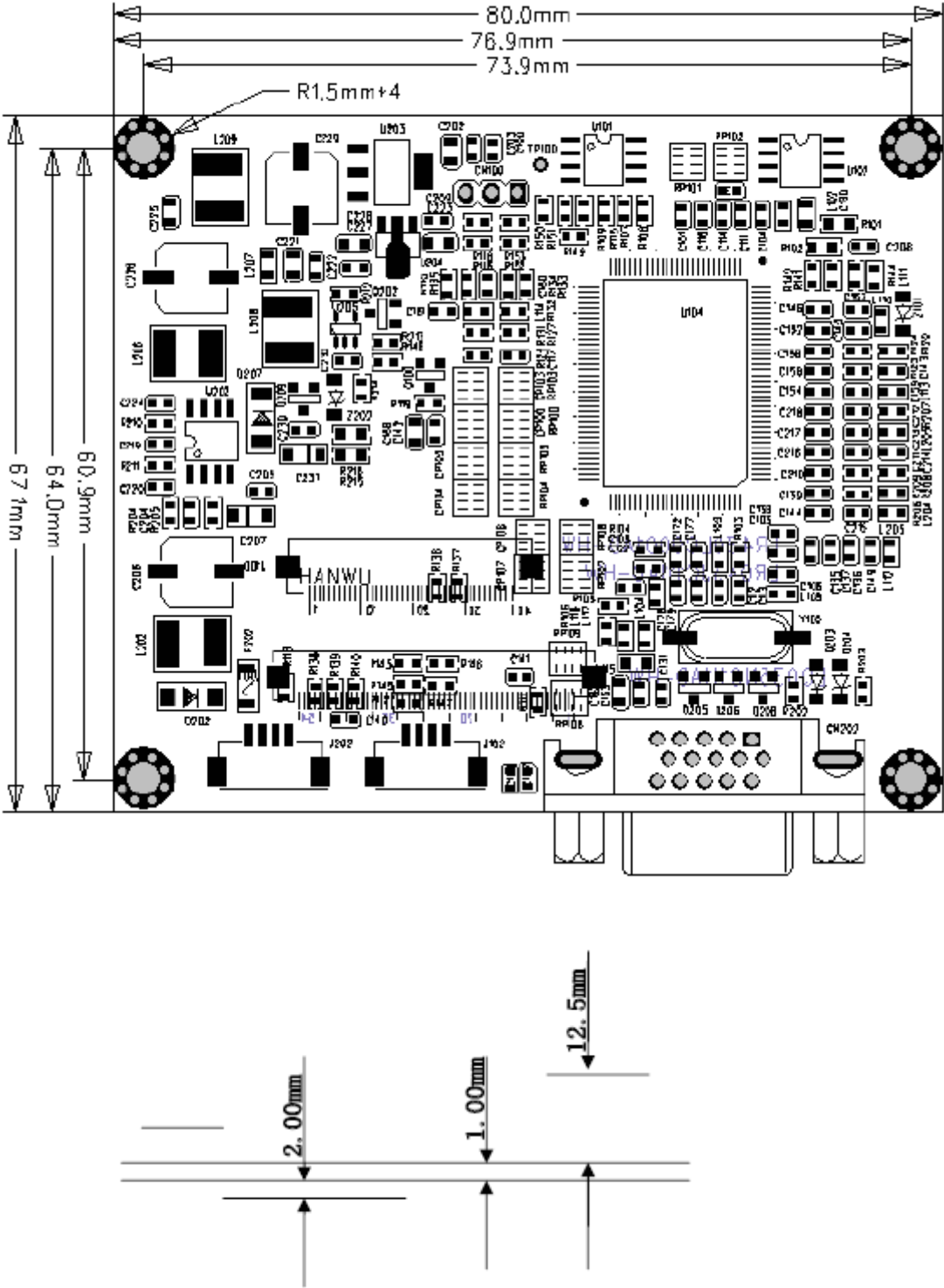
Pin	Symbol	I/O	Function	Remark
1	VLED-	I	LED Ground	
2	VLED+	I	LED Power	
3	DGND	I	Digital Ground	
4	VDD	I	Power Supply (+2.5 V)	
5	R0	I	Red Data Bit0	
6	R1	I	Red Data Bit1	
7	R2	I	Red Data Bit2	
8	R3	I	Red Data Bit3	
9	R4	I	Red Data Bit4	
10	R5	I	Red Data Bit5	
11	R6	I	Red Data Bit6	
12	R7	I	Red Data Bit7	
13	G0	I	Green Data Bit0	
14	G1	I	Green Data Bit1	
15	G2	I	Green Data Bit2	
16	G3	I	Green Data Bit3	
17	G4	I	Green Data Bit4	
18	G5	I	Green Data Bit5	
19	G6	I	Green Data Bit6	
20	G7	I	Green Data Bit7	
21	B0	I	Blue Data Bit0	
22	B1	I	Blue Data Bit1	
23	B2	I	Blue Data Bit2	
24	B3	I	Blue Data Bit3	
25	B4	I	Blue Data Bit4	
26	B5	I	Blue Data Bit5	
27	B6	I	Blue Data Bit6	
28	B7	I	Blue Data Bit7	
29	DGND	I	Digital Ground	
30	DCLK	I	Dot Data Clock	
31	DISP	I	Display On/Off	Note 1
32	Hsync	I	Horizontal Sync Input	
33	Vsync	I	Vertical Sync Input	
34	DE	I	Data Enable Control	Note 2
35	NC	I	no connect	
36	DGND	I	Digital Ground	
37	NC			
38	NC			
39	NC			
40	NC			

7. Structural Diagram:

7.1 LCD Panel:



7.2 Structural Diagram of PCB:



8. TFT-LCD Panel's Determinat standard

Aim: Establishing the standard of PANLE for inspecting material & progress and for clients' inspection.

Content:

8.1 Determinant standard and method:

8.1.1. The method and determinant of inspecting the nick of panel of LCD:

8.1.1.1. Inspect vertically (or at 45° angle from left/right) under the light tube (the power is 20 W) in the distance of 30cm to the panel. If there is no nick, it determines "OK", otherwise "NG".

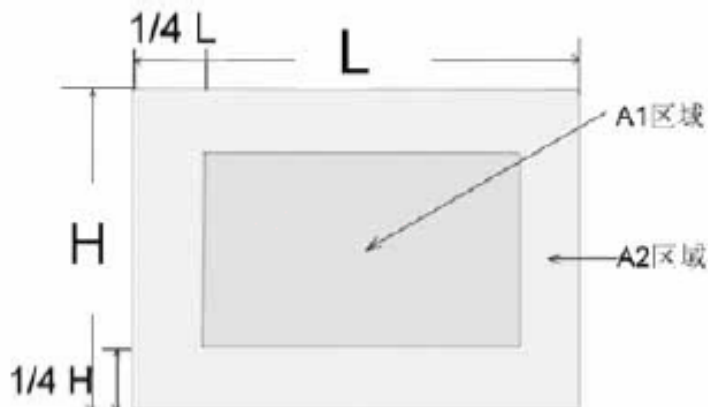
8.1.2. The method and determinative for black & white & color spots for the Panel of LCD :

8.1.2.1. Inspecting method

8.1.2.1.1. Black spots : under the situation of "turn on the light", set the MASK of black spot inspection near the black spot then compare the big and small by eyes.

8.1.2.1.2. White & Color spots: under situation of "turn on the light", set the Mask of black spot inspection on the white spot(or color spot) then observe them by eyes if it can hide.

8.1.2.1.2. Division of LCD Panel



Remark: Area of A1: The center of the available area for the picture

Area of A2: The edge of the available area for the picture
(8mm around the central area)

8.1.3 Determinant Choise

Spot Diameter (mm)		Allowed Area	
		A1	A2
Black Spot	$d \leq 0.15$	Irrespective	Irrespective
	$0.15 < d \leq 0.3$	4	4
	$0.3 < d \leq 0.5$	2	3
	$0.5 < d \leq 0.8$	0	2
White or color spot	$d \leq 0.15$	Irrespective	Irrespective
	$0.15 < d \leq 0.3$	3	3
	$0.3 < d \leq 0.5$	1	2
	$0.5 < d \leq 0.8$	0	1

- Remark: 1. Size: Average Diameter= (Max. Diameter + Min. Diameter) /2
2. Using information above as a standard in order to judge while the spot is are dense.
3. Black & White spot: To judge the obvious spots through the change of voltage by comparison.
4. Total quantity of Black & white & color spot: $A1+A2 \leq 4$.

9. Packing

TBD

10.Attention:

1. Voltage don't exceed upper limit.
2. The connector can't connect board in reverse, or will burn the board and influence the product.
3. Please don't touch it in order to keep your skin non-burn when you electrify the board(High voltage on the board).
4. TFT LCD Panel, it is a electric product, so you need to take anti-static measure when you operate it.
5. TFT LCD Panel is a glasswork, place carefully, broken for fear.
6. The connection is "FPC", which connect TFT LCD Panel to PCB. Please operate it carefully, in order to break off for fear.
7. Don't touch key-press's pin when you adjust brightness, color through soft key-press, due to Person's body have resistance, you will effect image's impact when touch it.