

SPECIFICATION

SFA050XS1-AV

Customer Approved

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Date

By

Sunful's Confirmation

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General Description:

This Color TFT LCD Driving Board apply to drive PVI's PA050XS1-7 Color TFT LCD Panel, The Driving Board provides all the Needs to convert Composite video signal to the proper interface of LCD Panel .It can accept PAL and NTSC Video signal input.

Features:

- Fit PRIME VIEW PA050XS1-7 TFT LCD
- Ultra Compact
- DC/DC DC/AC Video Decoder All In One
- PAL or NTSC Video input
- Up/Down Display Reverse
- Left/Right Display Reverse
- Single Operation Voltage 12V

Applications:

- Security
- Video Game
- Door Phone
- Video Phone
- Portable TV
- Instrument Display

Video input signal:

- Composite Video Signal 1.0Vp-p 75R

Work temperature:

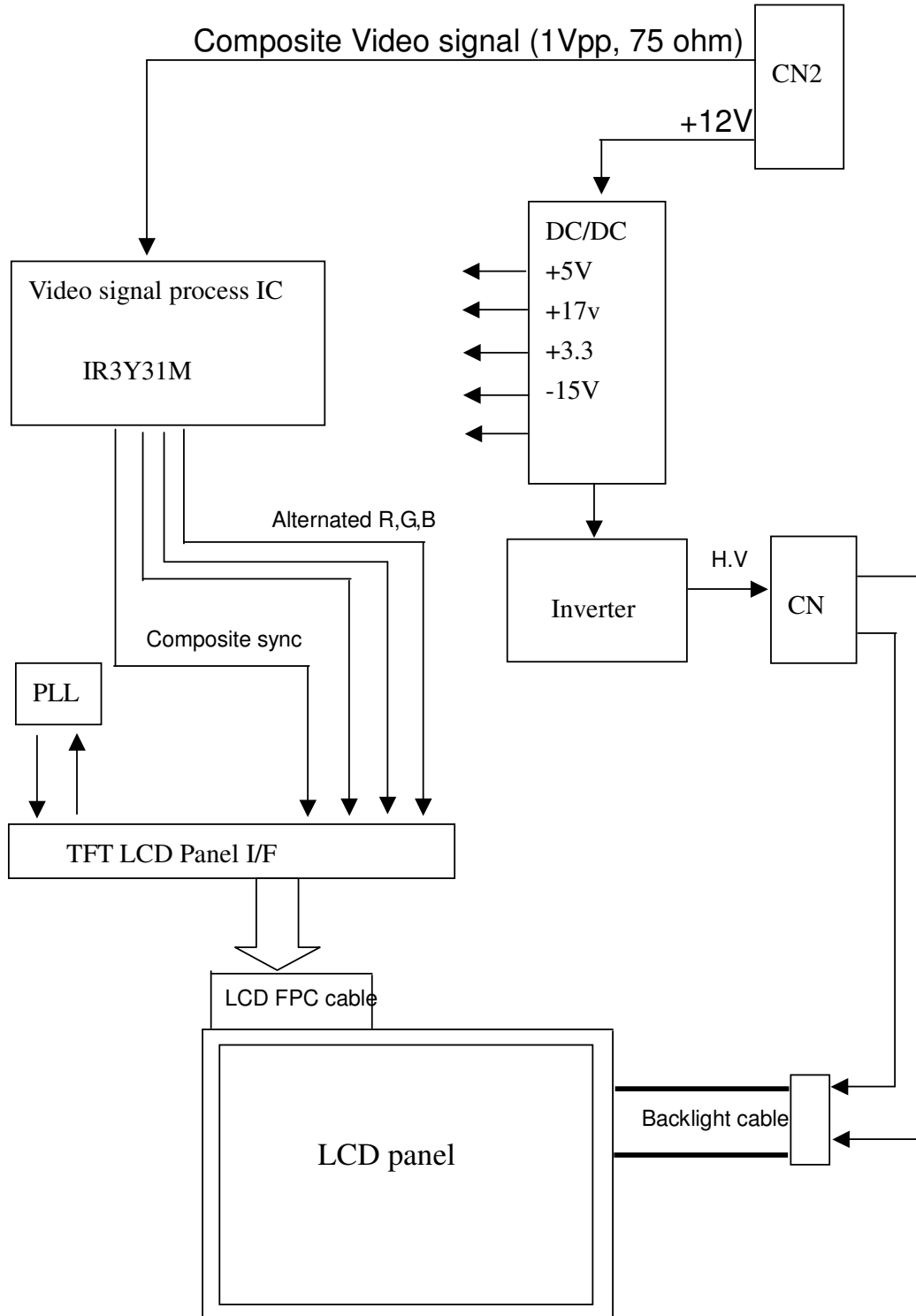
- -20⁰C—+70⁰C

Storage temperature:

- -30⁰C—+80⁰C

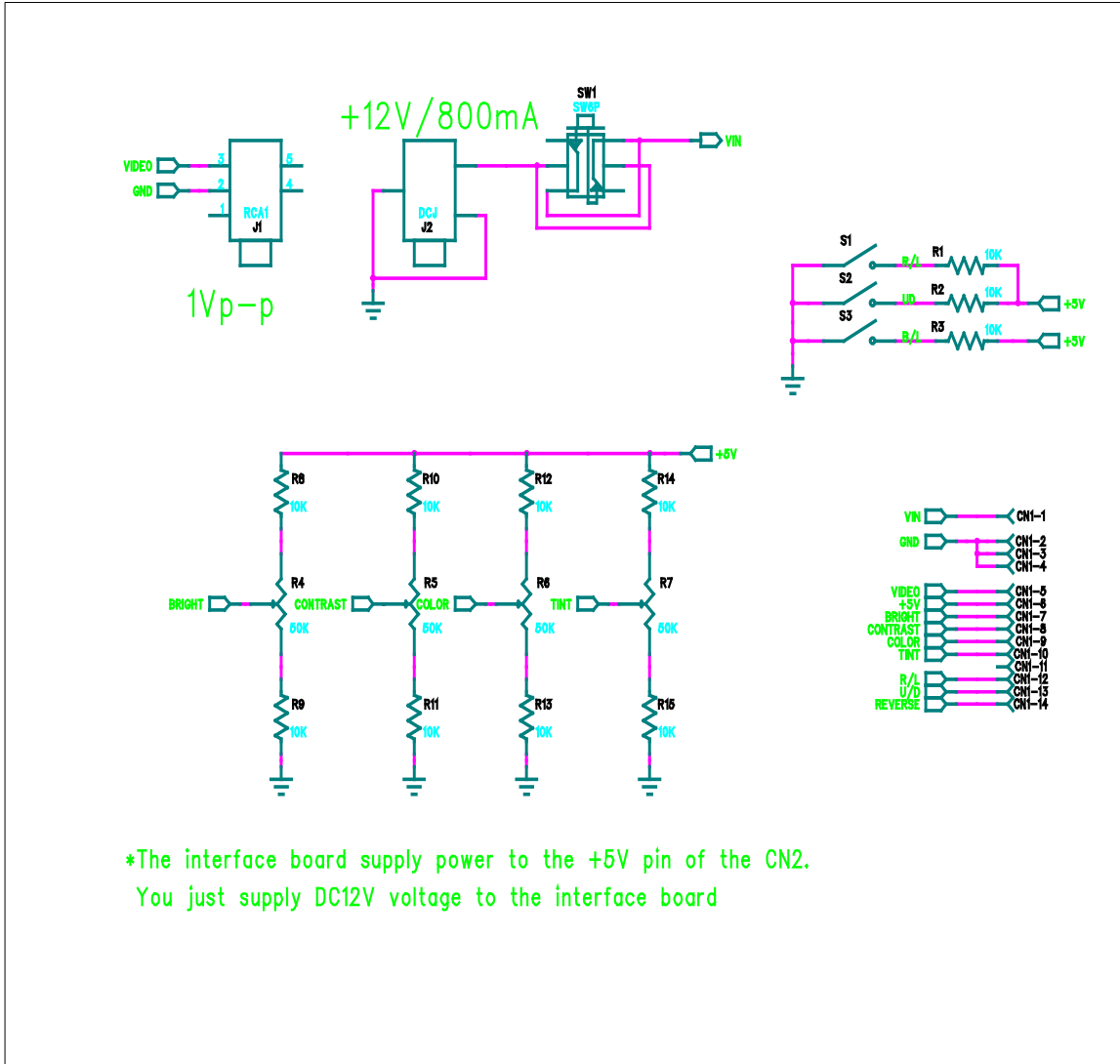


Driving Board Function Block:





Application Schematic Diagrams



*The interface board supply power to the +5V pin of the CN2.
You just supply DC12V voltage to the interface board



Electronic Characteristics (CN2)

| Pin | Symbol | I/O | Conditions | Min | Typ | Max | Unit |
|-----|----------------------|-----|----------------------------|-----|------------------|-----|--------------|
| 5 | Video | I | PAL or NTSC | | 1 | | V |
| 1 | V in I in P in | I | DC(+) DC (+12V) | 10 | 12 550 6.6 | 14 | V mA W |
| 6 | Vo Io | O | DC (+) | | 5 20 | | V mA |
| 7 | Bright(RGB) | I | DC (+) | 2.1 | 2.3 | 2.5 | V |
| 8 | Contrast | I | DC (+) | 2.1 | 2.3 | 2.5 | V |
| 9 | Color | I | DC (+) | 1.3 | 1.5 | 1.7 | V |
| 10 | Tint | I | DC (+) | 1.7 | 1.8 | 1.9 | V |

Other VR Default Voltage

| Pin | Symbol | I/O | Conditions | Min | Typ | Max | Unit |
|-----|--------|-----|------------|-----|-----|-----|------|
| 1 | BRT | I | DC(+) | 2.1 | 2.3 | 2.5 | V |
| 2 | PIC | I | DC(+) | 1.3 | 1.5 | 1.7 | V |

Input / Output Connector

1.) CN2: Power & Video Input Connector

Pin No. : 14 , Pitch : 1.25 mm, Molex 53398-1410 or compatibility

2.) CN3: RGB... Input Connector

Pin No. : 9 , Pitch : 1.25 mm, Molex 53398-0910 or compatibility

3.) CN1: LCD Signal Output Connector

FPC Down Connector, 30 Pins , Pitch : 0.5 mm

4.) CNH1: Backlight High Voltage Connector

Pin No. : 2 , Pitch : 3.5 mm JST BHSR-02VS-1 or compatibility



Connector Pin Definition

CN2 pin definition

| No. | Pin Name | I/O | Pin description | Remark |
|-----|------------|-----|------------------------------------|---------|
| 1 | Vin | I | +12V power input | |
| 2 | GND | I | Power ground | |
| 3 | GND | I | Power ground | |
| 4 | GND | I | Video signal ground | |
| 5 | Video | I | Composite video signal input | |
| 6 | +5V | O | For pin7/8/9/10 control purpose | |
| 7 | Brightness | I | Brightness control voltage input | |
| 8 | Contrast | I | Contrast control voltage input | |
| 9 | Color | I | Color control voltage input | |
| 10 | Tint | I | Tint control voltage input | |
| 11 | N.C. | NC | No connection | Reverse |
| 12 | R/L | I | Picture left/right inverse control | NOTE 1 |
| 13 | U/D | I | Picture up/down inverse control | NOTE 2 |
| 14 | DIMMER | I | Dimmer (Default Low) | |

CN3 pin definition

| No. | Pin Name | I/O | Pin description | Remark |
|-----|---------------|-----|---------------------------|--------|
| 1 | Rin | I | Red signal input | |
| 2 | Gin | I | Green signal input | |
| 3 | Bin | I | Blue signal input | |
| 4 | SW | I | Switch (Video/RGB Select) | NOTE 3 |
| 5 | SYNC IN | I | SYNC Input | |
| 6 | SYNC OUT | O | SYNC Output | |
| 7 | /HSYNC OUT | O | Reverse HSYNC Output | |
| 8 | /VSYNC OUT | O | Reverse VSYNC Output | |
| 9 | GND | I | Power Ground | |

(1) CNH1 pin definition

| No. | Pin Name | I/O | | Remark |
|-----|----------|-----|--------------------------------------|--------|
| 1 | HV | O | Lamp driving terminal (high voltage) | |
| 2 | LV | O | Lamp driving terminal (low voltage) | |

(2) CN1 pin definition

Meet PA050XS1 input definition

Note 1:

R/L = Hi (+5V) for shift right, Low (GND) for shift left

Note 2:

U/D = Hi (+5V) for down, Low (GND) for up

Note 3:

VIDEO = Low, High (+5v) for RGB INPUT



Default states:

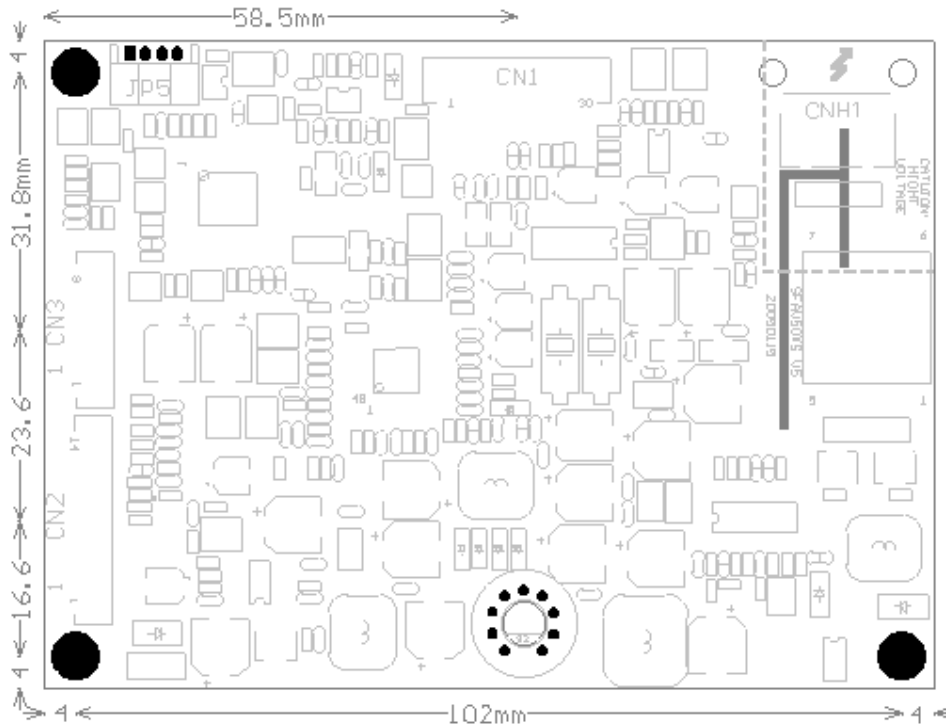
- 1) Support video signal input
- 2) support Bright、 Contrast 、 Color and Tint adjustable
- 3) Composite Sync input and could switch to RGB input
- 4) Support OSD input mode (RGB input and HSY/VSX output)

If need support S-video input, the followed operation is needed:

- 1) Open R59 (1K ohm resistor)
- 2) Solder RB1 (75ohm resistor)
- 3) Solder C64 (0.1uF capacitor)
- 4) Open RB2 (0ohm resistor)

If the analog video signal is RGB, the composite synchronization signal is needed.

Outline Dimension



Description:

Outline: 110.0*80.0*10.1mm

Top Layer High (Max): 8.5mm

Board thickness: 1.6mm

6 Screws: M3.0

Weight: 0.05kg