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# **VS DISPLAY TECHNOLOGY (HK) LTD**

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## **SPECIFICATION FOR LCD MODULE**

Model No.: VS-TY2662-V1

|                     |                   |                     |
|---------------------|-------------------|---------------------|
| <b>ORGANIZED BY</b> | <b>CHECKED BY</b> | <b>APPROVED BY</b>  |
| <b>RAJU PAU</b>     | <b>JOHNSON</b>    | <b>CRISTAL RAMY</b> |

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# VS DISPLAY TECHNOLOGY (HK) LTD

## 1. GENERAL DESCRIPTION

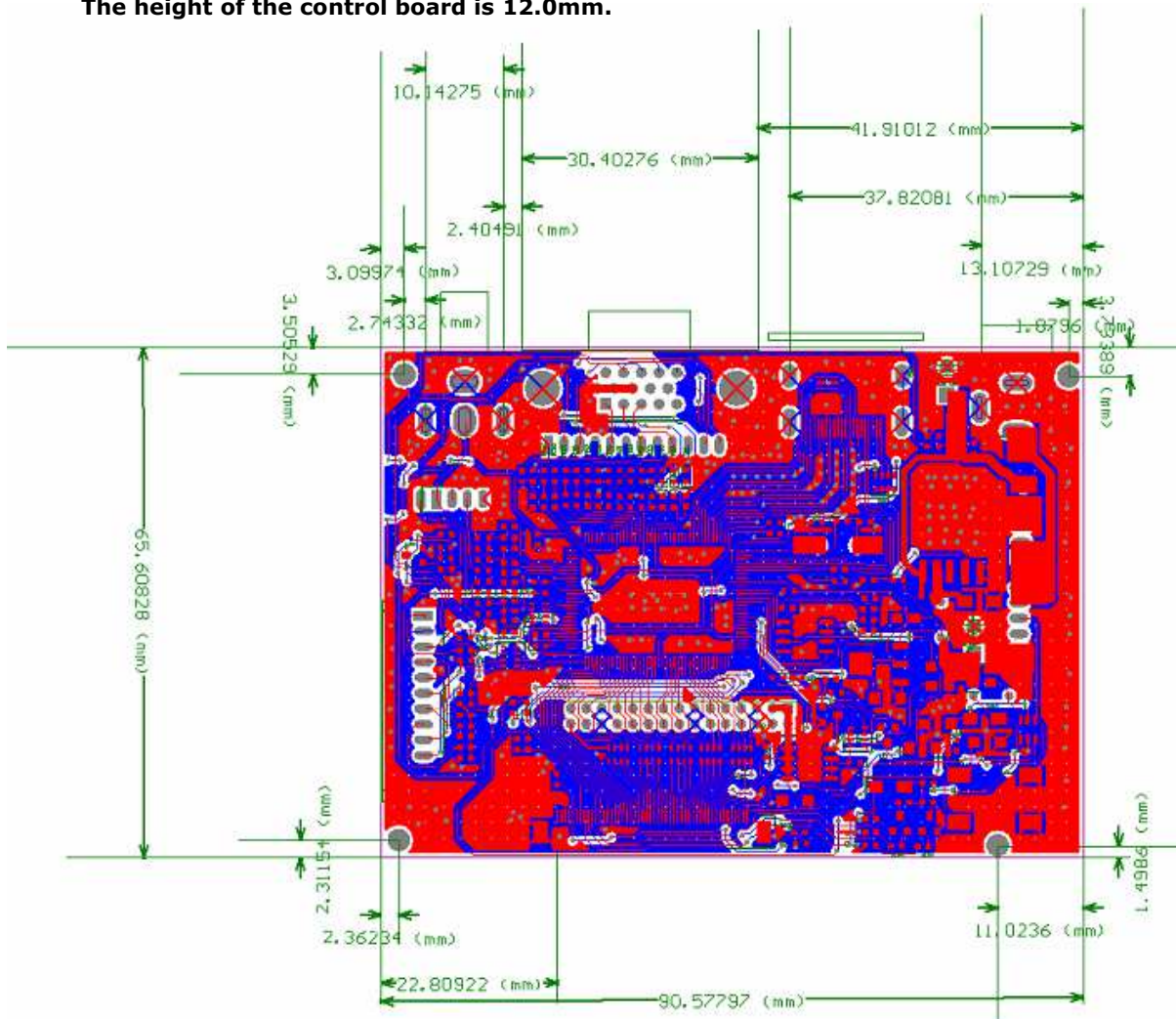
VS-TY2662-V1 is a LCD control board, it supports between 7 and 17inch LCD panel with single /dual LVDS interface. And the resolution is up to 1440x900. This board support HDMI+VGA+2CVBS input and support reversing function.

## 2. FEATURES

|                     |  |   |
|---------------------|--|---|
| <b>CHIPSET</b>      | RTD2662  |   |
| <b>OSD LANGUAGE</b> | Simplified Chinese, Traditional Chinese, English, French, German, Italian, Spanish, Japanese, Korean |   |
| <b>PANEL</b>        | Interface  | 50PIN TTL/6Bit 8it Dual/Single LVDS interface |
|                     | Resolution   | Up to 1920x1080                               |
| <b>VIDEO INPUT</b>  | Interface  | HDMI1.1+VGA+2AV                               |
|                     | H-Frequency  | 30~80KHz                                      |
|                     | V-Frequency  | 65~85Hz                                       |
| <b>POWER</b>        | Requirement  | 12V   |
|                     | To Panel   | 3.3V  |
|                     | Management   | Low power consumption mode; standby< 1W       |
| <b>KEY FUNCTION</b> | Auto, Menu, Vol-, Vol+, Power  |   |

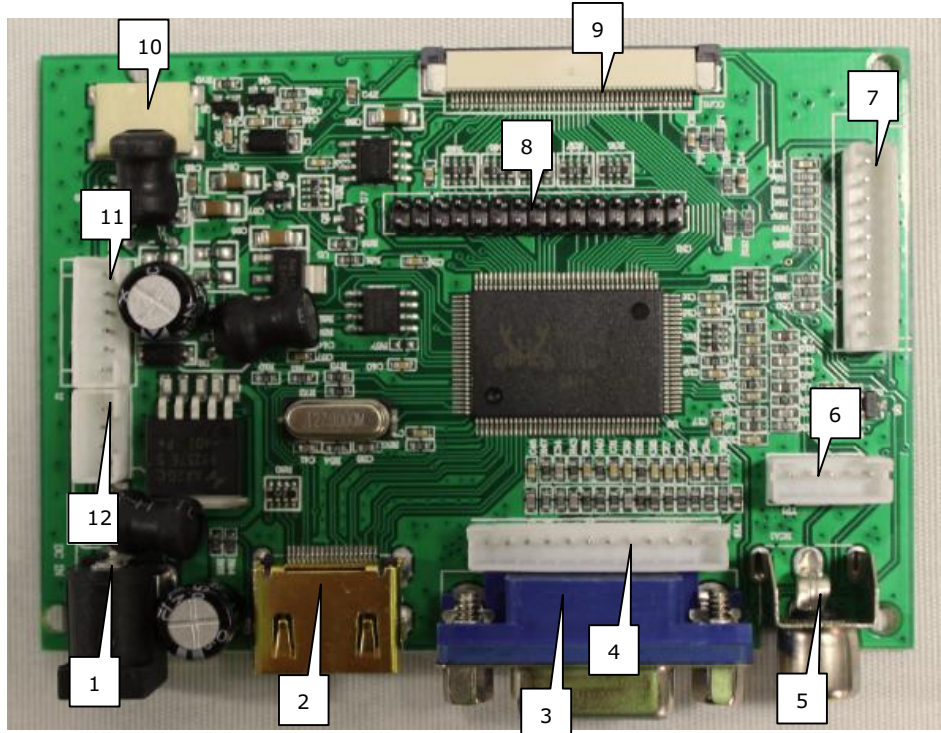
## 3. PCB DIMENSION

The height of the control board is 12.0mm.



## 4. FUNCTION LAYOUT

### TOP VIEW OF LCD CONTROL BOARD



### INTERFACE FUNCTION DESCRIPTION

| NO. | DESCRIPTION  | NO. | DESCRIPTION        |
|-----|--------------|-----|--------------------|
| 1   | Power Supply | 7   | KeyBoard           |
| 2   | HDMI         | 8   | 30P LVDS interface |
| 3   | VGA          | 9   | 50P TTL interface  |
| 4   | VGA          | 10  | Backlight          |
| 5   | AV1          | 11  | Inverter           |
| 6   | AV1/AV2      | 12  | Power Supply       |

## 5. INTERFACE DEFINITION

### 1/12: POWER SUPPLY INPUT CONNECTOR

| NO. | SYMBOL | DESCRIPTION |
|-----|--------|-------------|
| 1   | 5V/12V | 12V         |
| 2   | 5V/12V | 12V         |
| 3   | GND    | Ground      |
| 4   | GND    | Ground      |

### 3/4 : PC-RGB Input Connector

| NO. | SYMBOL | DESCRIPTION                         |
|-----|--------|-------------------------------------|
| 1   | GND    | Ground                              |
| 2   | VS     | Display Vertical Signal For Panel   |
| 3   | HS     | Display horizontal Signal For Panel |
| 4   | GND    | Ground                              |
| 5   | R      | Red Signal Input                    |
| 6   | GND    | Ground                              |
| 7   | G      | Green Signal Input                  |
| 8   | GND    | Ground                              |
| 9   | B      | Blue Signal Input                   |
| 10  | GND    | Ground                              |
| 11  | SCL    | I2C Clock                           |
| 12  | SDA    | I2C Data                            |

### 5/6: CVBS INPUT CONNECTOR

| NO. | SYMBOL | DESCRIPTION                 |
|-----|--------|-----------------------------|
|     | ACC    | Reversing Power Supply +12V |
|     | CVBS1  | CVBS1                       |
|     | GND    | GROUND                      |
|     | CVBS2  | CVBS2                       |
|     | GND    | GROUND                      |

### 7 : KEY BOARD & LED Indicator CONNECTOR

| NO. | SYMBOL | DESCRIPTION |
|-----|--------|-------------|
| 1   | K0     | Key 0       |
| 2   | R      | Led-Red     |
| 3   | G      | Led-Green   |
| 4   | GND    | Ground      |
| 5   | K1     | Key 1       |
| 6   | K2     | Key 2       |
| 7   | K3     | Key 3       |
| 8   | K4     | Key 4       |
| 9   | K5     | Key 5       |
| 10  | K6     | Key 6       |
| 11  | IR     | IR          |
| 12  | VCC    | VCC for IR  |

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## 8 : LVDS PANEL CONNECTOR

| NO. | SYMBOL | DESCRIPTION             |
|-----|--------|-------------------------|
| 1   | VSEL   | Power Supply for Panel  |
| 2   | VSEL   |                         |
| 3   | VSEL   |                         |
| 4   | GND    | Ground                  |
| 5   | GND    |                         |
| 6   | GND    |                         |
| 7   | RXO0-  | LVDS ODD 0- Signal      |
| 8   | RXO0+  | LVDS ODD 0+ Signal      |
| 9   | RXO1-  | LVDS ODD 1- Signal      |
| 10  | RXO1+  | LVDS ODD 1+ Signal      |
| 11  | RXO2-  | LVDS ODD 2- Signal      |
| 12  | RXO2+  | LVDS ODD 2+ Signal      |
| 13  | GND    | Ground                  |
| 14  | GND    |                         |
| 15  | RXOC-  | LVDS ODD Clock- Signal  |
| 16  | RXOC+  | LVDS ODD Clock+ Signal  |
| 17  | RXO3-  | LVDS ODD 3- Signal      |
| 18  | RXO3+  | LVDS ODD 3+ Signal      |
| 19  | RXE0-  | LVDS EVEN 0- Signal     |
| 20  | RXE0+  | LVDS EVEN 0+ Signal     |
| 21  | RXE1-  | LVDS EVEN 1- Signal     |
| 22  | RXE1+  | LVDS EVEN 1+ Signal     |
| 23  | RXE2-  | LVDS EVEN 2- Signal     |
| 24  | RXE2+  | LVDS EVEN 2+ Signal     |
| 25  | GND    | Ground                  |
| 26  | GND    |                         |
| 27  | RXEC-  | LVDS EVEN Clock- Signal |
| 28  | RXEC+  | LVDS EVEN Clock+ Signal |
| 29  | RXE3-  | LVDS EVEN 3- Signal     |
| 30  | RXE3+  | LVDS EVEN 3+ Signal     |

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## 9 50P TTL CONNECTOR

| Pin No. | Symbol            | I/O | Function                          | Remark |
|---------|-------------------|-----|-----------------------------------|--------|
| 1       | V <sub>LED+</sub> | P   | Power for LED backlight (Anode)   |        |
| 2       | V <sub>LED+</sub> | P   | Power for LED backlight (Anode)   |        |
| 3       | V <sub>LED-</sub> | P   | Power for LED backlight (Cathode) |        |
| 4       | V <sub>LED-</sub> | P   | Power for LED backlight (Cathode) |        |
| 5       | GND               | P   | Power ground                      |        |
| 6       | V <sub>COM</sub>  | I   | Common voltage                    |        |
| 7       | DV <sub>DD</sub>  | P   | Power for Digital Circuit         |        |
| 8       | MODE              | I   | DE/SYNC mode select               | Note 1 |
| 9       | DE                | I   | Data Input Enable                 |        |
| 10      | VS                | I   | Vertical Sync Input               |        |
| 11      | HS                | I   | Horizontal Sync Input             |        |
| 12      | B7                | I   | Blue data(MSB)                    |        |
| 13      | B6                | I   | Blue data                         |        |
| 14      | B5                | I   | Blue data                         |        |
| 15      | B4                | I   | Blue data                         |        |
| 16      | B3                | I   | Blue data                         |        |
| 17      | B2                | I   | Blue data                         |        |
| 18      | B1                | I   | Blue data                         | Note 2 |
| 19      | B0                | I   | Blue data(LSB)                    | Note 2 |
| 20      | G7                | I   | Green data(MSB)                   |        |
| 21      | G6                | I   | Green data                        |        |
| 22      | G5                | I   | Green data                        |        |
| 23      | G4                | I   | Green data                        |        |
| 24      | G3                | I   | Green data                        |        |
| 25      | G2                | I   | Green data                        |        |

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|    |                  |   |                          |          |
|----|------------------|---|--------------------------|----------|
| 26 | G1               | I | Green data               | Note 2   |
| 27 | G0               | I | Green data(LSB)          | Note 2   |
| 28 | R7               | I | Red data(MSB)            |          |
| 29 | R6               | I | Red data                 |          |
| 30 | R5               | I | Red data                 |          |
| 31 | R4               | I | Red data                 |          |
| 32 | R3               | I | Red data                 |          |
| 33 | R2               | I | Red data                 |          |
| 34 | R1               | I | Red data                 | Note 2   |
| 35 | R0               | I | Red data(LSB)            | Note 2   |
| 36 | GND              | P | Power Ground             |          |
| 37 | DCLK             | I | Sample clock             | Note 3   |
| 38 | GND              | P | Power Ground             |          |
| 39 | L/R              | I | Left / right selection   | Note 4,5 |
| 40 | U/D              | I | Up/down selection        | Note 4,5 |
| 41 | V <sub>GH</sub>  | P | Gate ON Voltage          |          |
| 42 | V <sub>GL</sub>  | P | Gate OFF Voltage         |          |
| 43 | AV <sub>DD</sub> | P | Power for Analog Circuit |          |
| 44 | RESET            | I | Global reset pin.        | Note 6   |
| 45 | NC               | - | No connection            |          |
| 46 | V <sub>COM</sub> | I | Common Voltage           |          |
| 47 | DITHB            | I | Dithering function       | Note 7   |
| 48 | GND              | P | Power Ground             |          |
| 49 | NC               | - | No connection            |          |
| 50 | NC               | - | No connection            |          |

I: input, O: output, P: Power

## 11 Inverter Board CONNECTOR

| NO. | SYMBOL | DESCRIPTION               |
|-----|--------|---------------------------|
| 1   | +12V   | +12V DC Power Supply      |
| 2   | +12V   | +12V DC Power Supply      |
| 3   | BL_ON  | Back-light ON/OFF control |
| 4   | NC     |                           |
| 5   | GND    | Ground                    |
| 6   | GND    | Ground                    |



## 6. CONFIGURATION & GENERAL PRECAUTIONS

- Relative humidity:  $\leq 80\%$ .
- Storage temperature:  $-10\sim+60$  °C.
- Operation temperature:  $0\sim+40$  °C.
- Protect the control board from static; it may cause damage to the IC.
- Disconnect the TV before the power supply of panel is connected correctly.
- Do not drop any metal on the control board when it is working.
- Do not push or pull the connector when the control board is working.
- Do not disassemble the module.
- If the surface or the control board is dirty, clean it with soft dry cloth.
- Can't be pressed and distorted.