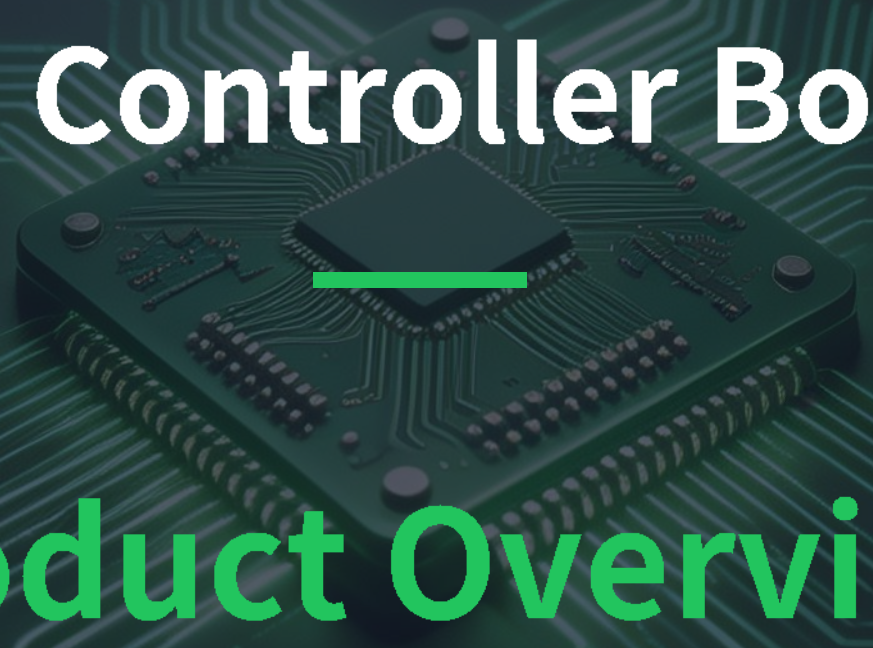
LCD Controller Board



Product Overview

Shenzhen Fengxiao Technology Co., Ltd.

www.lcddisplay.co

Product Overview

An LCD/OLED control board—also known as a driver board or control module—is a core component specifically designed to drive various types of LCD and OLED display panels. Acting as the "brain" of the display system, it is responsible for receiving video signals from a host device (such as a computer or media player) and rapidly converting them into a format that the display panel can recognize and render; thus, it serves as the critical bridge connecting the signal source to the display terminal.

Wide Range of Applications

Commercial Displays
High-frequency usage scenarios such as advertising displays, digital signage, and information kiosks.

Industrial Control
Industrial scenarios such as industrial all-in-one PCs, industrial monitors, and HMIs (Human-Machine Interfaces).

Special Environments
High-brightness outdoor displays, low-temperature cold chain applications, in-vehicle displays, etc.

professional field
Medical Imaging Equipment, Security Surveillance Systems, Specialized Aerospace Display Equipment

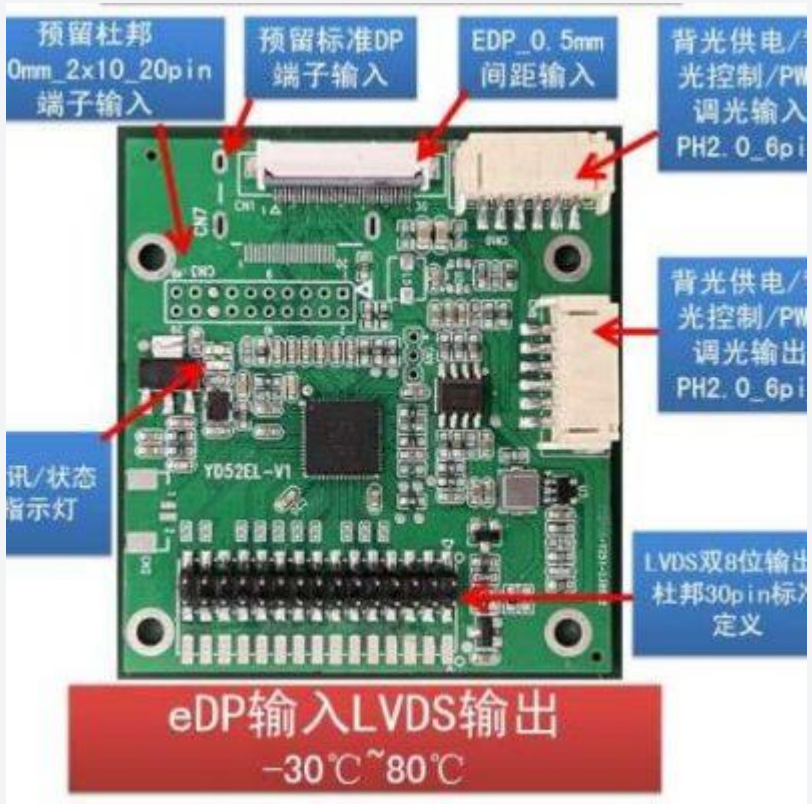
Core Values

- **High Compatibility：** Fully supports mainstream brands and various specifications of LCD and OLED display panels available on the market.
- **High Stability：** Designed specifically for harsh industrial and outdoor environments, ensuring long-term stable and reliable system operation.
- **Adaptability：** We offer standardized products alongside flexible, fully customized development services, responding rapidly to individualized requirements.

Core Advantages and Features

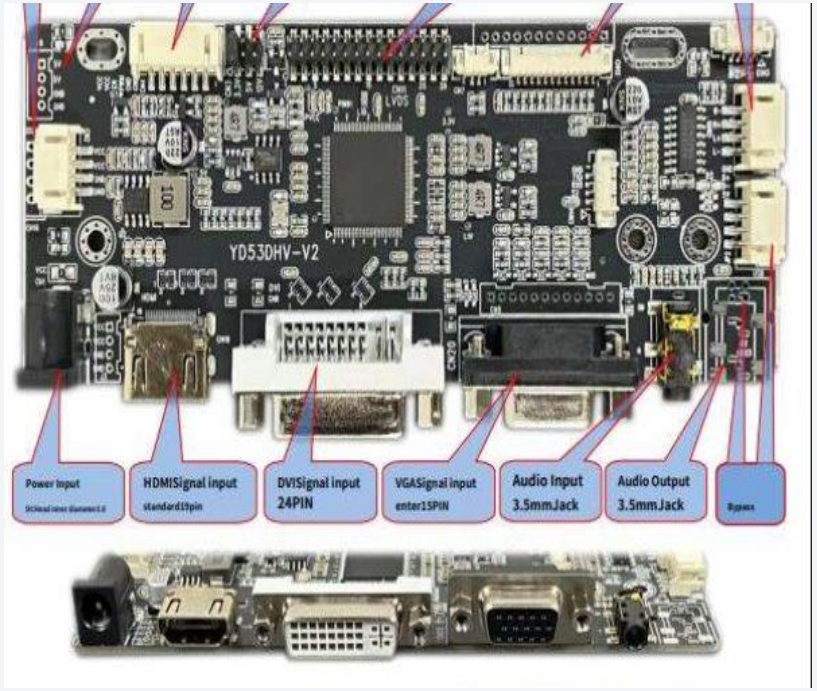
- Multi-Scenario Adaptability
- Compatible with All Categories of LCDs
- Flexible Customization Services
- Comprehensive Signal Support
- Wide-Temperature Operation
- High-Standard EMC Optimization
- Built-in Intelligent Algorithms
- Visual OSD Adjustment
- Professional Gamma Correction
- I^2C Ambient Light Sensing
- I^2C-to-USB Touch Controller
- Industrial-Grade High Reliability

eDP to LVDS LCD Controller Board V1



Product Model:YD52EL-V1 (Ver: V1; Board Ver: A1)
Dimensions:57×52.7×6.7mm (L×W×H); PCB 1.2mm
Max Resolution:2560×1600 (60Hz); Default 1920×1080
Signal: Input: eDP (2/4-wire @1.62/2.7Gbps)
Output: LVDS (Single/Dual 6/8bit)
Voltage: Input: 3.3~5.2V DC (Nom 3.3V)
Output: Panel 3.3/5V; BL 12V (opt 5V)
Interface:eDP(CN1/3), DP(CN7); LVDS(CN6); BL Ctrl
Environment:-30°C~+80°C (Industrial Grade)
Power: Standby <0.2W; Current: 0.1~0.7A
Features:70mW Low-power; Imported MCU; Anti-interference
MTBF:>100,000 hours

HDMI DVI VGA to LVDS Controller Board V1.3

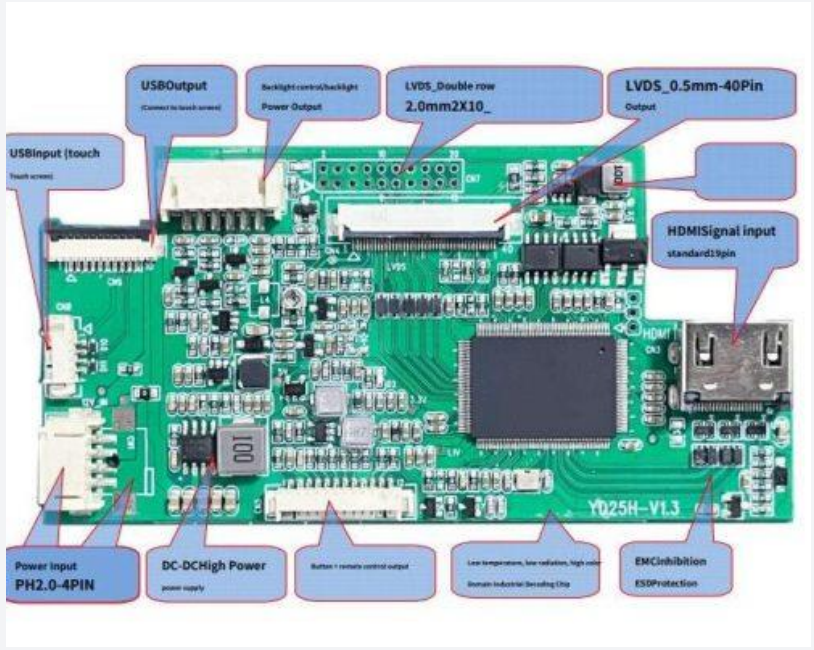


Product Model:YD53DHV-V2 (Version: V1; Board Version: A1)
Overall Dimensions:139×53×16.5mm (L×W×H)
Max Resolution:1920×1200 (VESA standard compatible)
Input Signals:HDMI (19pin), DVI (DB24), VGA (DB15/PH2.0)
Input Voltage:8V~25V DC (Typical 12V)
Panel Power:3.3V/5V/12V (Jumper selectable)
Backlight Power:12V (PWM adj: 0.1~5V)
Outputs:LVDS (30Pin), Audio (2×3W), 5V/2A
Control:OSD buttons, IR remote, Self-test
Features: Aging/Self-test mode, ESD protection
OS: Windows / Linux / Android
MTBF:>100,000 hours

HDMI to LVDS eDP Controller Board

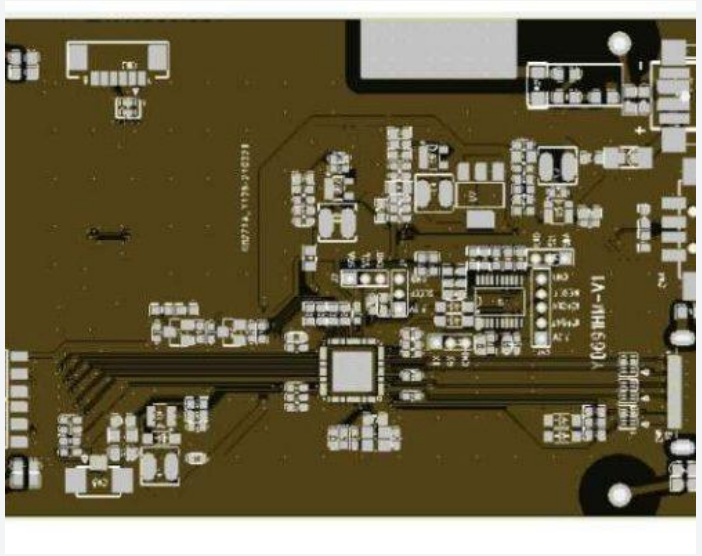
Product Model:YD256HU-V1 (Version: V1; P/N No.: V860102218; Board Version: A1)
Overall Dimensions:74.2mm×53mm×11mm (L×W×H)
Max Resolution:2560×1600 (compatible with 480×272~2560×1600)
Input Signal:HDMI (HDMI-19pin 90° Taiwan socket, CN7)
Input Voltage:8V~25V DC (Typical: 12V)
Output Voltages:Panel: 3.3V/5V/12V (CN5); Backlight: 12V(default)/5V(opt)
Output Interfaces:1.EDP(2/4lane); 2.LVDS(Dual 8-bit); 3.Audio(CN11); 4.USB(CN8/10); 5.Backlight(CN6)
Control:1.OSD(CN12); 2.IR(CN13); 3.IIC(CN13)
Features:Built-in LED driver, Aging mode, GND mounting holes, Visual OSD
MTBF:>100,000 hours

HDMI to LVDS Controller Board V1.3



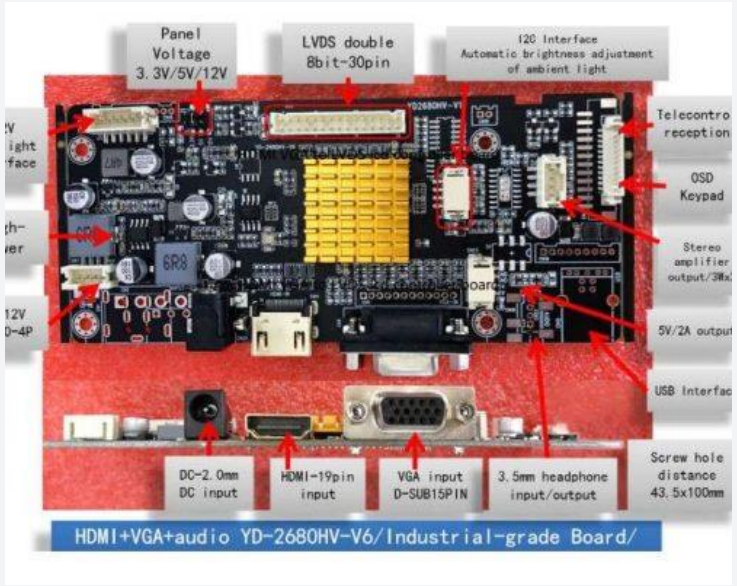
Product Model:YD25H-V1.3 (V1.3; A1)
Dimensions:103×51.5×15mm (L×W×H)
Max Resolution:1920×1200 (480×272~1920×1200)
Input:HDMI (19pin 90° Taiwan socket)
Input Voltage:8~25V DC (Typ. 12V)
Panel Power:3.3V/5V (jumper selectable)
Backlight Power:12V (9~29V support)
Outputs:LVDS (40pin/20pin), USB Touch, BL Ctrl
Control:OSD button, IR (optional)
Features:BL driver, Aging/Self-test mode, Low radiation, High color gamut, ESD protection
MTBF:>30000 hours

HDMI to MIPI LCD Controller Board



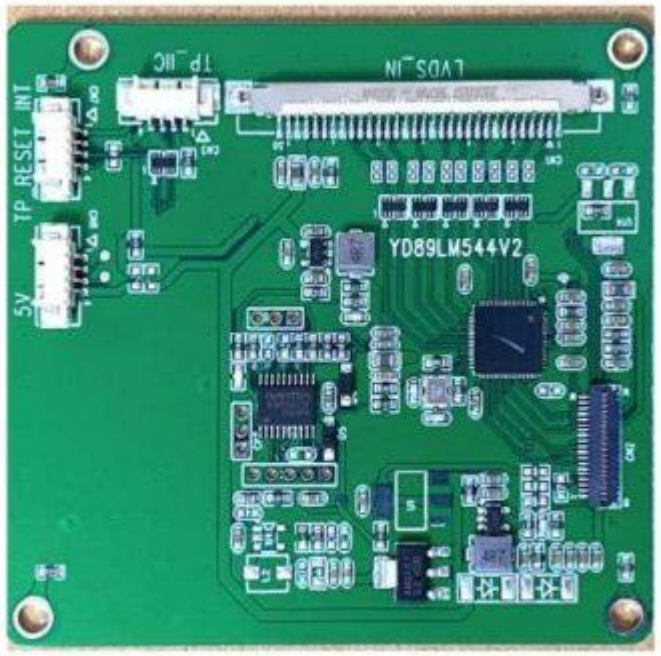
Product Model:YD691MIPI-V1 (Version: V1; Board Version: A1.1)
Overall Dimensions:108mm×66mm×8.5mm (L×W×H)
Max Resolution:1920×1200 (720×1280~1920×1200 compatible)
Input Signal:HDMI (19pin 90°) + USB/IIC Touch
Input Voltage:4.5V~5.5V DC (Nominal 5V)
Panel Power:3.3V/5V (Jumper selectable)
Backlight Power:BL-EN/PWM 0.1~4.8V (Built-in LED drive)
Output Interface:MIPI 2/4lane (0.5pitch-40PIN)
Comm Interface:USB (Touch), I^2C (Touch, NC)
Features:LED drive, PWM dimming, PCB mounting holes
MTBF:>50000 hours

HDMI VGA to LVDS Controller Board



Product Model:YD-2680HV V6 (Ver: V1; P/N: V20081101)
Overall Dimensions:136×60×16.5mm (L×W×H); PCB 1.6mm
Max Resolution:1920×1200 (VESA 640×480~1920×1200)
Input Signal:HDMI(19pin), VGA(DB15/PH2.0), PAL/NTSC, Audio(3.5mm/PH2.0)
Input Voltage:8~16V DC (Nominal 12V)
Output (Panel):3.3V/5V/12V (J1 jumper)
Output (Backlight):5V/12V (BL-EN/PWM 0~5V)
Interface:LVDS(2×15P), Audio(3W×2), 5V/2A, Backlight Ctrl
Control: Digital buttons, IR (optional), OSD (auto-save)
Features: Industrial EMC, Temp Ctrl, I2C Dimming, USB3.0
MTBF:>100,000 hours

LVDS to MIPI LCD Controller Board V89lm



Product Model:YD89LM544V2 (Version: A1; P/N No.: V08602205)
Overall Dimensions:69.5mm×66.2mm×5mm (L×W×H)
Max Resolution:1920×1200 (60Hz); compatible with 640×480~1920×1200
Input Signal:LVDS (single/dual 6/8bit; 8 pairs diff signals)
Input Voltage:4.7~5.2V DC (nominal 5V; ripple ⩽120mV)
Output Signal:2/4-Wire MIPI CSI/DSI (1.5Gbps/lane)
Panel Power:3.3V; Backlight: BL-EN/BL-PWM 3~5V
Interfaces:LVDS(CN1: JAE FI-X30HL); MIPI(CN2: FH26W-39S)
Operating Temp:-35°C~+80°C (industrial-grade)
Features: Low-power; MCU control; MTBF >100000h

MIPI to eDP LCD Controller Board

Product Model:YD11ME-V1 (Version: A1; P/N No.: V08602306)

Overall Dimensions:46.1mm×50mm×5mm (L×W×H)

Max Resolution:2560×1600 (60Hz); default 1920×1080

Input Signal:4-lane MIPI (high-speed)

Input Voltage:4.7~5.2V DC (nominal 5V); 3.3V opt

Output Signal (eDP):2/4-Wire @1.62/2.7Gbps

Panel Power:3.3V/5V (recommend 5V)

Backlight Power: Default +12V (opt 5V); BL-EN/PWM: 3~5V

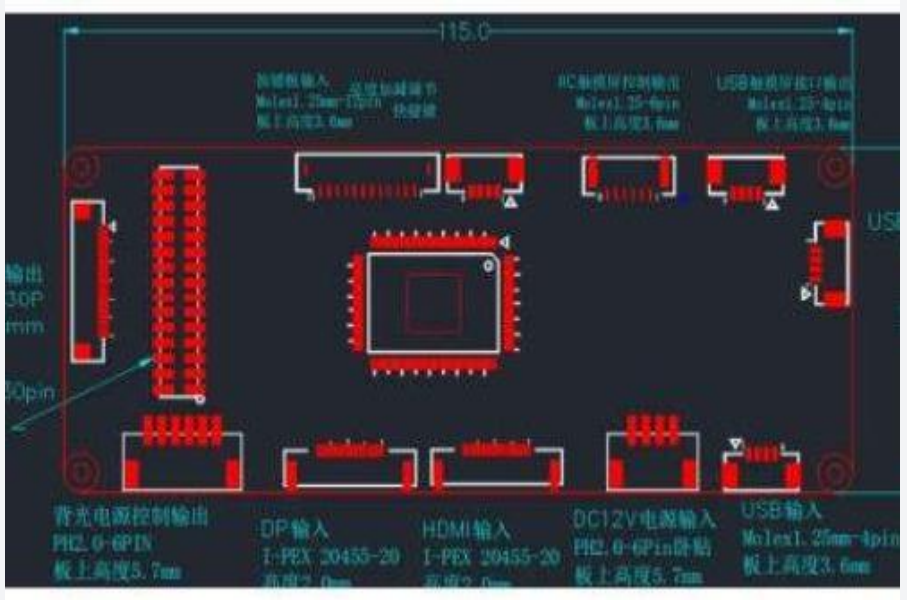
Interfaces:MIPI (CN3/CN1), eDP (CN2/CN4), Backlight (CN5/CN6)

Temp Range:-35°C~+80°C (industrial-grade)

Features: Low-power (70mW), MCU control, Aging mode

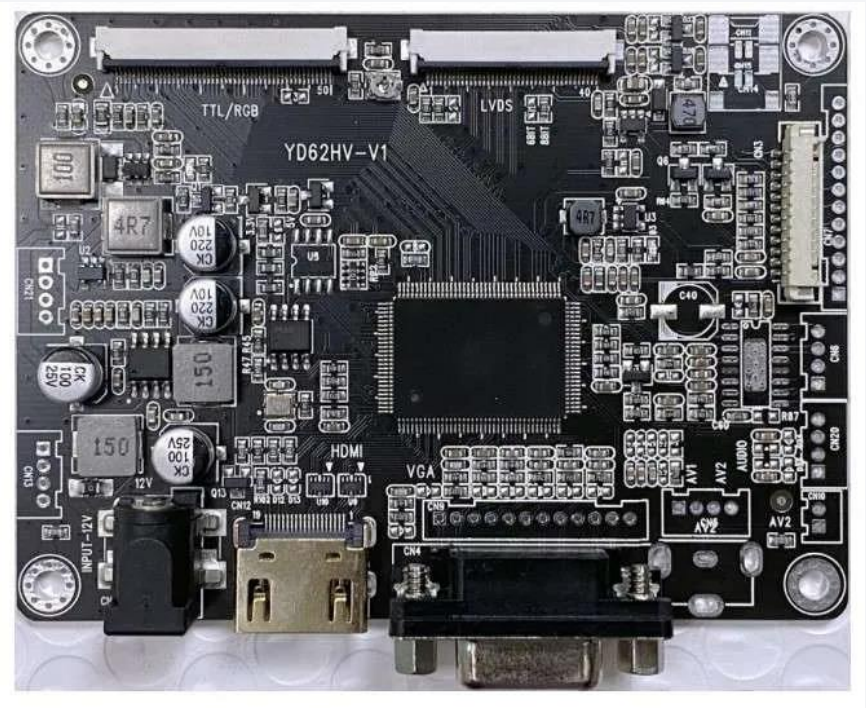
MTBF:>100,000 hours

HDMI DP to LVDS eDP Controller Board



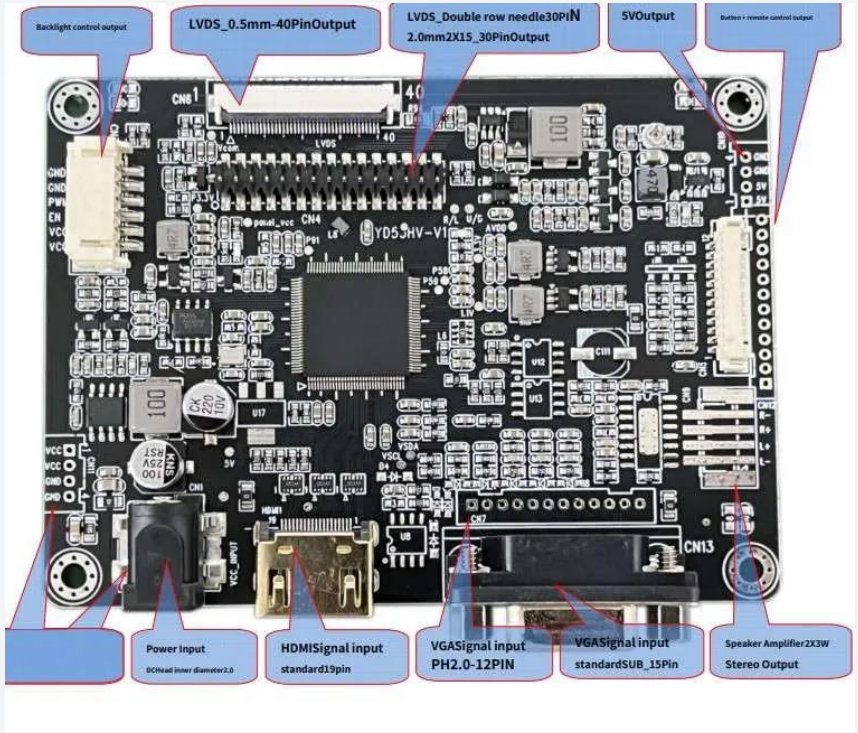
Product Model:YD285DH-V2 (Version: V1; P/N No.: V860102219)
Overall Dimensions:125.4×70.7×16.5mm (L×W×H)
Max Resolution:2560×1600 (VESA 480×272~2560×1600)
Input Signal:DP(20Pin) / HDMI(19Pin) / USB Touch / I2C Touch
Input Voltage:8V~25V DC (Typ. 12V)
Panel Power:3.3V/5V/12V (Jumper selectable)
Backlight Power:5V/12V (PWM adjustable)
Output Interface:eDP(2/4lane) / LVDS(Dual 8-bit) / Power/Backlight/USB
Control: Digital button / IR / OSD menu
Features: Aging mode / Dual touch / Grounded mounting holes
MTBF:>100000 hours

HDMI VGA to LVDS RGB Controller Board V1



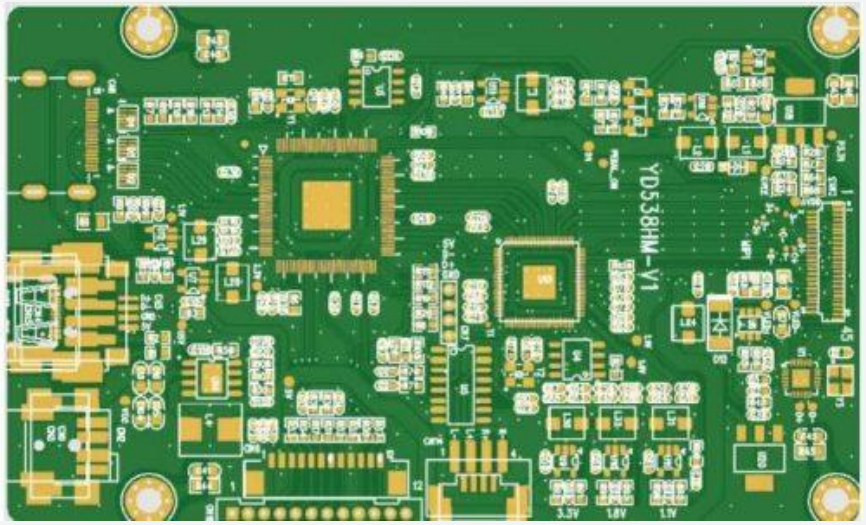
Product Model:YD62HV-V1 (Version: V1; P/N No.: V08602106)
Overall Dimensions:96mm×70mm×16.5mm (L×W×H)
Max Resolution:1366×768 (compatible 480×272~1366×768)
Input Voltage:8V~20V DC (typ 12V; 10.8V~13.2V range)
Output (Panel):3.3V/5V/12V (jumper selectable)
Output (Backlight):9~25V (LED drive, BL-EN/PWM: 0.1~4.8V)
MTBF:>100000 hours
Input Signal:1. HDMI (HDMI-19pin CN12); 2. VGA (DB15FLC CN4 or PH2.0-12PIN CN9); 3. AV (PAL/NTSC)
Output Interface:1. LVDS (0.5mm-40pin CN16); 2. TTL (0.5mm-50pin CN17); 3. Audio (CN6); 4. Power (5V/2A CN21); 5. Backlight (Molex1.25 CN11/15, BH3.5 CN14)
Control: Digital buttons (K1-K6), IR, OSD menu
Special Features: Built-in T-CON & LED driver; PWM adjustment; Ambient light sensor support

HDMI to MIPI DSI LCD Control Board



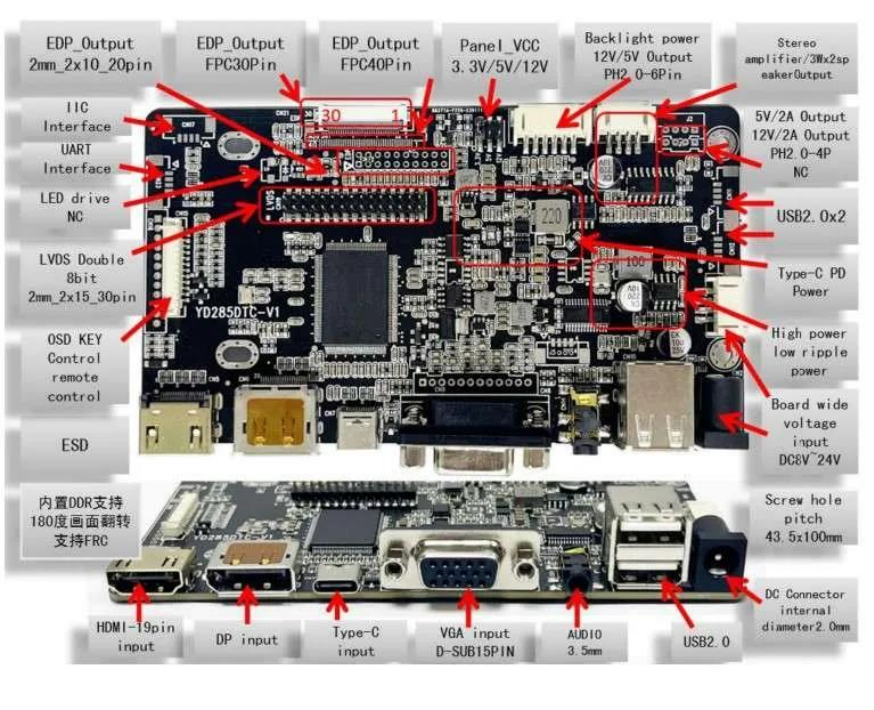
Product Model:YD539HM-V1 (Version: V1; Board Version: A1.1)
Overall Dimensions:108mm×66mm×11.5mm (L×W×H)
Max Resolution:1920×1200 (compatible with 720×1280~1920×1200)
Input Signal:1.HDMI(HDMI-19pin); 2.USB Touch; 3.IIC Touch
Input Voltage:5.5~24V DC (Typ 12V; Min 10V, Max 13V)
Panel Power:3.3V/5V (Jumper selectable)
Backlight Power: Built-in drive (BL-EN/PWM: 0.1~4.8V)
Output Interface:MIPI(2/4lane), 0.3pitch-45PIN flip socket
Control:1.OSD button; 2.Infrared(IR)
Special Functions:1.Backlight drive; 2.90° flip; 3.Debug USB
MTBF:>50000 hours

HDMI-DP-Type-C-VGA to EDP Control Board



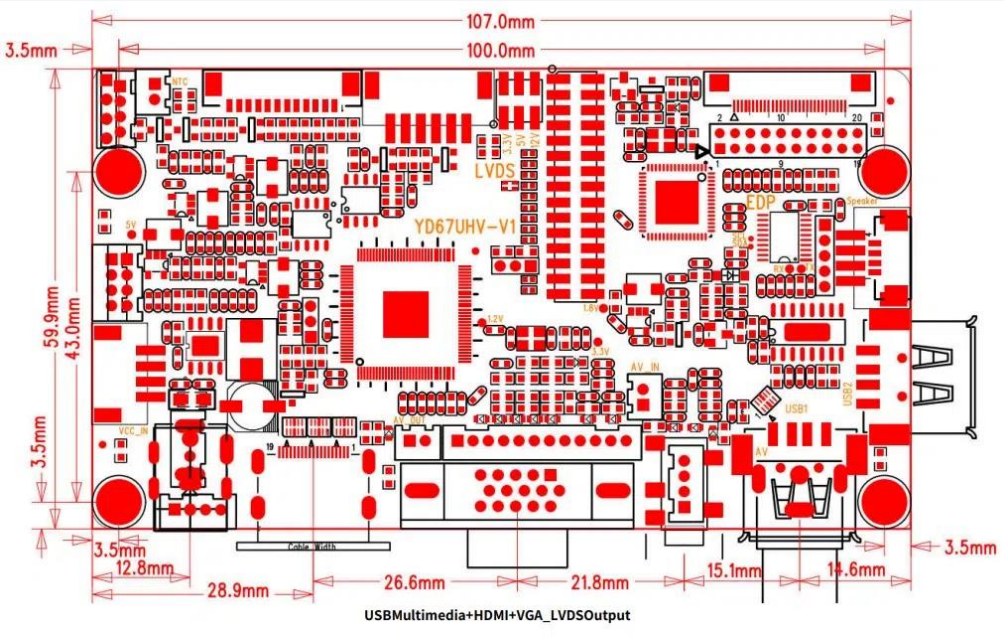
Product Model:YD285DTC-V1 (Version: V1)
Overall Dimensions:125.4×70.7×16.5mm (L×W×H)
Max Resolution:2560×1600 (VESA standard)
Input Signal Type:
1. Type-C (HD, reverse charging); 2. DP (20Pin); 3. HDMI; 4. VGA
Power: Input 8-24V DC; Output 3.3/5/12V (selectable)
Output Interface:
1. EDP (2/4lane); 2. LVDS (Dual 8-bit); 3. Audio (3.5mm/PH2.0); 4. Power Out
Control:OSD Button / IR Remote
Special Features:DDR, FRC, 180° Flip, Aging Mode, ESD Protection
MTBF:>100,000 hours

USB+HDMI+VGA+CVBS to LVDS+eDP Controller Board



Product Model:YD671UHV-V1 (Ver: V1; P/N: V860102108)
Overall Dimensions:106.8×60×16.5mm (L×W×H)
Max Resolution:1920×1200 (VESA 480×272~1920×1200)
Input Signal:HDMI(2-way), VGA, CVBS, USB2.0(2-way), 3.5mm Audio
Input Voltage:8V~25V DC (Typ. 12V)
Panel Power:3.3V/5V/12V (Jumper selectable)
Backlight Power:5V/12V (PWM adjustable)
Output Interface:LVDS(2×15P), eDP(FPC30pin), CVBS, SPDIF Audio, PWM Fan
Control: Digital Buttons, IR Remote, OSD Menu
MTBF:>100,000 hours

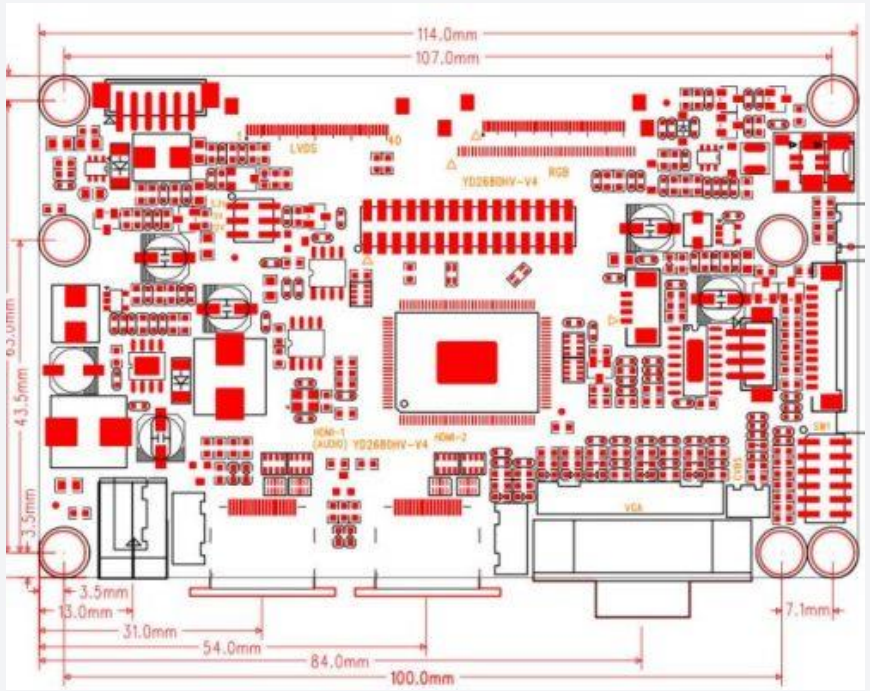
Dual HDMI to LVDS Controller Board



USBMultimedia+HDMI+VGA_LVDSOutput

Product Model:YD2680HV-V4 (Version: A1; P/N No.: V08602203)
Overall Dimensions:114mm×70mm×16.5mm (L×W×H)
Max Resolution:1920×1200 (VESA 480×272~1920×1200)
Input Signal:1.Dual HDMI (HDMI1 w/ Audio, HDMI2 DVI); 2.VGA; 3.AV
Input Voltage:8V~25V DC (Typ:12V; Range:10.8~13.2V)
Panel Power:3.3V/5V/12V (J1 jumper selectable)
Backlight Power:5V/12V (Default 12V); 9~25V for LED
Output Interface:1.LVDS(2×15P/FFC); 2.TTL(FFC); 3.Audio; 4.Backlight Ctrl
Control:1.Button; 2.IR; 3.Resolution jumpers (S1-S6)
Features: Built-in T-CON/LED drive; Grounded holes; OSD UI
MTBF:>100,000 hours

HDMI to LVDS Controller Board V5



Product Model:YD2680HV-V5 (Version: A1; P/N No.: V08301810)

Overall Dimensions:74.82×53×16.5mm (L×W×H)

Max Resolution:1920×1200 (compatible with 640×480~1920×1200)

Input Signals:HDMI+VGA+AV

Input Voltage:6V~24V DC (typical 12V)

Output Interface: Dual 8-bit LVDS (2×15P/30Pin)

Panel Power:3.3V/5V/12V (jumper selectable)

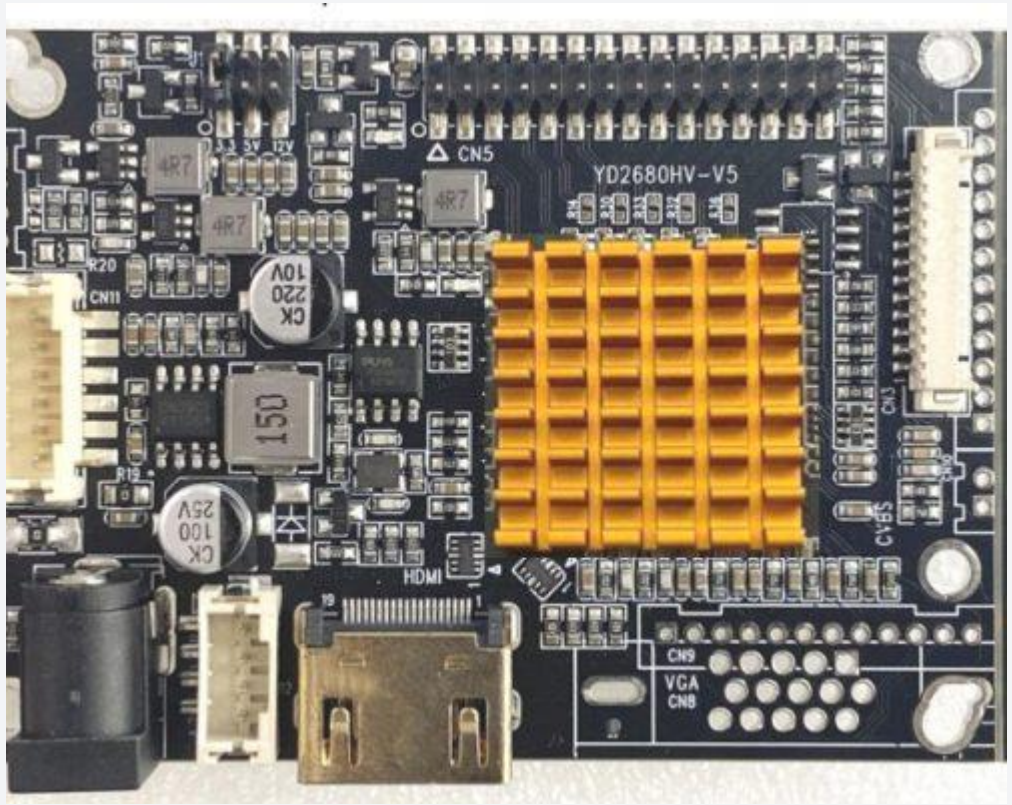
Backlight Power:5V/12V (PWM dimming supported)

Control: Digital buttons, IR remote, Aging mode

Features: Grounded PCB holes, Visual OSD UI, 60-75Hz refresh rate

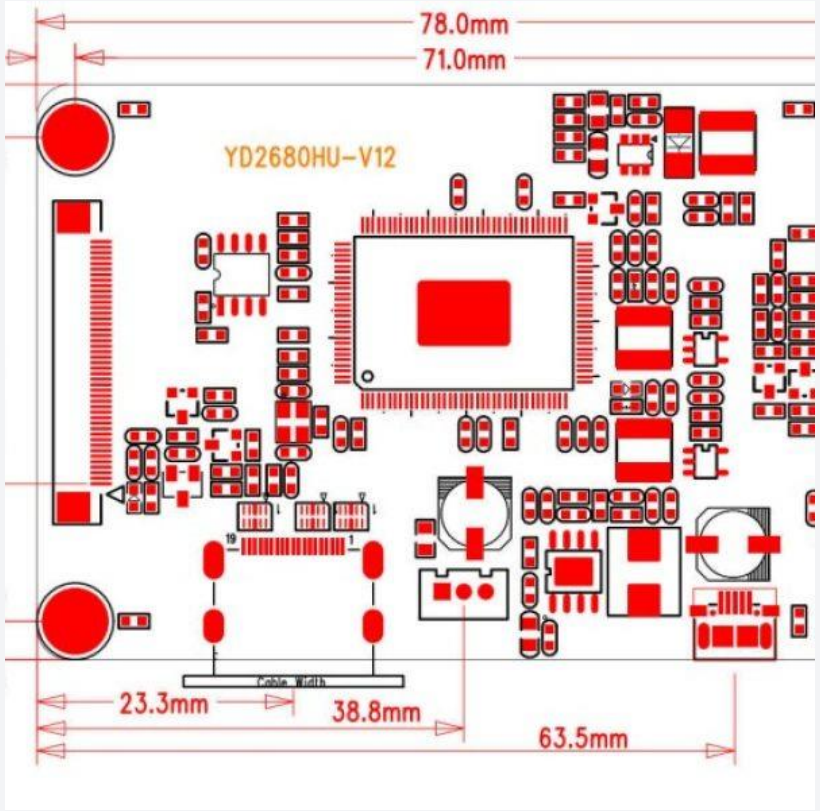
MTBF:>100,000 hours

HDMI to LVDS Controller Board V12



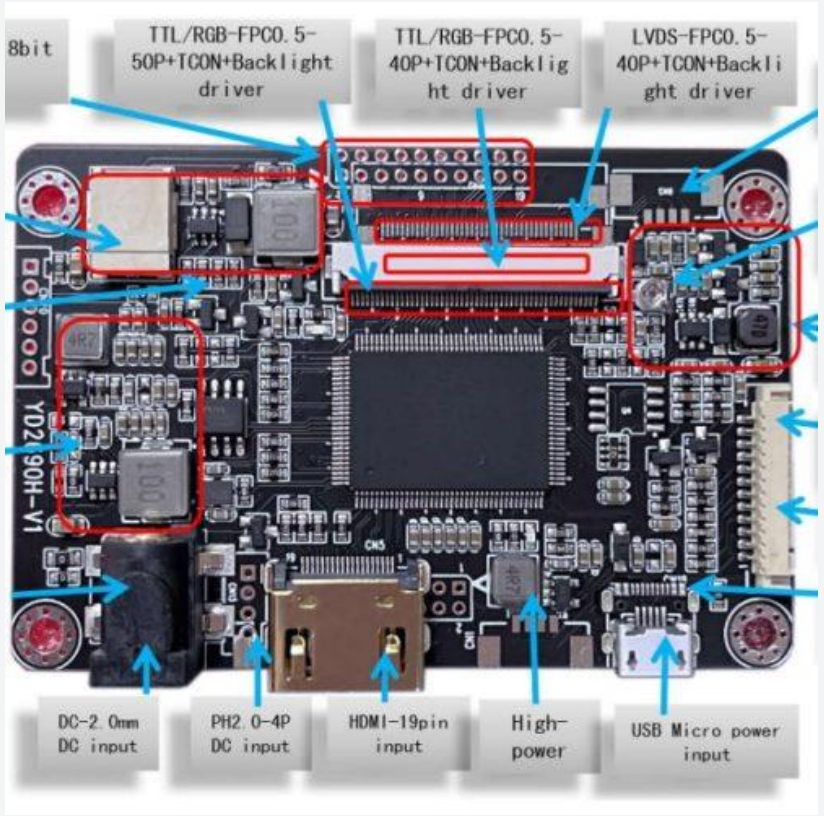
Product Model:YD2680HU-V12 (Ver:A1; P/N:V08602005; Board:V0)
Overall Dimensions:78×52.3×13.5 mm (L×W×H)
Max Resolution:1920×1200 (320×240~1920×1200)
Input Signal:HDMI (HDMI-19pin 90° Taiwan socket)
Input Voltage:1. USB Micro 5V(4.8~5.5V); 2. DC 9~16V
Panel Power:3.3V/5V (resistor selectable)
Backlight Power:9~25V; BL-EN/PWM:0.1~4.5V
Output Interface:LVDS(FFC 0.5mm-45pin); Backlight(PH2.0-6PIN)
Control: Digital button (MOLEX-12PIN); IR control
Features: Built-in LED driver; Visual OSD; 60Hz Refresh
MTBF:>100,000 hours

HDMI to LVDS+RGB Controller Board V1



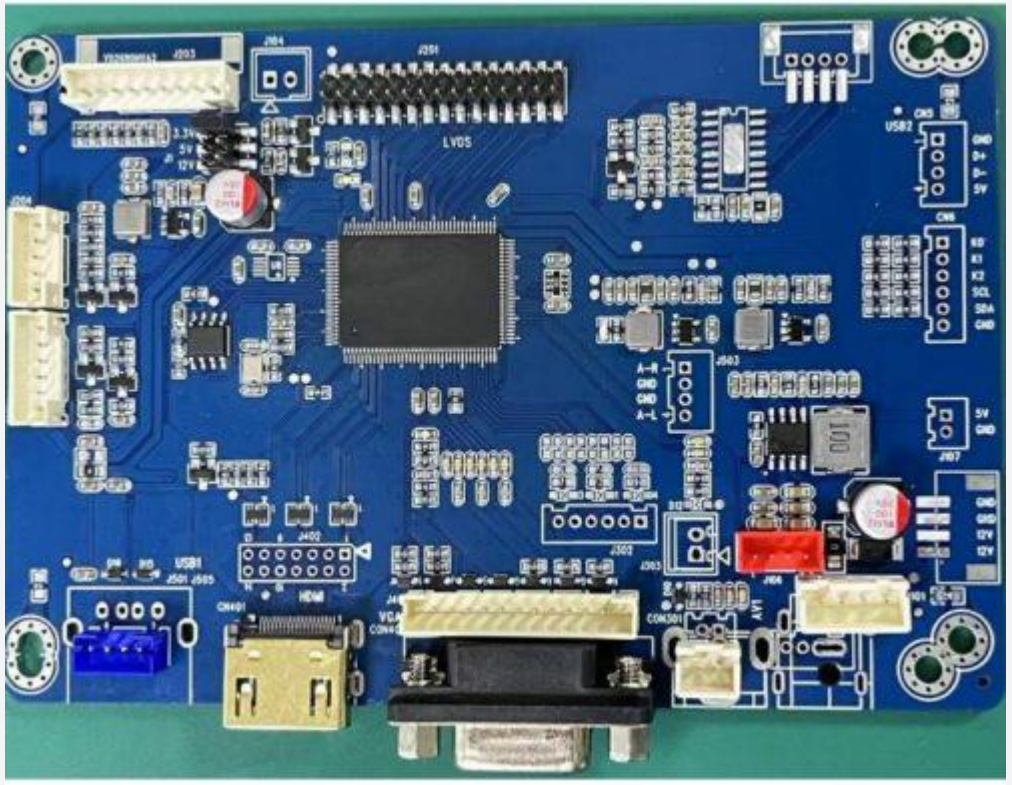
Product Model:YD2690H-V1 (Ver:A1; P/N:V08602005; Board Ver:V0)
Overall Dimensions:78×50×13.5mm (L×W×H)
Max Resolution:1920×1200 (compatible 320×240~1920×1200)
Input Signal:HDMI(CN12) + Mini HDMI(CN5, NC)
Input Voltage: Micro USB 5V(4.8~5.5V); DC 9~16V; 12V DC(CN1)
Output (Panel):3.3V/5V (resistor selectable)
Output (Backlight):9~25V; BL-EN/PWM: 0.1~4.5V
Output Interface:LVDS(FFC/20Pin); TTL/RGB(FFC 40/50Pin); BL Ctrl(CN20)
Control: Digital button(CN7); Infrared(IR)
Features: Built-in T-CON/LED drv; GND holes; OSD; 60Hz refresh
MTBF:>100,000 hours

HDMI VGA to LVDS RGB Controller Board V9



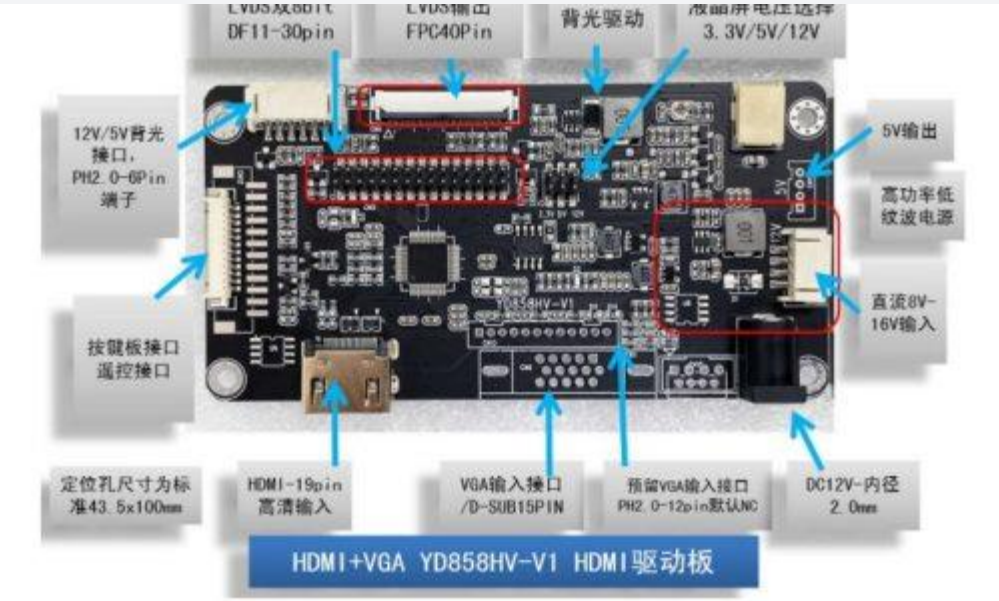
Product Model:YD2680HV-V9 (Ver: A1.1; P/N: V08602006)
Overall Dimensions:116.9×70×16.5mm (L×W×H)
Max Resolution:1920×1200 (VESA 480×272~1920×1200)
Input Signal:HDMI(19pin) / VGA / AV(PAL/NTSC)
Input Voltage:5V~25V DC (Typ: 12V)
Output Voltage: Panel: 3.3/5/12V; Backlight: 5/12V(9~25V)
Output:LVDS(2×15P/FFC) / TTL/RGB / Audio(3W×2) / Backlight Ctrl / 5V/2A
Control: Digital btn / IR / Jumpers / IIC Auto-dimming
Features: Built-in T-CON/LED drive, Low EMC, ESD, OSD, USB-B
MTBF:>100,000 hours

HDMI+VGA to LVDS controller board HAV2



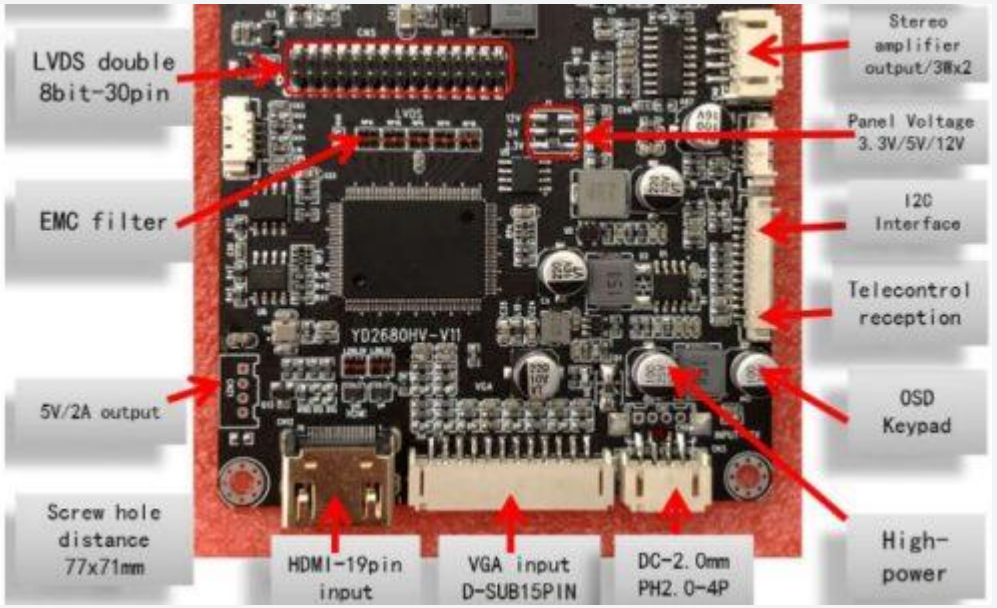
Product Model:YD2680HAV2 (Ver: A1.1; P/N: V08602006)
Overall Dimensions:114mm×83.5mm×16.5mm (L×W×H)
Max Resolution:1920×1080 (VESA 480×272~1920×1200)
Input Signal:HDMI(19pin) / VGA / AV(PAL/NTSC)
Input Voltage:5V~25V DC (Typ: 12V)
Output Voltage:Panel: 3.3/5/12V; Backlight: 5/12V(9~25V)
Output:LVDS(2×15P/FFC) / TTL/RGB / Audio(3W×2) / Backlight Ctrl / 5V/2A
Control:Digital btn / IR / Jumpers / IIC Auto-dimming
Features:Built-in T-CON/LED drive, Low EMC, ESD, OSD, USB-B
MTBF:>100,000 hours

HDMI+VGA to LVDS controller board V1



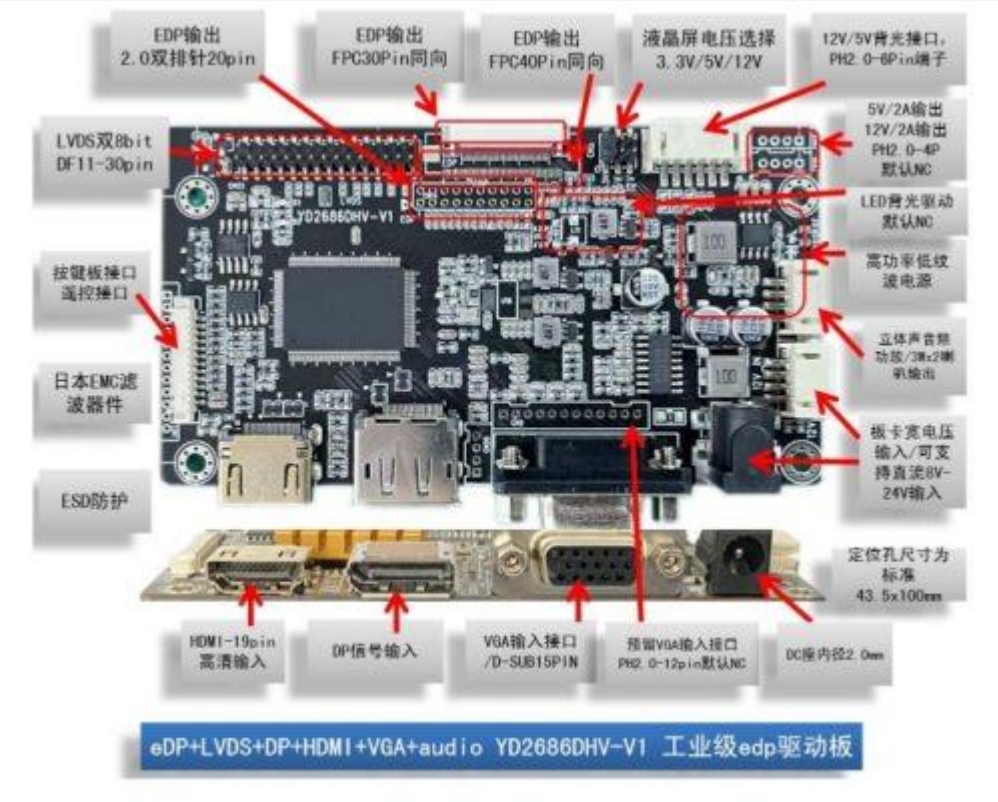
Product Model:YD858-V1 (Version: A1.1; P/N No.: V08702035)
Overall Dimensions:107mm×56.4mm×16.5mm (L×W×H
Max Resolution:1920×1200 (VESA 480×272~1920×1200)
Input Signal:HDMI(19pin) / VGA
Input Voltage:8V-18V DC (Typ: 12V)
Output Voltage: Panel: 3.3/5/12V; Backlight: 5/12V(9~25V)
Output:LVDS 40P/FFC) Backlight Ctrl / 0.8-4.8V
Control: Digital btn / IR / Jumpers / IIC Auto-dimming
Features: Built-in T-CON/LED drive, Low EMC, ESD, OSD, USB-B
MTBF:>100,000 hours

HDMI+VGA to LVDS controller board V11



Product Model:YD2680HV-V11 (Version: A1.1; P/N No.: V08602009)
Overall Dimensions:78mm×84mm×7.9mm (L×W×H)
Max Resolution:1600×1200 (VESA 480×272~1600×1200)
Input Signal:HDMI(19pin) / VGA / AV(PAL/NTSC)
Input Voltage:5V~25V DC (Typ: 12V)
Output Voltage: Panel: 3.3/5/12V; Backlight: 5/12V(9~25V)
Output:LVDS(2×15P/FFC) / TTL/RGB // Backlight Ctrl / 5V/2A
Control: Digital btn / IR / Jumpers / IIC Auto-dimming
Features: Built-in T-CON/LED drive, Low EMC, ESD, OSD, USB-B
MTBF:>100,000 hours

VGA+HDMI+DP to LVDS+eDP controller board V1



Product Model:YD2686DHV-V1 (Version: A1; P/N No.: V860102019)
Overall Dimensions:109.5mm×60mm×16.5mm (L×W×H)
Max Resolution:2560×1080 (VESA 480×272~2560×1080)
Input Signal:HDMI(19pin) / VGA / DP
Input Voltage:5V~25V DC (Typ: 12V)
Output Voltage: Panel: 3.3/5/12V; Backlight: 5/12V(9~25V)
Output:LVDS(2×15P/FFC) / EDP(2x10P)Audio(3W×2) / Backlight Ctrl / 5V/2A
Control: Digital btn / IR / Jumpers / IIC Auto-dimming
Features: Built-in T-CON/LED drive, Low EMC, ESD, OSD, USB-B
MTBF:>100,000 hours

Thanks for watching.

look forward to working with you.