

Image Processor Board and its Accessories



- ❖ High-end board solutions for displays up to FHD/WUXGA and UHD/4k resolution
- ❖ Latest type of display interfaces and inputs support
- ❖ Fully configured plug & play kits with converter, power supply, cables and OSD Key Pad
- ❖ Performed the outstanding image quality

1. Neptune (AD Board, Up to 4k / UHD, Vx1 16Lane& eDP interface type, PIP & PBP)
2. Saturn2 (AD Board, Up to 4k / UHD, Vx1 8Lane& eDP interface type, PIP & PBP)
3. Titan (AD Board, Up to 4k / UHD, Vx1 & eDP interface type)
4. Venus6 (AD Board, Up to FHD / WUXGA, LVDS interface type, SDI input support)
5. Galaxy6 (AD Board, Up to UXGA / QHD, LVDS interface type)
6. SDI to HDMI converter, 3G ang 12G model
7. LVDS Receiver (Signal converter from LVDS to TTL/CMOS type interface)
8. DC/DC Board (Power Accessory for 12V to 24V)

AD Board (4K Supportable)

NEPTUNE



24V DC In



12V DC In



SMPS In (Wafer Type)

◆ Display

UHD(3840x2160, 4096x2160) resolution display format.
Up scaling can do VGA, SVGA, XGA, SXGA, UXGA to
UHD VESA Standard Mode.

- Vx1 interface Max 32-Lane
- e-DP 16-lane(HBR2 - 5.4Gbps)
- e-DP 8-lane(HBR3 - 8.1Gbps)

◆ Video Input

- 3 x HDMI In/HDMI 2.1 /4K2K@60Hz
- 2 x DisplayPort In/DP1.4/4K2K@60Hz

◆ Audio

- HDMI Input: Digital Audio
- DisplayPort: Digital Audio
- SPDIF out port (Wafer type)
- Speaker Output: 10W+10W,Stereo Sound
- Headphone Output: 3.5Ø Stereo Jack

◆ Other Connections

- RS232 control Port (Wafer type)
- Key Pad/IR: 7Key, IR Remote Controller
- I2C control port (Wafer type: Master/Slave)

◆ Power

- 12VDC Power
- 24VDC Power
- SMPS In (wafer type)

◆ Basic Features

- Over driver/Over scan Function
- 6Color control
- PCM (Precise Color Management)
- Sharpness/Hue/Color Support
- Gamma Control
- Color Effect Function
- Response time Control
- UART for RS232 Control

◆ Advanced Features

- PIP/PBP(L/R, Top/Bottom)/4P(4Windows) Function
- PIP Sound Choice
- HDR (High Dynamic Range)/Optional Support
- Ambient Light sensor control
- FAN control (RPM) by temperature sensor
- DICOM / ECDIS calibration and support LUT

◆ Conditions

- Operating Temperature : -10°C~ 70°C
- Operating Humidity : 20%~90%RH
- Storage Temperature : -20°C~70°C
- Storage Humidity : 5%~90%RH

◆ Dimensions

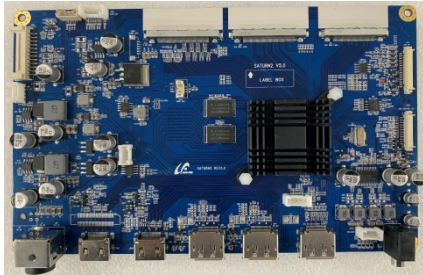
- 200mm X 130mm x 14.6mm

◆ Options

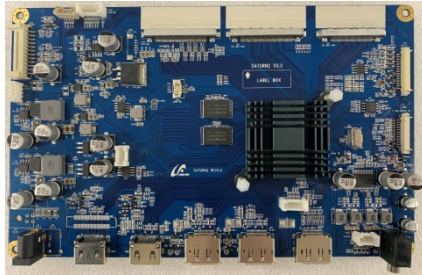
- Light Ambient Sensor Board (I2C type)
- Temperature Sensor Board (I2C type)
- FAN control Board
- 12G SDI combination
- SDVoE combination

AD Board (4K Supportable)

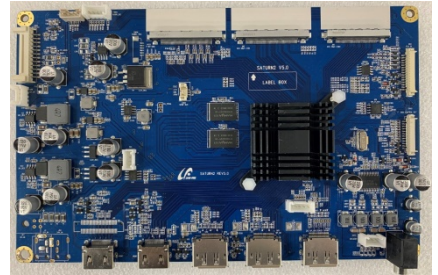
SATURN2



24V DC In



12V DC In



SMPS In (Wafer Type)

◆ Display

UHD(3840x2160, 4096x2160) resolution display format.
Up scaling can do VGA, SVGA, XGA, SXGA, UXGA to
UHD VESA Standard Mode.

- Provides upto 30-bit color and 4Ch LVDS
- Vx1 interface
- e-DP 8-lane(HBR) / 4-lane(HBR2) Interface

◆ Video Input

- 2 x HDMI In/HDMI 2.0 /4K2K@60Hz
- 2 x DisplayPort In/DP1.2/4K2K@60Hz
- 1 x DisplayPort out
- 1 x VGA in (Wafer type: option)

◆ Audio

- RGB: Analog Audio
- HDMI Input: Digital Audio
- DisplayPort: Digital Audio
- SPDIF out port (Wafer type)
- Speaker Output: 10W+10W,Stereo Sound
- Headphone Output: 3.5Ø Stereo Jack

◆ Other Connections

- RS232 control Port (Wafer type)
- Key Pad/IR: 7Key, IR Remote Controller
- I2C control port (Wafer type: Master/Slave)

◆ Power

- 12VDC Power
- 24VDC Power
- SMPS In (wafer type)

◆ Basic Features

- Over driver/Over scan Function
- 6Color control
- PCM (Precise Color Management)
- Sharpness/Hue/Color Support
- Gamma Control
- Color Effect Function
- Response time Control
- UART for RS232 Control

◆ Advanced Features

- PIP/PBP(L/R, Top/Bottom)/4P(4Windows) Function
- DisplayPort MST (Multi Stream Transport, up to FHD 4 EA)
- Daisy chain Output.
- Video-wall control: up to 5 x 5 (Option)
- PIP Sound Choice
- HDR (High Dynamic Range)/Optional Support
- Ambient Light sensor control
- FAN control (RPM) by temperature sensor
- DICOM / ECDIS calibration and support LUT

◆ Conditions

- Operating Temperature : -10°C~ 70°C
- Operating Humidity : 20%~90%RH
- Storage Temperature : -20°C~70°C
- Storage Humidity : 5%~90%RH

◆ Dimensions

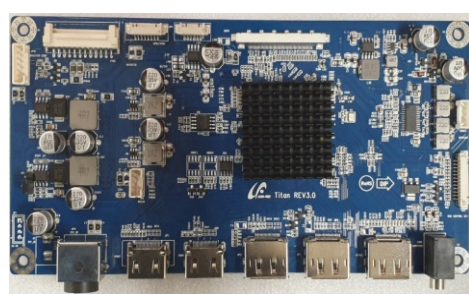
- 200mm X 130mm x 1.46mm

◆ Options

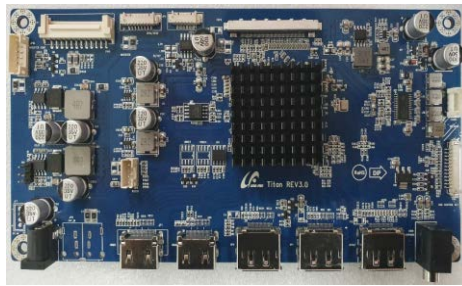
- Light Ambient Sensor Board (I2C type)
- Temperature Sensor Board (I2C type)
- FAN control Board
- 12G SDI Combination

AD Board (4K Supportable)

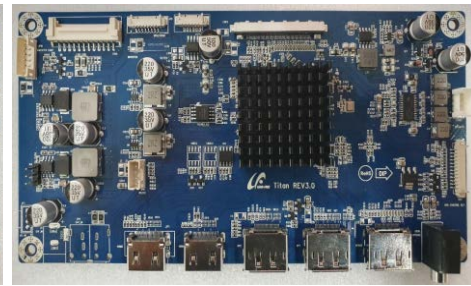
TITAN



24V DC In



12V DC In



SMPS In (Wafer Type)

◆ Display

UHD(3840x2160, 4096x2160) resolution display format.
Up scaling can do VGA, SVGA, XGA, SXGA, UXGA to
UHD VESA Standard Mode.

- Vx1 interface
- e-DP 8-lane(HBR) / 4-lane(HBR2) Interface

◆ Video Input

- 2 x HDMI In/HDMI 2.0 /4K2K@60Hz
- 2 x DisplayPort In/DP1.2/4K2K@60Hz
- 1 x DisplayPort out

◆ Audio

- HDMI Input: Digital Audio
- DisplayPort: Digital Audio
- SPDIF out port (Wafer type)
- Speaker Output: 10W+10W,Stereo Sound

◆ Other Connections

- RS232 control Port (Wafer type)
- Key Pad/IR: 7Key, IR Remote Controller
- I2C control port (Wafer type)

◆ Power

- 12VDC Power
- 24VDC Power
- SMPS In (wafer type)

◆ Basic Features

- Over driver/Over scan Function
- 6Color control
- PCM (Precise Color Management)
- Sharpness/Hue/Color Support
- Gamma Control
- Color Effect Function
- Response time Control
- UART for RS232 Control

◆ Advanced Features

- DisplayPort MST (Multi Stream Transport, upto FHD 4 EA)
- Daisy chain Output.
- Video-wall control: up to 5 x 5 (Option)
- HDR (High Dynamic Range) Support
- Ambient Light sensor control
- FAN control (RPM) via FAN controller by temperature sensor
- DICOM / ECDIS calibration and support LUT

◆ Conditions

- Operating Temperature : -10°C~70°C
- Operating Humidity : 20%~90%RH
- Storage Temperature : -20°C~70°C
- Storage Humidity : 5%~90%RH

◆ Dimensions

- 180mm X 92mm x 1.46mm

◆ Options

- Light Ambient Sensor Board (I2C type)
- Temperature Sensor Board (I2C type)
- FAN control Board

AD Board (4K Supportable)

TITAN2



TITAN2



OLED Power Sequence Board

◆ Display

Minimized form factor (60mm width) for LG transparent OLED Module UHD(3840x2160, 4096x2160) resolution display format. Up scaling from VGA, SVGA, XGA, SXGA,, UXGA to UHD VESA Standard Mode.

- e-DP 8-lane(HBR) / 4-lane(HBR2) Interface

◆ Video Input

- 1 x HDMI In / HDMI 2.0 / 4K2K@60Hz
- 1 x DisplayPort In / DP1.2 / 4K2K@60Hz
- 1 x DisplayPort out

◆ Audio

- Speaker Output: 10W+10W, Stereo Sound

◆ Other Connections

- RS232 control Port (Wafer type)
- Key Pad/IR: 7Key, IR Remote Controller
- I2C control port (Wafer type)

◆ Power

- 24VDC Power
- 22VDC Power
- SMPS In (wafer type)

◆ Basic Features

- Over driver / Over scan Function
- 6Color control
- PCM (Precise Color Management)
- Sharpness/Hue/Color Support
- Gamma Control
- Color Effect Function
- Response time Control
- UART for RS232 Control

◆ Advanced Features

- DisplayPort MST (Multi Stream Transport, upto FHD 4 EA)
- Daisy chain Output.
- Video-wall control: up to 5 x 5 (Option)
- HDR (High Dynamic Range) Support
- Ambient Light sensor control
- FAN control (RPM) via FAN controller by temperature sensor

◆ Conditions

- Operating Temperature : -10°C~70°C
- Operating Humidity : 20%~90%RH
- Storage Temperature : -20°C~70°C
- Storage Humidity : 5%~90%RH

◆ Dimensions

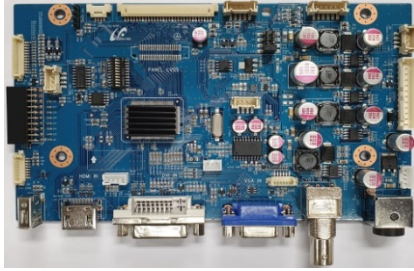
- TITAN2 : 200mm X 60mm X 22.15mm
- OLED Power board : 140mm X 60mm X 18.25mm

◆ Options

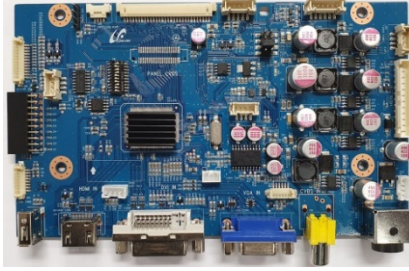
- Light Ambient Sensor Board (I2C type)
- Temperature Sensor Board (I2C type)
- FAN control Board

AD Board (FHD/WUXGA, LVDS)

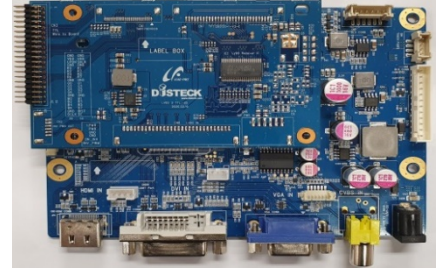
VENUS6



BNC Type



RCA Type



Venus6+LVDS Receiver

◆ Display

Full CRT multi-sync monitor compatibility
Multi-sync capability up to WUXGA resolution @ 60Hz, compatible standard
DOS, VGA, SVGA, XGA and SXGA / WUXGA VESA timing
Expand DOS, VGA and SVGA to full screen display

- 10-bit data processing and **10-bit LVDS** output
- TTL output (Option Board)

◆ Video Input

- 1 x Analog RGB
- 1 x DVI-D
- 1 x HDMI
- 1 x CVBS (Jack option: RCA type or BNC type)
- 1 x SDI (Option Board)

◆ Audio

- Audio support (2W x 2W speaker out)

◆ Other Connections

- Touch Power Control
- USB for Firmware Update
- RS232 control Port (Wafer type)
- Key Pad/IR: 5Key, IR Remote Controller
- I2C control port (Wafer type)

◆ Power

- 12VDC Power
- 24VDC Power
- SMPS In (wafer type)

◆ Basic Features

- Full control of all relevant display and interface parameters via OSD
- Multi language support
- VESA DDC 1/2B compliant
- Compatible with VESA DPMS power saving
- UART for RS232 Control

◆ Advanced Features

- Multi-standard color system at CVBS (PAL/NTSC)
- Image Flip/Mirror supportable by AD board
- Serial Control (RS232C) ready / Customized protocol setting (optional contract basis)
- Media Player (wafer to USB: Firmware Update port)
- Ambient Light sensor control
- FAN control (RPM) by temperature sensor
- DICOM / ECDIS calibration and support LUT

◆ Conditions

- Operating Temperature : -30°C~80°C
- Operating Humidity : 20%~90%RH
- Storage Temperature : -30°C~85°C
- Storage Humidity : 5%~90%RH

◆ Dimensions

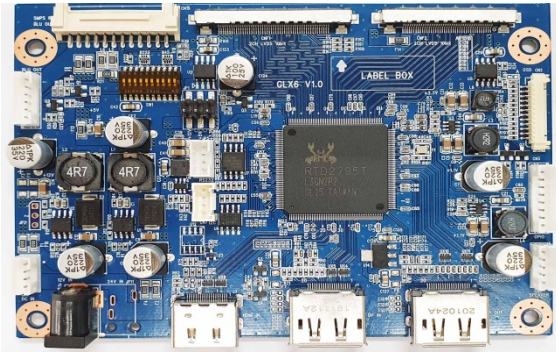
- 170mm X 100mm x 20mm

◆ Options

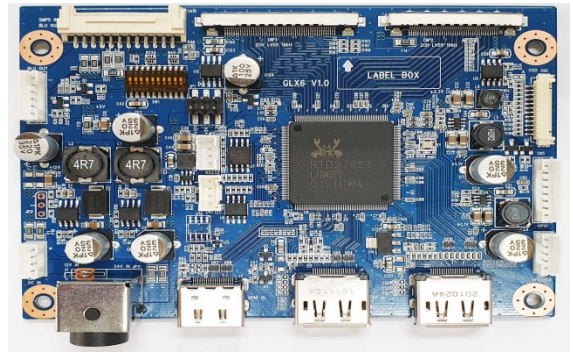
- Light Ambient Sensor Board (I2C type)
- Temperature Sensor Board (I2C type)
- FAN control Board

AD Board (UXGA, LVDS)

GALAXY6



12V Type



24V Type

◆ Display

Up to UXGA (2560x1600, 2560x1440) resolution display format.

Up scaling from VGA, SVGA, XGA, SXGA, FHD, WUXGA to QHD VESA Standard Mode.

- Up to 30-bit color and 4 Channel LVDS Interface

◆ Video Input/Output

- 1 x HDMI In/HDMI 1.4 /2K@60Hz
- 1 x DisplayPort In/DP1.2/2K@60Hz
- 1 x DisplayPort Out

◆ Audio

- HDMI Input: Digital Audio
- DisplayPort: Digital Audio
- Speaker Output: 10W+10W,Stereo Sound

◆ Other Connections

- RS232 control Port (Wafer type)
- Key Pad/IR: 5Key, IR Remote Controller
- I2C control port (Wafer type)

◆ Power

- 12VDC Power
- 24VDC Power
- SMPS In (wafer type)

◆ Basic Features

- Over driver/Over scan Function
- 6Color control
- PCM (Precise Color Management)
- Sharpness/Hue/Color Support
- Gamma Control
- Color Effect Function
- Response time Control
- UART for RS232 Control

◆ Advanced Features

- Ambient Light sensor control
- FAN control (RPM) via FAN controller by temperature sensor

◆ Conditions

- Operating Temperature : -10°C~70°C
- Operating Humidity : 20%~90%RH
- Storage Temperature : -20°C~70°C
- Storage Humidity : 5%~90%RH

◆ Dimensions

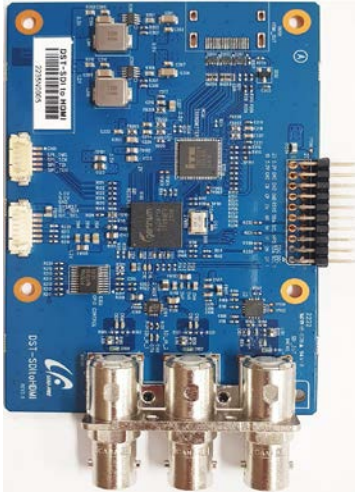
- 123mm X 90mm x 1.6mm

◆ Options

- Light Ambient Sensor Board (I2C type)
- Temperature Sensor Board (I2C type)
- FAN control Board

SDI Board (3G, 12G)

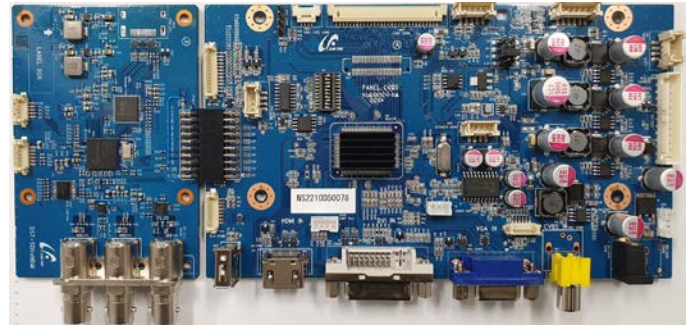
3G SDI converter



3G SDI to HDMI converter

◆ Spec Summary

- Cable free connection or Pin Header Type connection to targeting (mating) AD Board
- Automatic rate detection 3G/HD/SD-SDI
- Two 3G/HD/SD-SDI inputs and one monitored output
- Adoption of High quality CANARE BNC connectors



Example : 3G SDI with mating Venus6

◆ Conditions

- Operating Temperature : -10°C~70°C
- Operating Humidity : 20%~90%RH
- Storage Temperature : -20°C~70°C
- Storage Humidity : 5%~90%RH

◆ Dimensions

- 68mm X 100mm x 18mm

12G SDI converter



◆ Spec Summary

- 12G-SDI input x 2 , 12G-SDI LOOF output x1
- Automatic skew compensation for multi-link SDI inputs
- SDI to HDMI Conversion and Re-clocking
- 12G-SDI Video output format - 3840x2160 60Hz
- Supports up to 8 channels of digital audio



◆ Conditions

- Operating Temperature : -10°C~60°C (Cooling fan applied)
- Operating Humidity : 20%~90%RH
- Storage Temperature : -20°C~70°C
- Storage Humidity : 5%~90%RH

◆ Dimensions

- 77mm X 70mm x 18mm

Optional Accessories

FAN Controller

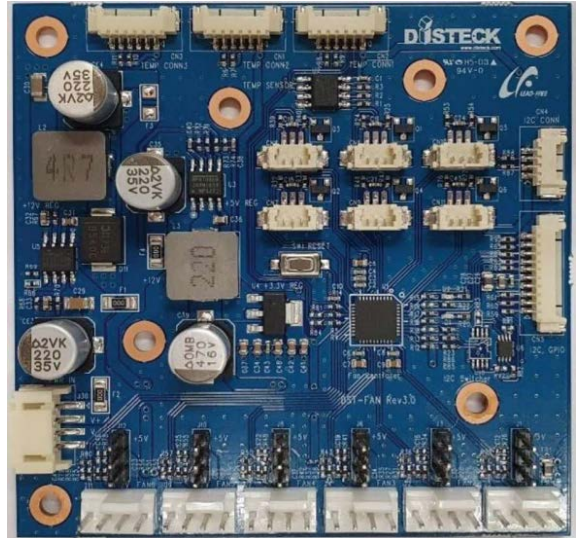
PWM based Fan Controller and Monitoring.

◆ Feature

- PWM based Fan Controller and Monitoring
- 8 x FAN support
 - 4 x FAN primary, 4 x FAN secondary
 - 12V/5V Fan support
- 5 x Temperatures sensor support
 - TMP05 or TPM06
- SMBus/I2C interface : Monitoring and Control
- I2C chain connector reserved for ambient sensor

◆ Conditions

- Operating Temperature : -10°C~70°C
- Operating Humidity : 30%~85%RH
- Storage Temperature : -10°C~70°C
- Storage Humidity : 5%~90%RH



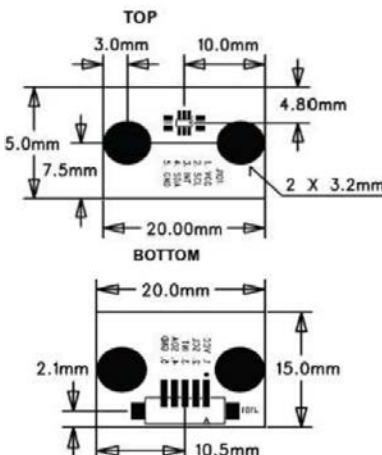
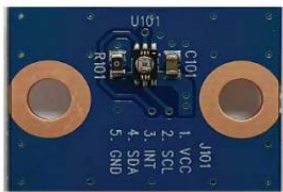
◆ Dimensions

- 80 mm X 80 mm

Sensor Board

1. Ambient Light Sensor board

◆ I2C Type

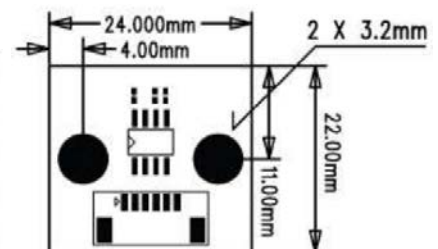


◆ Dimensions

- 20 mm X 15 mm

2. Temperature Sensor board

◆ I2C Type



◆ Dimensions

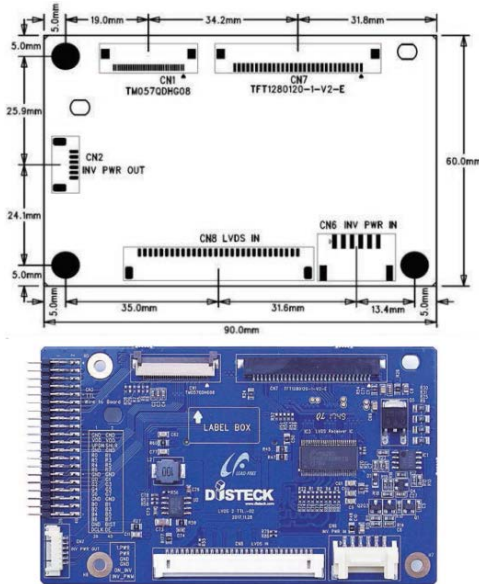
- 24 mm X 22 mm

Optional Accessories

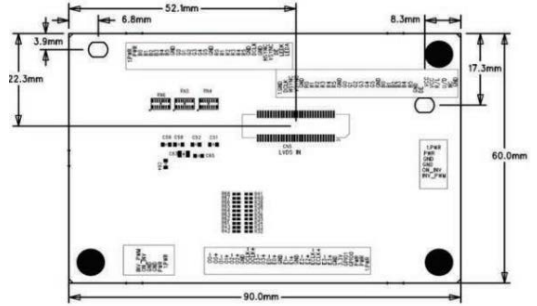
LVDS Receiver

LVDS to TTL Board

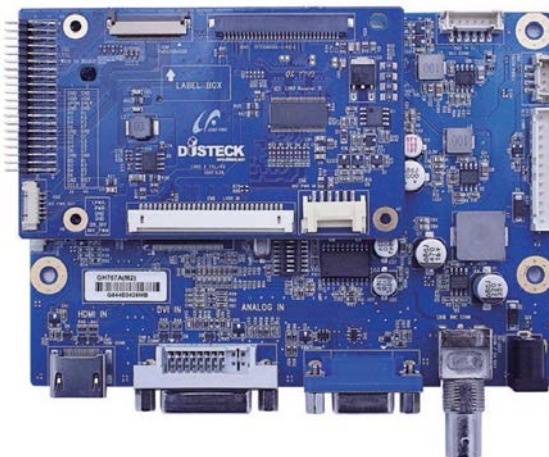
◆ Feature



<Top View>



<Bottom View>



◆ VENUS2 + LCDS Receiver

Venus2 has LVDS output port (CN17).

So, Venus2 can support TTL interface panel with LVDS Receiver.

◆ Conditions

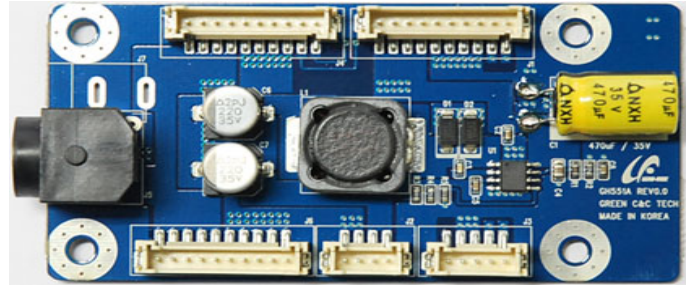
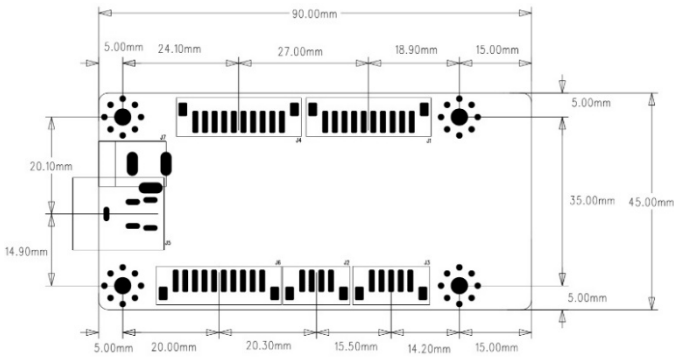
- Operating Temperature : -10°C~70°C
- Operating Humidity : 30%~85%RH
- Storage Temperature : -10°C~ 70°C
- Storage Humidity : 5%~90%RH

◆ Dimensions

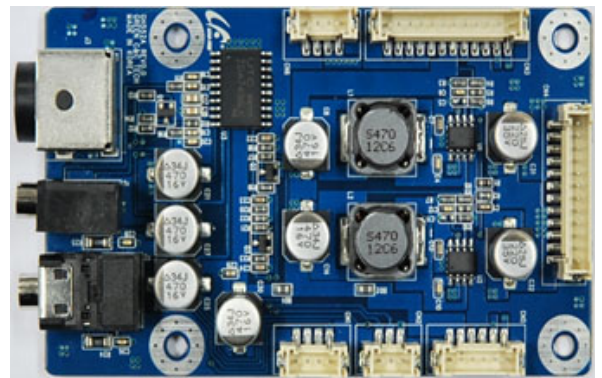
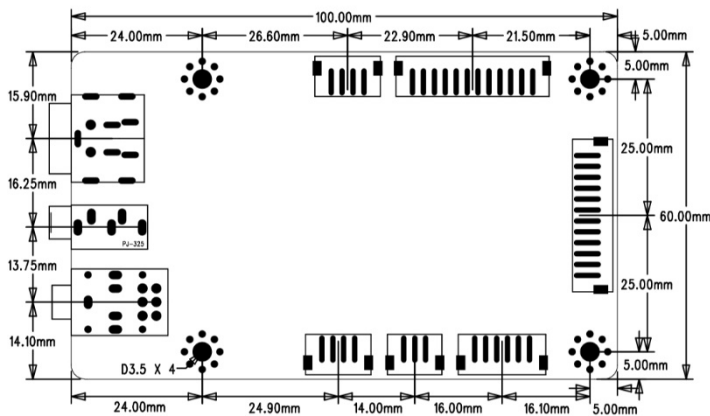
- 90 mm X 50 mm

DC/DC Board

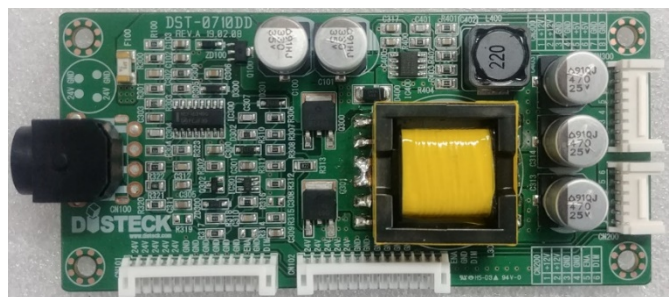
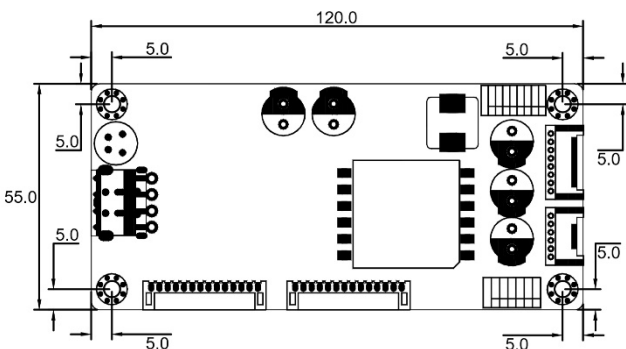
1. DC/DC Board (24V to 12V, 90x45x17mm)



2. AUDIO + DC/DC Board (24V to 12V, 100x60x17mm)



3. DC/DC Board (24V to 12V/5A, 5V/2A, 120x55x20mm)



LVDS CONVERTER GENDER BOARD



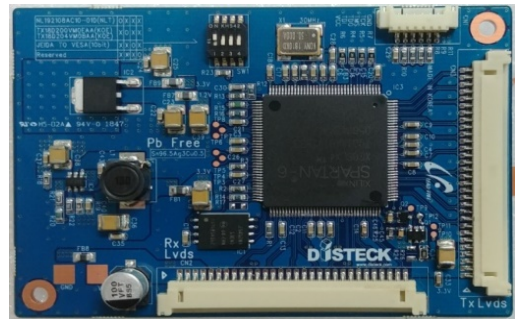
1. LVDS CONVERTER (Signal Converter for TIANMA 9" & KOE/JDI 7")
2. GENDER BOARD (for Automotive LCD Panel)

FPGA Processor Board

LVDS Converter

for

NLT NL192108AC10-01D
KOE TX18D200VM0EAA10
KOE TX18D204VM0BAA



Specification

- ◆ This LVDS converter receives dual-link LVDS, then an integrated FPGA combines into single link LVDS at doubled clock rate.

- NLT 9", NL192108AC10-01D, Full HD model
- KOE (JDI) 7", TX18D200VM0EAA10, Full HD model

- ◆ This converter converts JEIDA format to VESA format, so thus, all 8bit and 10bits format can be fitted into 10 bit panel. However, this converter does NOT enhance quality of 8 bits source.

- All kinds of LVDS based 10 bit Displays from 8 bit source (JEIDA-to-VESA conversion)

- ◆ This converter board takes a role of intermediate device in between ordinary AD board, SBC (single board computer) or Embedded PC and TFT LCD Display (NLT 9" or KOE(JDI) 7").

◆ Basic Features

- LVDS Input
- LVDS Output
- LVDS Line Buffer
- LVDS Pixel Formatter
- Vcc in:
 - Min 4.8V
 - Typ 5.0V
 - Max 5.2V

◆ Conditions

- Operating Temperature : -10°C~70°C
- Operating Humidity : 20%~90%RH
- Storage Temperature : -20°C~70°C
- Storage Humidity : 5%~90%RH

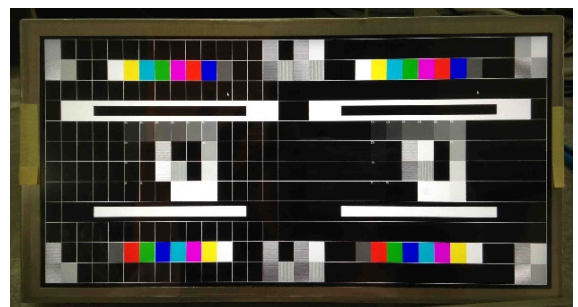
◆ Dimensions

- 55mm X 80mm X 7.3mm



NL192108AC10-01D

(960 x 1080) + (960 x 1080) resolution



NL192108AC10-01D + LVDS Converter

(1920 x 1080) resolution

FPGA Processor Board

Gender Board consists of

- Touch Controller ,
- Voltage Circuit : Gamma & V-Com
- LED Driver Circuit
- Signal Cable Gender : from FPC to Wire for LG 8.4" Automotive Panel (LA084X1-SL02)



Specification

This gender board which can provide below function for LG 8.4" TFT LCD Panel, LA084X1-SL02 model.

- P-Cap Touch Controller Circuit : Atmel (MicroChip) Controller chip adopted
- Voltage Circuit : Gamma & V-Com
- LED Driver Circuit : 4CH, 55mA, 24Vf supportable
- FPC Cable Connection : mating female connector on PCB and relevant FPC Cable (60 mm long)
- Inner metal chassis : for the assembly between driving board and LCD panel

The above function and so hardware allow to adopt any ordinary driving board based on LVDS level such as AD Board, Embedded Board, ARM Board or Single Board Computer thanks to the above reservation.

◆ Basic Features

- 8bit type LVDS with 20 pins
- USB Connector and wired USB Connector
- Selection of Touch Control type:
 - I2C control
 - USB Control
- 12V DC Connection by 6 pin wire type connector

◆ Conditions

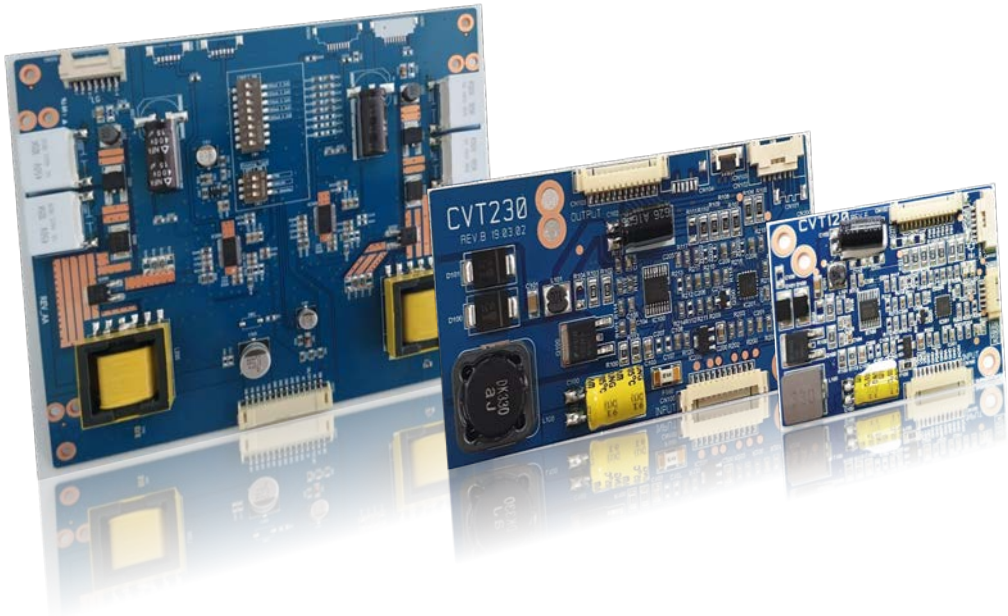
- Operating Temperature : -10°C~70°C
- Operating Humidity : 20%~90%RH
- Storage Temperature : -20°C~70°C
- Storage Humidity : 5%~90%RH

◆ Dimensions

- 125mm X 125mm



Smart LED Driver



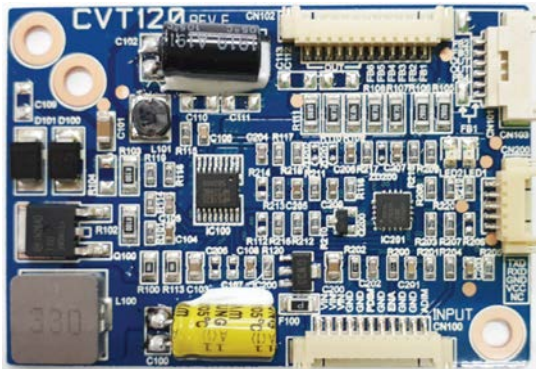
- ❖ Smart LED Drivers for various TFT LCD panels.
- ❖ Analog/PWM dimming control
- ❖ Programmable LED drivers per TFT LCD panels.

1. CVT120 (Programmable Type Setting)
2. CVT230 (Programmable Type Setting)
3. CVT456-MULTI2 (Dip Switch / Hardware Type Setting)

Smart LED Driver

CVT120E

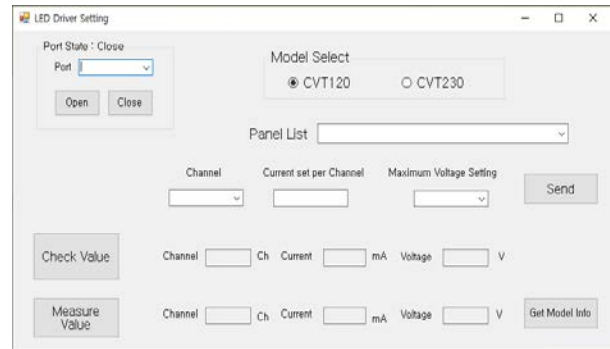
The CVT120 has been designed for providing an easiest way of suitable LED driver adoption based on a fixed a hardware model which can be applicable for various TFT LCD Modules.



Specification

◆ **Programmable LED Driver**

The CVT120 can support various TFT LCD panels by setting value (no H/W change) per panel. And also, it can support analog dimming & PWM dimming also.



◆ **Over Voltage Protection (OVP)**

The voltage will not exceed the upper trip limit.
The noise spikes (exceeding the trip limit smaller than 10 μ s) will not restrict the output voltage at zero level.

Voltage	Over Voltage Protection	
	Range[V]	Protection
Output	Set 10V higher than the string voltage of panels.	Shut Down

◆ **Temperature**

- Operating Temp. : -35 ~ 85°C (Without Case)
- Storage Temp. : -35 ~ 85°C (Without Case)

◆ **Dimming**

Analog Dimming & PWM Dimming

◆ **Conditions**

- Operating Temperature : -35°C~85°C
(Optional guarantee up to -40°C~85°C)
- Operating Humidity : 20%~85%RH
- Storage Temperature : -35°C~85°C
- Storage Humidity : 5%~95%RH

◆ **Dimensions**

- 63mm X 43mm X 6.8mm

◆ **Maximum Output Voltage and Current**

Forwarding Voltage Range	Channel	Maximum Wattage	Output Constant Current per channel (mA)			Total Output Constant Current (mA)		
			Min.	Typ.	Max.	Min.	Typ.	Max.
15V ~ 65V	1Ch ~ 6Ch	23W at 12V 27W at 24V	10	-	630	30	-	630

Multi LED Driver

CVT230

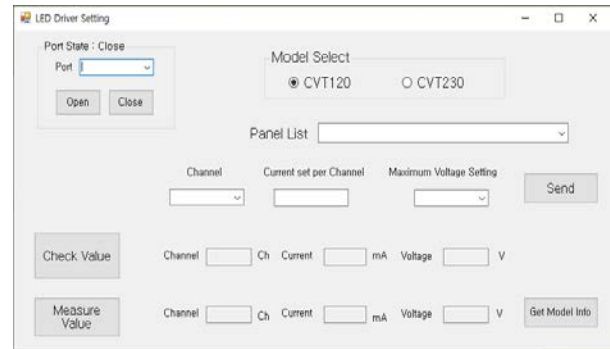
The CVT230 has been designed for providing an easiest way of suitable LED driver adoption based on a fixed a hardware model which can be applicable for various TFT LCD Modules.



Specification

◆ **Programmable LED Driver**

The CVT230 can support various TFT LCD panels by setting value (no H/W change) per panel. And also, it can support analog dimming & PWM dimming also.



◆ **Over Voltage Protection (OVP)**

The voltage will not exceed the upper trip limit.
The noise spikes (exceeding the trip limit smaller than 10 μ s) will not restrict the output voltage at zero level.

Voltage	Over Voltage Protection	
	Range[V]	Protection
Output	Set 10V higher than the string voltage of panels.	Shut Down

◆ **Temperature**

- Operating Temp. : -35 ~ 85°C (Without Case)
- Storage Temp. : -35 ~ 85°C (Without Case)

◆ **Dimming**

Analog Dimming & PWM Dimming

◆ **Conditions**

- Operating Temperature : -35°C~85°C
(Optional guarantee up to -40°C~85°C)
- Operating Humidity : 20%~85%RH
- Storage Temperature : -35°C~85°C
- Storage Humidity : 5%~95%RH

◆ **Dimensions**

- 83mm X 43mm X 8.5mm

◆ **Maximum Output Voltage and Current**

Forwarding Voltage Range	Channel	Maximum Wattage	Output Constant Current per channel (mA)			Total Output Constant Current (mA)		
			Min.	Typ.	Max.	Min.	Typ.	Max.
15V ~ 65V	1Ch ~ 6Ch	27W at 12V 32W at 24V	50	-	1000	50	-	1000

Smart LED Driver

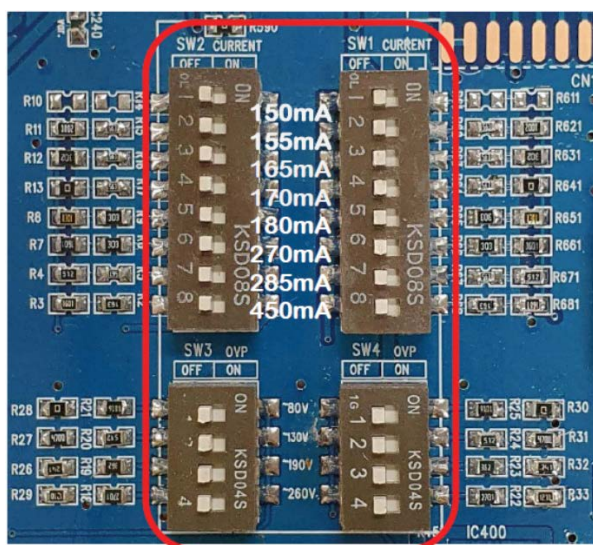
CVT456-Multi2

The CVT456-Multi2 is supporting various type displays 40", 43", 49", 55" & 65" models which have not been built-in the mating LED driver.

Specification

◆ Multiple LED Driver

The CVT456-Multi2 can support various TFT LCD panels by change of H/W Dip switch. And also, it can support PWM dimming.

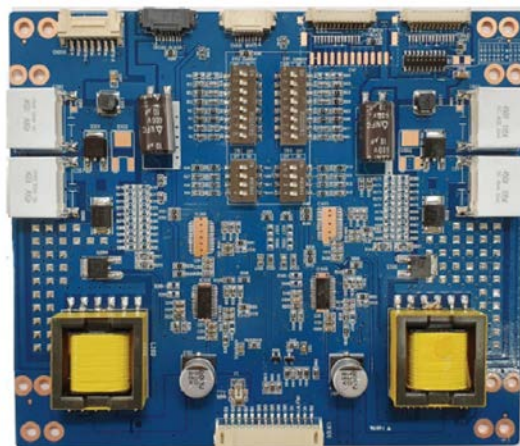


◆ Conditions

- Operating Temperature : 0°C~50°C
- Operating Humidity : 30%~85%RH
- Storage Temperature : -10°C~65°C
- Storage Humidity : 5%~90%RH

◆ Dimensions

- 152.5mm X 130mm X 13mm



◆ Supportable TFT LCD Panel List

❖ CVT456-Multi2 – Type 1

- LD430EUE-FHB1, LD430EUE-FHC1
LC430EUE-FHM1, LC430EGE-FHM1
- LD490EUE-FHB1, LD490EUE-FHC1
LD490EGE-FHM1, LC490EUE-FHM1
LD490EUE-FHA1
- LD550EUE-FHA1, LD550EUE-FHB1
LD550EUE-FHC1, LD550EGE-FHM1
LC550EGE-FHM1, LC550EUE-FJM1
- LD650EGE-FHM1, LC650EGE-FHM1
LC650EUF-FHB1

❖ CVT456-Multi2- Type 2

- LD430EQE-FPA2, LD430EQE-FLA1
LD430EQE-FPA1
- LD490EQE-FPA2, LD490EQE-FPA1
- LD550EQE-FPA1, LD550EQE-FPA2
LD550EQE-FKA1
- LD650EQE-FPA2, LD650EQE-FJA1

❖ CVT456-Multi2- Type 3

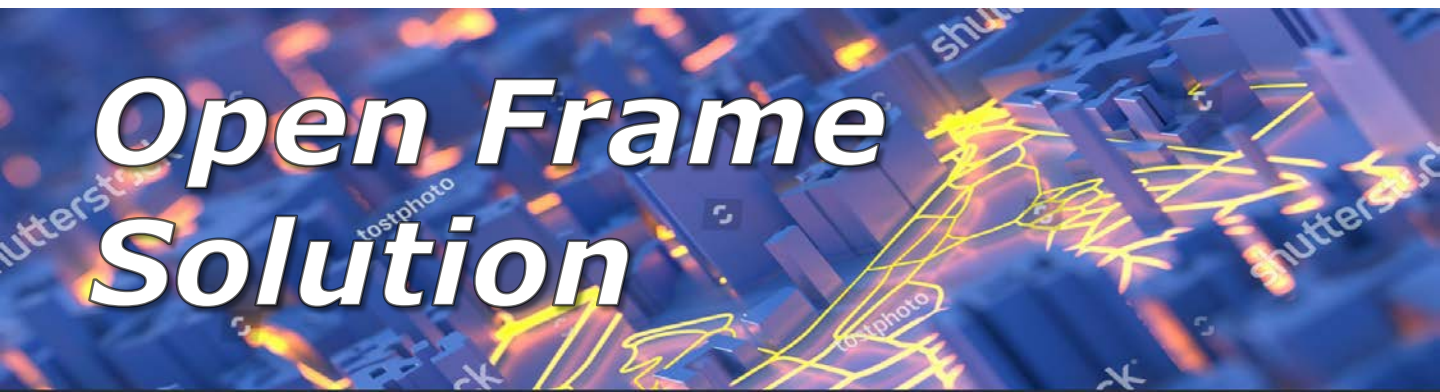
- INNOLUX S400DJ1-KS5
- INNOLUX S400HJ6-LE8
- BOE DV270FHM-R01

❖ CVT456-Multi2- Type 4

- AUO P550QVN01.2
- AUO P550QVN01.3

❖ CVT456-Multi2- Type 5

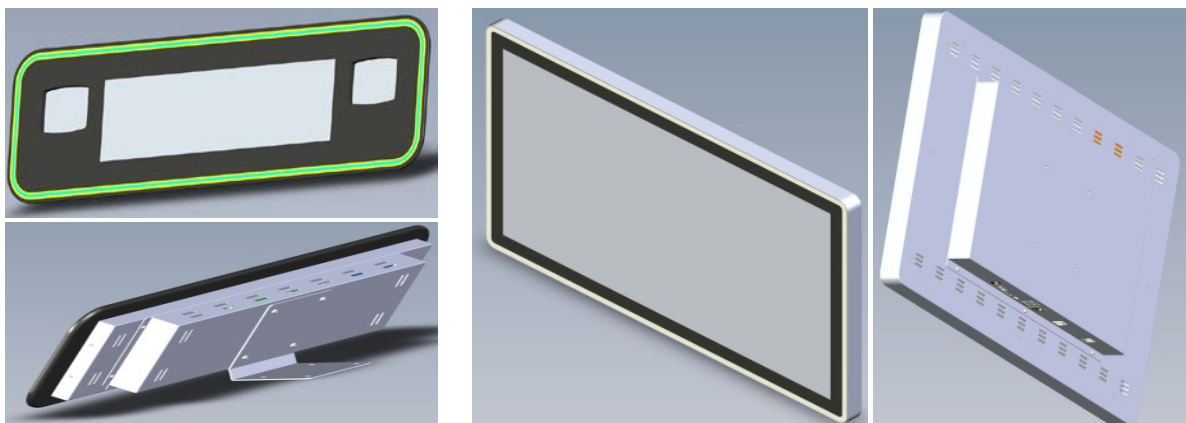
- LD750EQF-FJM1



Open Frame Solution

DISTECK designs and manufactures custom open frame, High Bright monitor and panel PC solutions for a wide range of market-specific applications.

Open Frame for Stretched Type LCD panels



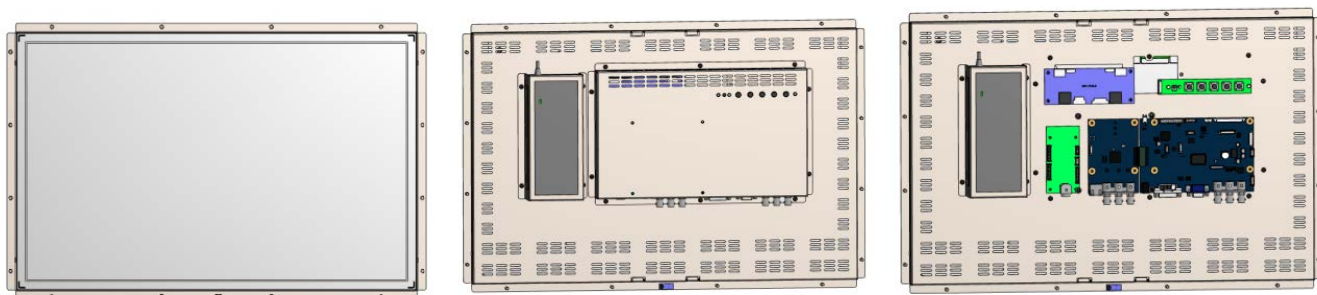
Open frame solutions

- ❖ Rackmount open frame with touch screen
- ❖ Gaming open frame
- ❖ Rugged monitors for industrial use
- ❖ High Bright open frame/monitors
- ❖ Stand-alone monitors



Panel PC

- ❖ Open frame panel PCs with various touch technologies
- ❖ Rackmount solutions for easy integration
- ❖ Rugged panel PCs for use under harsh environmental conditions
- ❖ Stand-alone panel PCs for plug and play



Open Frame for Stretched Type LCD panels



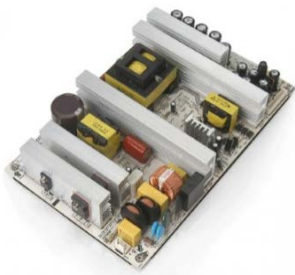
DISTECK designs and manufactures customized Open Frame of stretched type LCD and High Bright stretched LCD models for a wide range of market-specific applications.



• Available running LCD Models

Maker	Size	Resolution	Brightness	LCD Model
BOE	19"	1920 x 360	300	DV190FBM-NB0
BOE	20.9"	1920 x 132	300	DV210FBM-N00
BOE	24"	1920 x 360	300	DV240FBM-NB0
BOE	28"	1920 x 360	700	DV280FBM-NB1
BOE	29"	1920 x 720	700	DV290FBM-N01
BOE	36.6"	1920 x 290	700	DV366FBM-N10
BOE	47.1"	3840 x 160	500	DV471FBM-N01
BOE	48"	3840 x 720	1000	DV480FBM-N01
AUO	15.1"	1280 x 248	300	G151EVN01.0
AUO	22.9"	1920 x 165	500	G229HAN01.0
AUO	22.9"	1920 x 165	700	G229HAF01.0
AUO	22.9"	1920 x 165	700	G229HAF02.0
AUO	28.0"	1920 x 360	700	P280HVN02.0
AUO	28.6"	1920 x 540	1000	G286HAN01.0
AUO	29.0"	1920 x 540	700	P290IAN01.0
AUO	37.0"	1920 x 540	2500	P370IVN04.0
AUO	37.0"	1920 x 540	1500	P370IVN03.0
AUO	37.0"	1920 x 540	1000	P370IVN01.0
AUO	37.0"	1920 x 540	700	P370IVN02.0
AUO	42.0"	1920 x 480	2500	P420IVN03.0
AUO	42.0"	1920 x 480	1500	P420IVN02.0
AUO	42.0"	1920 x 480	700	P420IVN01.0
AUO	48.5"	1920 x 360	700	P485IVN01.0
AUO	49.5"	1920 x 540	1500	P495IVN01.0
LG	12.3"	1920 x 720	900	LA123WF4-SR08
LG	88.0"	3840 x 1080	700	LD880DEN-UKA2

Switching Mode Power Supply



MODEL	INPUT	TYPE	POWER	OUTPUT
HNP-1700	100V to 240Vac	SLIM POWER	179W	5VS/1A, 5VD/2.5A, 12V/3A/24V/5A
HNP-1701	100V to 240Vac	SLIM POWER	161W	5VS/1A, 12V/3A, 24V/5A
PVP-2342	100V to 240Vac	SLIM POWER	209W	5VS/1A, 12V/3A, 24V/7A
PVP-2420	100V to 240Vac		272W	5VS/1.2A, 5VD/4A, 12V/4.5A, 24V/8A
PVP-3140	100V to 240Vac		350W	5VS/1.2A, 5VD/4A, 12V/5A, 24V/11A
PVP-5960	100V to 240Vac		590W	5VS_Main/1A or 3.4VS/1.5A, 5VS/0.1A, 5VD/3A, 12V 7A, 24V 20A
HNP-1K00	100V to 240Vac		1KW	5VS/2.5A, 5VD/3A, 12V/8A, 24V/36A

SMPS (Power Supply)

PVP-2870

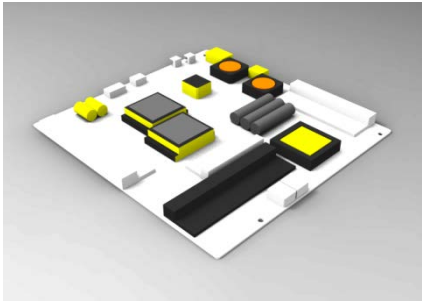
Brief Specifications



Ultra Slim Power Supply

- ❖ LCD
- ❖ 300W

- ◆ Size : 250(W) 235(L) Height : MAX. 14mm
- ◆ Weight : 738g max



Output	Output Typ.(V)	OUTPUT REGULATION Limit	Output Current(A)		
			Min.	Max.	Peak. *1)
+5VS	+5	4.75VDC ~ 5.25VDC	0.0	2.0	2.2
+5VD	+5.2V	4.94VDC ~ 5.46VDC	0.1	2.0	3.0
+12V	+12	11.4VDC ~ 12.6VDC	0.1	4.5	5.0
+24V	+24	21.6VDC ~26.4VDC	0.0	11.0	12.0

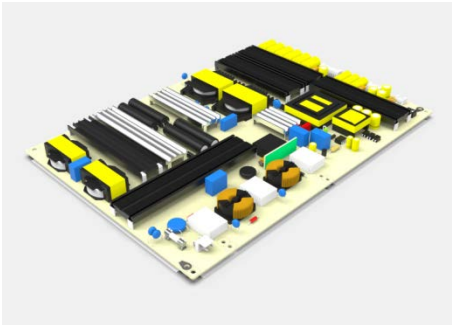
BRK-4520

Brief Specifications

Ultra Slim Power Supply

- ❖ Complying with power sequence of OLED
- ❖ 450W

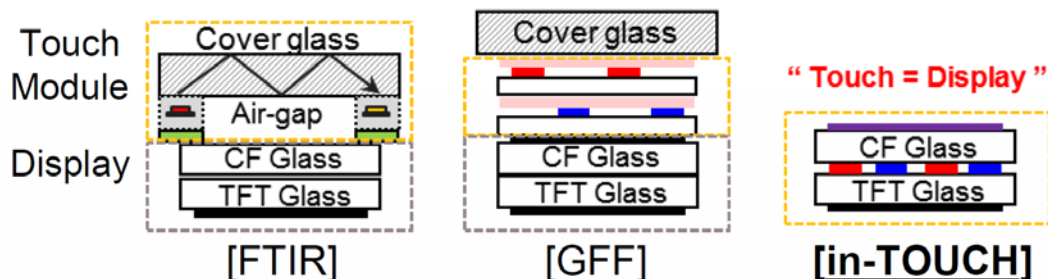
- ◆ Size : 230(W) 390(L) Height : MAX. 20mm
- ◆ Weight : 860g max



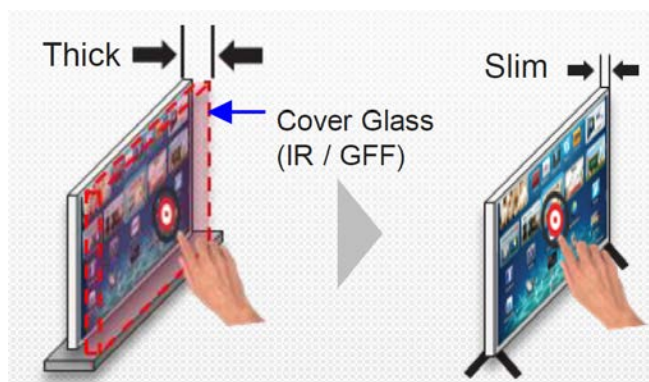
Output	Output Typ.(V)	OUTPUT REGULATION Limit	Output Current (A)			Output Control
			Min.	Max.	Peak.	Always Output
+5VS	5	4.75VDC ~ 5.25VDC	0.0	2.0	2.2	PS-On Signal Control
+5VD	+5.2V	4.94VDC ~ 5.46VDC	0.1	2.0	3.0	
+12V	12	11.4VDC ~ 12.6VDC	0.2	6.0	7.0	PS-On & BL-On Signal Control
+24V	24	22.8VDC ~25.2VDC	0.0	15.0	16.0	

Incell Touch

Incell Touch Solution



High Touch Performance & Picture Quality



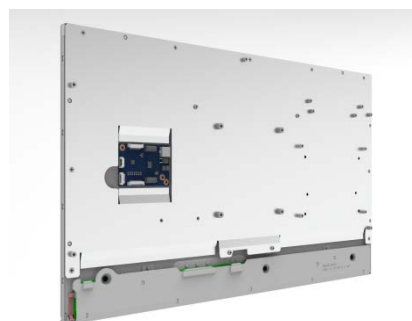
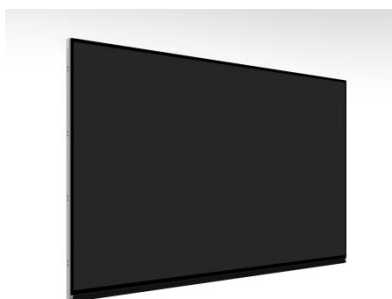
- ❖ Low Reflection / Deep Black
- ❖ Wide Viewing Angle
- ❖ No deterioration of PQ caused by Touch Film
- ❖ Low color shift
- ❖ Stable Touch without Flash

Line Up

- ❖ 21.5" ❖ 32" ❖ 86"
- ❖ 23.8" ❖ 43"
- ❖ 27" ❖ 55"

◆ 21.5"/23.8"/27" Option

- E-glass (0.2mm) OCA
- Surface Hardness 9H
- Anti-Finger
- Anti-Virus
- Ball Drop Test: 700mm/130g



Stretched Type Incell Module with Solution

10.25"

Incell Touch Panel: LA103WF4-SL02

- 10.25"
- 1920 x 720 / 900nit
- Incell Touch / Operating temp.(-30'c ~ 85"c)

Solution: LA103WF4-SL02 Gender Board



LA103WF4-SL02 Gender Board



12.3"

Incell Touch Panel: LA123WF7-SL05

- 12.3"
- 1920 x 720 / 900nit
- Incell Touch / Operating temp.(-40'c ~ 85"c)
- GMSL Interface

Solution: GMSL Interface board

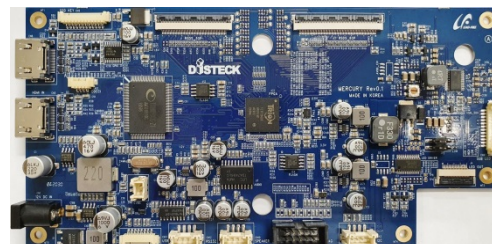


GMSL Interface board

W/O Incell Touch Panel:

- | | |
|-----------------|----------------------------------|
| ❖ LA123WF1-SR03 | ➤ 12.3" |
| ❖ LA123WF4-SR03 | ➤ Operating temp.(-40'c ~ 85"c) |
| ❖ LA123WF4-SR08 | ➤ 1920 x 720 / 900nit |
| | ➤ RSDS Interface |

Solution: Mercury board (RSDS Interface)



Mercury (RSDS interface)

14.5"

Incell Touch Panel: LA145WF1-SL01

- 14.5"
- 2560 x 720 / 1000nit
- Incell Touch / Operating temp.(-30'c ~ 85"c)
- GMSL Interface

Solution: GMSL Interface board



GMSL Interface board

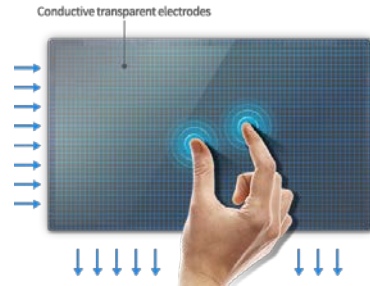
Touch & LCD panels

PCAP Touch (Projected Capacitive Touch)

The projected capacitive method utilizes clear conductive electrodes that create a checkerboard surface. Touch is detected through changes in electricity between the electrodes. The P-CAP method allows for multi-touch functionality.

7" ~ 55"

ITO & Metal mesh type PCAP touch solution with extremely high performance and stable & reliable



Touch Controller (USB Type, I2C Type)

Except the COF (Chip On FPC), the most of COB type (Chip On Board) Controllers are available to provide, for example the "EETI" model, "Silicon Works" model and "DMC" model.

Especially Distek can supply an "Universal Type" controller which can be adopted for any different existing manufacturers' Touch Screen without additional tuning process of sensitivity.

This Universal model has very strong features such as 40 points touch, Water Noise Free, Globe Touch supportable, Palm Touch, etc

TFT LCD Panels

In general, the TFT LCD Panel is available to be supplied with the mating driving board kit, however if any customers are looking for a short term delivery or less than a carton box q'ty or a part of OEL model, if any, Distek Display has provided the LCD Panels to the customers, so far.

In case of Product Road Map file and Spec files of target LCD Model, Distek provide to whom it may need continuously.



AUO

INNOLUX

BOE

SHARP

TIANMA



KOE
JDI Group

SAMSUNG