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Model Name: KFE-DIS000124

15.6" wide PoE PC monitor
Android on board
2 x USB, HDMI, LAN (power & data), audio, microSD



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WARNING:

THIS USER MANUAL IS RELATED TO A PRODUCT WHICH IS NOT INTENDED TO BE USED AS STAND-ALONE DEVICE. IT HAS BEEN DESIGNED TO BE ONLY INSTALLED INTO A SPECIFIC ELECTRICAL CABINET. THE RIGHT ENGINEERING, THE CORRECT CONNECTION AND THE BEST MECHANICAL INSTALLATION OF THE PRODUCT WITH AND INTO CUSTOMER'S EQUIPMENT IS IN CHARGE OF THE CUSTOMER.

ALL THESE ACTIVITIES HAS TO BE DONE TAKING IN CONSIDERATION THE NORMS WHICH ARE REQUIRED BY THE SPECIFIC FIELD OF APPLICATION. EMC AND EMI TEST, WHICH ARE PART OF CE CERTIFICATION SHOULD BE CARRIED OUT ON THE COMPLETE CUSTOMER'S SYSTEM.



Revision history

Rev.N.	Date	Description	Checked	Approved	Note

Safety Instructions

- **Cleaning**—Unplug the AC cord from the AC outlet before cleaning the product. Use a damp cloth to clean the product. Do not use liquid cleaners or aerosol cleaners without a prior check with your supplier.
- Use a soft damp cloth to gently wipe the panel when it is dirty. To protect the panel, do not use a chemical cloth to clean it. Chemicals may cause **damage or scratches**.
- **Water and moisture**—Do not use the product near water, such as bathtub, washbasin, kitchen sink, laundry tub, swimming pool and in a wet basement, if it's not directly permitted by the specs into the next pages.
- Do not place vases or any other water-filled containers on this product. The water may spill onto the product causing fire or **electric shock**.
- **Stand**—Do not place the product on an unstable position. Doing so can cause the product to fall, resulting in serious personal injuries as well as damage to the product. Follow only the suggestions recommended by the manufacturer or accessories sold with the product.
- **Ventilation**—The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product.
- **Heat sources**—Keep the product away from heat sources such as radiators, heaters, stoves and other heat-generating products.
- To **prevent fire**, never place any type of candle or naked flames on the top or near the TV set.
- To **prevent fire or shock hazard**, do not place the AC cord under any heavy items.
- Do not display a still picture for a long time, as this could cause an **afterimage** to remain.
- **Servicing**—Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified person to perform servicing.
- Avoid using **benzene, thinner** and other solvents, as these may deform the cabinet and cause the paint to peel off.
- **Turn off** the main power and unplug the AC cord from the wall outlet **before handling**.



Drivers

This device is based on Android operating system, which is free and open source. The basic installation is designed to properly support all the interfaces already included on the device itself, any external peripherals may require the installation of new software packages.

Electrical connection

PoE technology (PowerOverEthernet) allows the use of only one cable to bring to the device both data and the supply voltage at the same time. For a proper use, it is suggested to adopt an Ethernet router/switch equipped with PoE ports or simply a PoE injector to be connected between your own router/switch and the monitor.

In both cases it is recommended to check first that your router/switch or PoE injector is PoE certified.

Software Recommendation

The basic installation already includes several applications for the management, monitoring and control of the Ethernet connection. The intent is to make possible an easy implementation of the device and to let you display information remotely, by a central server. Based on your know-how, there is no limit on the APPs which can be installed to increase the functions of the device.

KF IS AVAILABLE TO ANALYZE ANY REQUIRE AND EVALUATE COSTS AND TIME TO BETTER SUPPORT YOU AND YOUR APPLICATIONS.

Few of the APPs already installed are listed below:

1. ANDROID VNC

2. DROID VNC SERVER

Virtual network computing (VNC) is a type of remote-control software that makes it possible to control another computer over a network connection. Keystrokes and mouse clicks are transmitted from one computer to another, allowing technical support staff to manage a desktop, server, or other networked device without being in the same physical location.

VNC works on a client/server model: A VNC viewer (or client) is installed on the local computer and connects to the server component, which must be installed on the remote computer. The server transmits a duplicate of the remote computer's display screen to the viewer. It also interprets commands coming from the viewer and carries them out on the remote computer.

VNC is platform independent and is compatible with any operating system. Computers must be networked with TCP/IP and have open ports allowing traffic from the IP addresses of devices that may need to connect.

THROUGH A VNC SYSTEM YOU CAN ALSO DISPLAY REMOTELY ANY KIND OF INFORMATION ON OUR DEVICE, THIS IS VERY INTERESTING FOR APPLICATION AS QUEUE MANAGEMENT, INFORMATION TECHNOLOGY, ADVERTISING (RETAIL), TO MANAGE MEETING ROOMS AND MANY OTHERS.

3. QUICKSSHD

4. SSHDROID

QuickSSHd, using the dropbear sshd (SSH Daemon), is an easy to use SSH server for the Android platform. This allows a computer to connect to the Android device for remote access or file transfer.

In addition to the standard SSH shared public key authentication, it supports the use of a password which is stored encrypted on the Android device.

5. OVERLOOK FING

Fing is the ultimate command line tool for network and service discovery. Taking advantage of a brand new cross-platform network engine, it reaches an impressive discovery sharpness and speed: you're going to discover your whole network in few seconds and generate customized real-time reports.

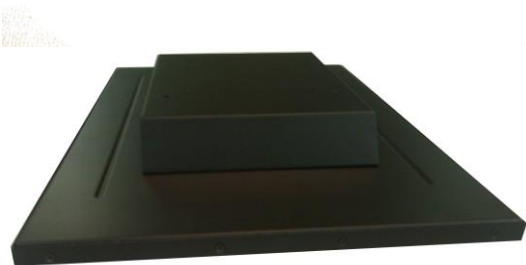
The network discovery provides you a complete view of any network in a very short time: fing smart discovery automatically detects the network type and uses the best technique to take the picture of it.



Product pictures

The pictures below are about the standard version without speakers and touchscreen.

FOR MORE DETAILS ABOUT THE AVAILABLE OPTIONS, PLEASE CONTACT WITH YOUR DEALER.



General information

KFE-DIS000124 is the first model out of a series of products designed to meet your request in the field of visualization and computing. The device is composed by a powerful fanless PC card equipped with Android, by a wide screen TFT and a special PoE board which allow you to connect data and power through the same Ethernet cable.

The device is able to perform calculation and control in local mode, since it is equipped with CPU and operating system and thanks to the applications already included, the device can also be used for the simple remote viewing operations.

The VESA holes, which are placed in the back cover, they make your installation easy.

At the moment we are designing other versions with touch screen and sizes of 10" and 15" as well as an Open Frame model which is mainly for industrial applications (designed for rear mounting).

TFT specs

B156XW02 V6 is a Color Active Matrix Liquid Crystal Display composed of a TFT LCD panel, a driver circuit, and LED backlight system. The screen format is intended to support the 16:9 HD, 1366(H) x768(V) screen and 262k colors (RGB 6-bits data driver) with LED backlight driving circuit. All input signals are LVDS interface compatible.



The following items are characteristics summary on the table at 25°C condition:

Items	Unit	Specifications																
Screen Diagonal	[mm]	394.91																
Active Area	[mm]	344.23 X193.54																
Pixels H x V		1366x3(RGB) x 768																
Pixel Pitch	[mm]	0.252X0.252																
Pixel Format		R.G.B. Vertical Stripe																
Display Mode		Normally White																
White Luminance (ILED=20mA) (Note: ILED is LED current)	[cd/m ²]	180 typ. (5 points average)																
Luminance Uniformity		1.25 max. (5 points)																
Contrast Ratio		500 typ																
Response Time	[ms]	16 Max																
Nominal Input Voltage VDD	[Volt]	+3.3 typ.																
Power Consumption	[Watt]	4.5 max. (Include Logic and Blu power)																
Weight	[Grams]	450 max																
Physical Size Include bracket	[mm]	<table border="1"> <thead> <tr> <th></th> <th>Min.</th> <th>Typ</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>Length</td> <td></td> <td>359.3</td> <td>360</td> </tr> <tr> <td>Width</td> <td></td> <td>209.5</td> <td>210</td> </tr> <tr> <td>Thickness</td> <td></td> <td></td> <td>5.5</td> </tr> </tbody> </table>		Min.	Typ	Max	Length		359.3	360	Width		209.5	210	Thickness			5.5
	Min.	Typ	Max															
Length		359.3	360															
Width		209.5	210															
Thickness			5.5															
Electrical Interface		1 channel LVDS																
Glass Thickness	[mm]	0.5																
Surface Treatment		Glare, Hardness 3H, Reflection 4.3%																
Support Color		262K colors (RGB 6-bit)																
Temperature Range Operating	[°C]	0 to +50																
Storage (Non-Operating)	[°C]	-20 to +60																
RoHS Compliance		RoHS Compliance																



Optical characteristics.

The optical characteristics are measured under stable conditions at 25°C (Room Temperature) :

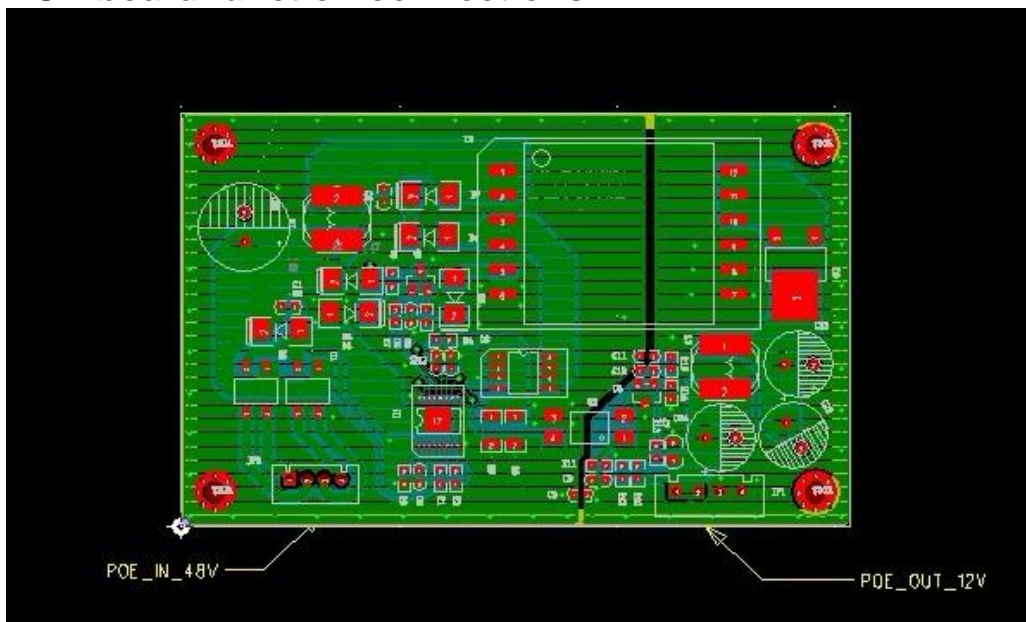
Item	Symbol	conditions	Min	Typ	Max	Unit	Note
White Luminance ILED=20mA		5 points average	-	180	--	cd/m ²	, 4, 5.
Viewing Angle	θ_R θ_L ψ_H ψ_L	Horizontal (Right) CR = 10 (Left)	40 40	45 45	- -	degree	4, 9
		Vertical (Upper) CR = 10 (Lower)	10 30	15 35	-		
Luminance Uniformity	δ_{5P}	5 Points			1.25		1, 3, 4
Luminance Uniformity	δ_{13P}	13 Points			1.50		2, 3, 4
Contrast Ratio	CR			500			4, 6
Cross talk	%				4		4, 7
Response Time	T_r	Rising			4	msec	4, 8
	T_f	Falling					
	T_{RT}	Rising + Falling		16			
Color / Chromaticity Coordinates	Red	Rx	CIE 1931	0.54	0.572	0.60	4
		Ry		0.313	0.343	0.373	
	Green	Gx		0.316	0.346	0.376	
		Gy		0.521	0.551	0.581	
	Blue	Bx		0.127	0.157	0.187	
		By		0.093	0.123	0.153	
	White	Wx		0.283	0.313	0.343	
		Wy		0.299	0.329	0.359	
NTSC	%			45			



Absolute Maximum Ratings.

Parameter	Symbol	Values		Units	Notes
		Min.	Max.		
Power supply Input voltage	VCC	-0.3	+5.5	V dc	V 25°C
Operating temperature	TOP	0	+50	°C	1
Storage temperature	TST	-20	+60	°C	1
Operating Ambient humidity	HOP	10	+90	%RH	1
Storage Humidity	HST	10	+90	%RH	1

POE board function connections



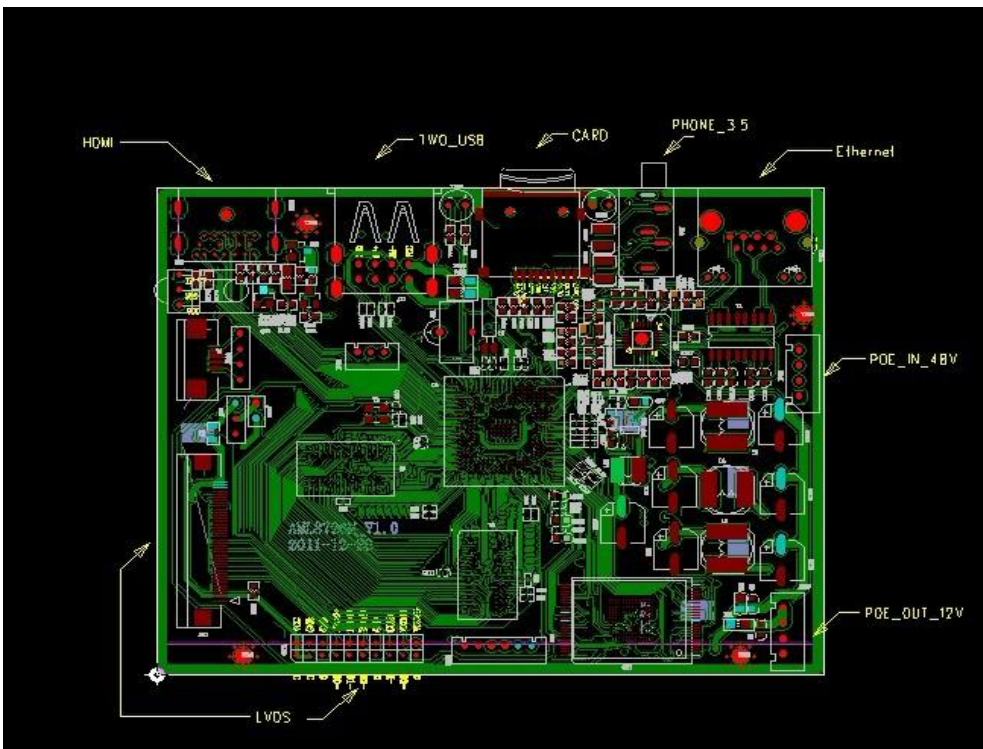
Basic Specification.

Standard	IEEE802.3af POE Ethernet network standard.
Physics character	10BASE-T: 3, 4, 5 Non-STP cable (max length 100m) EIA/TIA-568 100 ohm STP cable (Max length 100m) 100BASE-TX: 5 and above Non-STP cable (Max length 100m) EIA/TIA-568 100 ohm STP cable (Max length 100m)
LED instruction	No



Network PINs position defination	1, 2and 3, 6 are Data PINs. 4 and 5PIN are power anode、7, 8PINs are power negative pole
Physics condition	
JP1	DC 12V output
JP2	POEinput
Power output	DC 12V , max power consumption 25W
Operation temperature	-20~70°C
Store temperature	-40~70°C
temperature	5%~95% without congeal
dimension	78*50*18mm

Main board function slot



Main board technical parameter

Basic specification	
standard	Operation system edition Android2.3
CPU main frequency	1000MHz



Processor model	ARM Cortex A9
System memory	1GB DDR2 internal memory
Flash	2GB, up to 32GB
Memory card	Support Micro SD (TF) card, up to 32GB
Double USB2.0	1、 Support external USB mouse and keyboard。 2、 USB Wi – Fi support RTD8188、 RT5070、 RT3070 module 。 3、 Support USB memory and hard disk。 4、 Support camera。 Standard UVC camera, just like mouse.
RJ45 socket	Ethernet: 10Mbps (Semi duplex) 20Mbps (full duplex) Speedy Ethernet: 100Mbps (Semi duplex) 200Mbps (full duplex) .
J10	earphone
CON5	HDMI output support high definition ,up to 1080P 。
Video format	MP3, WMA, MP2, AAC, WAV format, max can support 1080p resolution ..
Audio format	MP2, MP3, WAV, AAC, WMA
Pictures format	JPEG, BMP and PNG。
LED instruction	
Physics condition	
JP25	Power input DC 12V ,
JP26	POE output
CN7、 CON4	Single LVDS slot
JP18、 J4	Touch screen slot
CON3	Inverter connection
IR1	Remote control incept
Operation system	-10~70°C
Store temperature	-40~70°C
Humidity	5%~95% without congeal
dimension	100*80*20mm



Font Installation :

1. install Font "Installer.apk" file to the POE board;
2. At the main Menu please click Font Installer ;
3. The system will remind you that if you admit the top purview to run the program;
4. Then click Yes, Font Installer will go into Loading. It means the installation is going on;
5. After successful downloading the character, then the screen will appear the characters type list you can choose;
6. Click the favorite characters you need. and install the characters type following the installation instructions;
7. finished the character installation, then reboot POE. And the unit will update the new characters you installed.

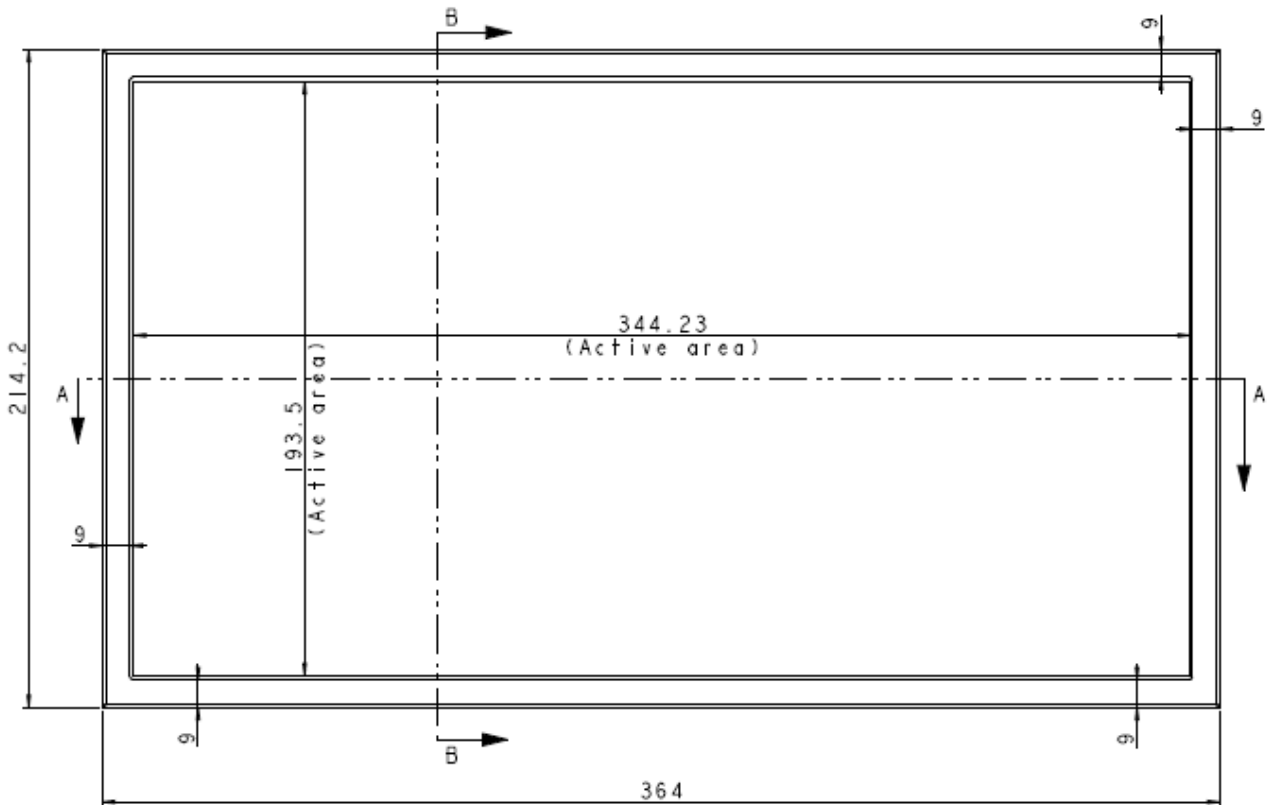
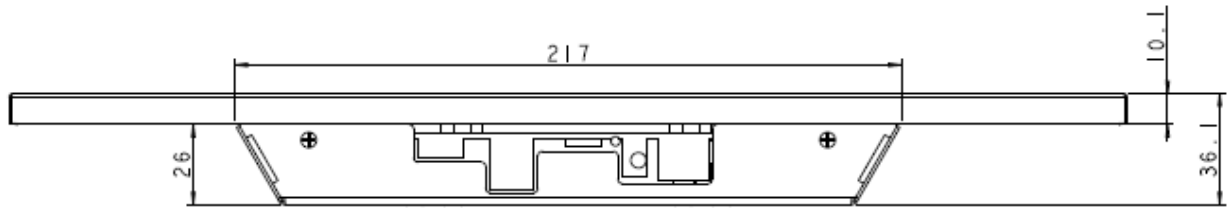
HDMI output conversion.

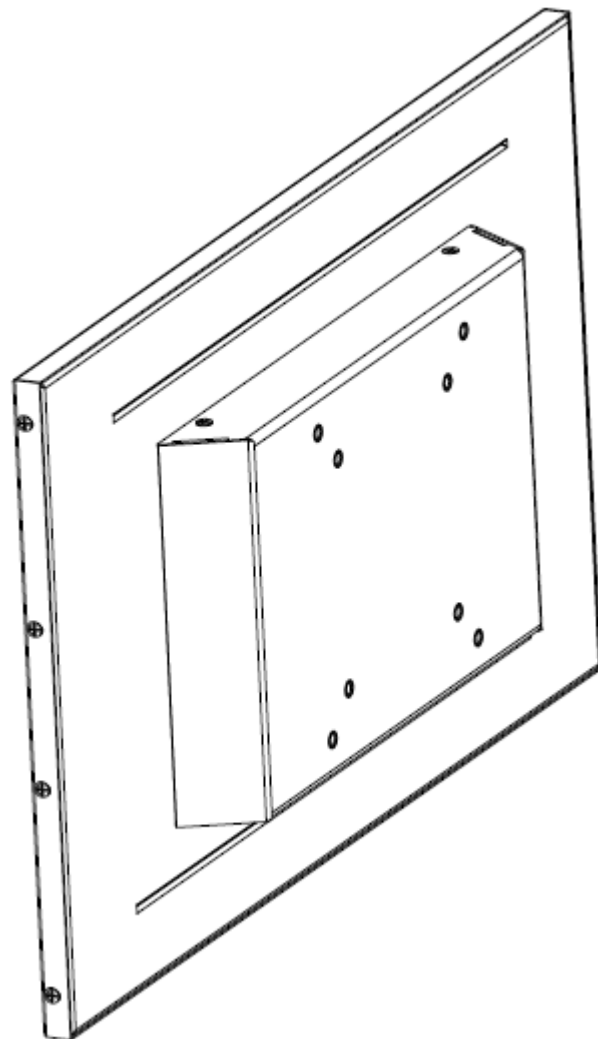
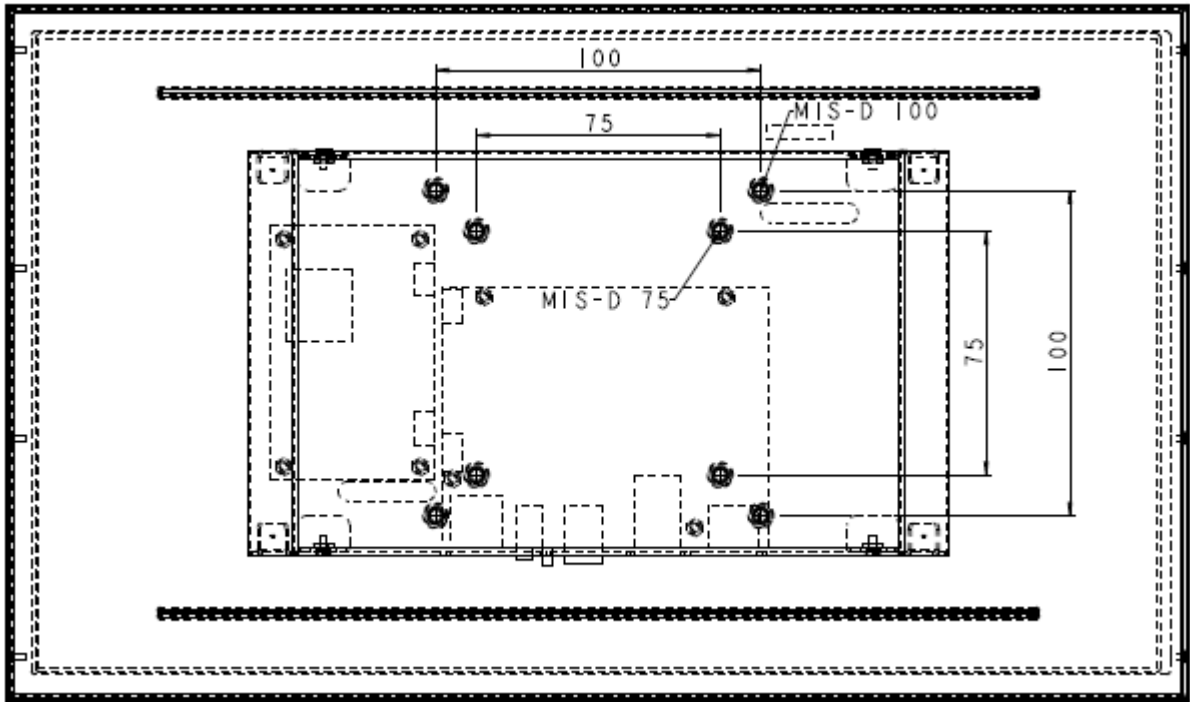
In order to avoid the HDMI and LVDS' mutual interference, we will write 2 different software for HDMI and LVDS output. Below is the exact conversion method.

8. Directly install the HDMI output software to the POE.
9. After installation, connect the HDMI slot with the displayer which comes with HDMI.
10. Reboot, the displayer will work;
11. HDMI output conversion is successful.



Mechanical drawings







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<Description>

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File Name:
UM_KFE-DIS000124

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