DM-121/SRM-121

User Manual

Ver 3.0

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Chapter 1 Product Information

1.1 Product Specifications and Information

　　ICP Electronics Inc. is an expert in Industrial Computer solutions, manufacturer and system integrator. We specialize in single board computers, chassis, workstations, panel PC, flash disk, PC/104 products, power supply, and backplane. ICP operates a worldwide network of distributors and sales representatives to offer customer the best service.

　　IEI LCD monitor brings information everywhere. Even under the most severe environments like steel plant or warehouse, DM/SRM series offer multiple mounting options and brightness that meet your needs. The DM-121/ SRM-121 is a 12.1" flat panel display specially designed to meet the applications for industrial environment.

- Suitable for panel mounting and 75/100mm interface pads for arm mounting (conform to the proposed VESA standard)
- **Panel Interface:** Analog VGA signal (by AV-9261 Analog VGA to Digital LCD Interface Board)
- Front OSD control keys to adjust the best display quality.
- Side cabling design to less the LCD monitor's total thickness
- Front plastic panel or aluminum material (DM-121-AL/ SRM-121-AL)
- Ship with power adapter for 100-240 VAC input

- **Display Model (DM-121):**
  IMES 12.1" TFT M121-53DH high brightness TFT LCD
  Resolution: 800X600
  MAX. Colors: 18 bits
  Brightness: 250 cd/m^2
  Hor. Frequency: 15-80KHz
  Ver. Frequency: 50-85Hz
  Operating Temperature: 0~50 ^{o}C
  Storage Temperature: -20~60 ^{o}C
  Viewing Angle(degree): R/L:180　U/D:30
  LCD MTBF: 50,000 hrs
  Backlight MTBF: 30,000 hrs

- **Display Model (SRM-121):**

  LiteMAX 12.1" TFT SP1201 high brightness TFT LCD

  Resolution: 800X600

  MAX. Colors: 18 bits

  Brightness: 1308 cd/m^2

  Hor. Frequency: 15-80KHz

  Ver. Frequency: 50-85Hz

  Operating Temperature: 0~40°C

  Storage Temperature: -20~60 ^{o}C

  Viewing Angle (degree): R/L:180 U/D:30

  LCD MTBF: 50,000 hrs

  Backlight MTBF: 20,000 hrs

- **Option Touch Screen : Dynapro 12.1"**

  Type: Analog Resistive

  Resolution: Continuous

  Light transmission: Typical value 75%

  Surface Hardness: 4H (Test condition: ASTM D3363-92A)

  8-wire touch screen

  Touch screen interface: RS-232

  Support driver: Linux,MS-DOS,Windows 3.1/95/
  98/CE,ME/2000/NT,OS/2,MAC,etc.

- **Environmental specifications**

  Operating Temperature : 0 ~ 50

  Relative Humidity: 10-95% @0~50   , non-condensing

  Vibration: 5 to 17 Hz 0.1" double-amplitude displacements,
  17 to 640 Hz 1.5 G Peak to peak

- **Power supply: (DM-121)**

  Model no: UP06031120A

  Input requirements:

  Input Voltage range: 90 to 264 VAC.

  Line frequency: 47 to 63 HZ.

  In-Rush current: 80 A max.

  Input current: 1.4 A max.

  Output:

  Output Voltage range: +11.4V ~+12.6V (tolerance: ± 5%) 3.8A 45 Watt

  Ripple and Noise at +12V Voltage

  Maximum peak to peak ripple and noise: 120mV

  Operating environmental conditions:

  Ambient Temperature: 0°C~50°C.

  Relative Humidity: 10%~95%.

  Altitude: Sea level to 12,000 feet.

  Vibration: 1.0mm, 10-25Hz, 15 minutes per cycle for each Axis (X, Y, Z).

  EMI emissions:

  The power supply meets the radiated and conducted emission requirements for a (CISPR22 CLASS B) and a (FCC CLASS B).

  MTBF:

  When the power supply is operated within any of the limits of this power supply's specification, the MTBF shall be at least 50,000 hours at 25°C.

** System Power Consumption: 12V / 1.3A(not include touch screen)

- **Power supply: (SRM-121)**

Model no: PSA65U-120

Input requirements:

Input Voltage range: 90 to 264 VAC.

Line frequency: 47 to 63 HZ.

In-Rush current: 30A max@115VAC ,60A max@230VAC at 25 .

Input current: 1.5 A max@115VAC, 0.8A max@230VAC.

Output:

Output Voltage range: +12V ± 0.5V 5A 60 Watt

Ripple and Noise at Voltage 120 mvP

Operating environmental conditions:

Ambient Temperature: 0°C~40°C.

Relative Humidity: 5%~95%.

Altitude: Sea level to 10,000 feet.

Vibration: 10-55Hz, 15 minutes X, Y, Z Axis cycle: 20.

EMI emissions:

The power supply meets the radiated and conducted emission requirements for a (CISPR22 CLASS B) and a (FCC CLASS B).

MTBF:

When the power supply is operated within any of the limits of this power supply's specification, the MTBF shall be at least 50,000 hours at 25°C.

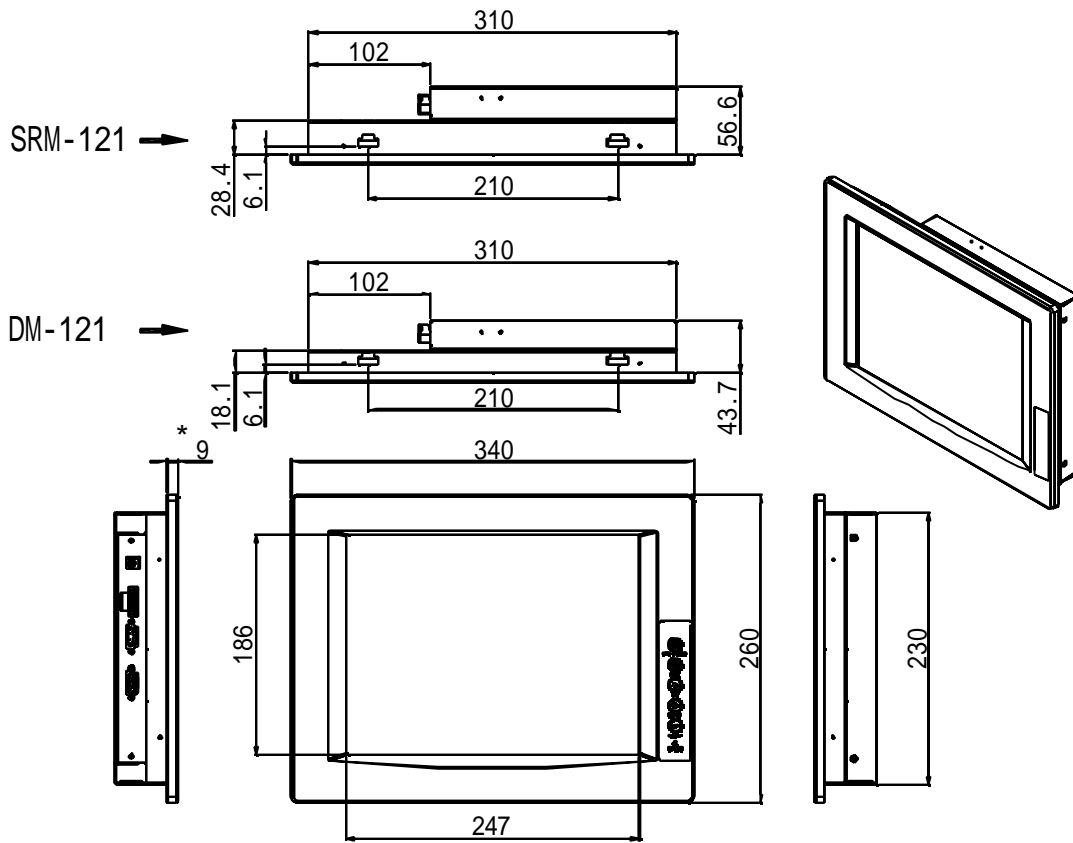** System Power Consumption: 12V / 2.4A(not include touch screen)

1.2 Product Dimensions

The following diagrams indicate the dimensions of DM-121/SRM-121.

Front Panel: 340mm x 260mm x 9mm (WxHxD)

Cabinet: 310mm x 230mm x 43.7mm (WxHxD)……DM-121

Cabinet: 310mm x 230mm x 56.6mm (WxHxD)……SRM-121

SRM121 →

DM121 →

"*" Front panel of thickness.
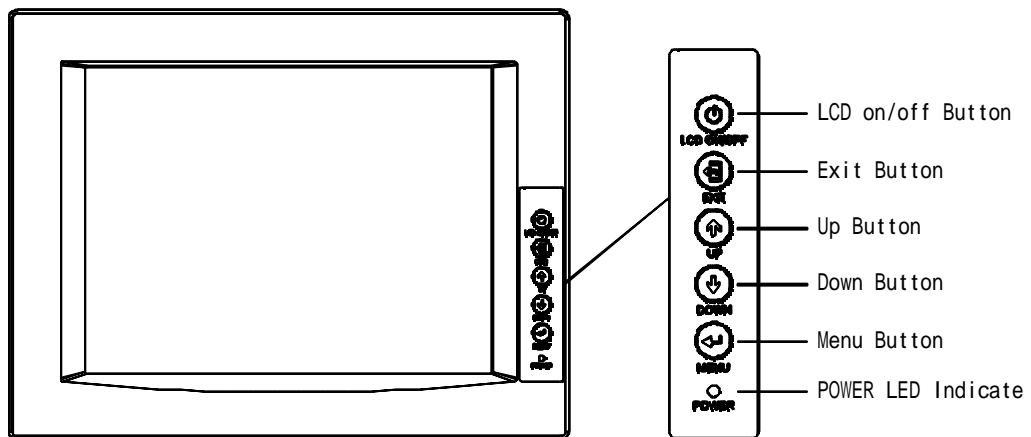By DM121-AL / SRM121-AL the thickness is 8 mm

(Unit: mm)

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Chapter 2 System Setup

The DM-121/ SRM-121 is very easy to be set up for operation.　 As you set up your system, please refer to the following procedures.

2.1　 Front panel operation

LCD on/off Button

Exit Button

Up Button
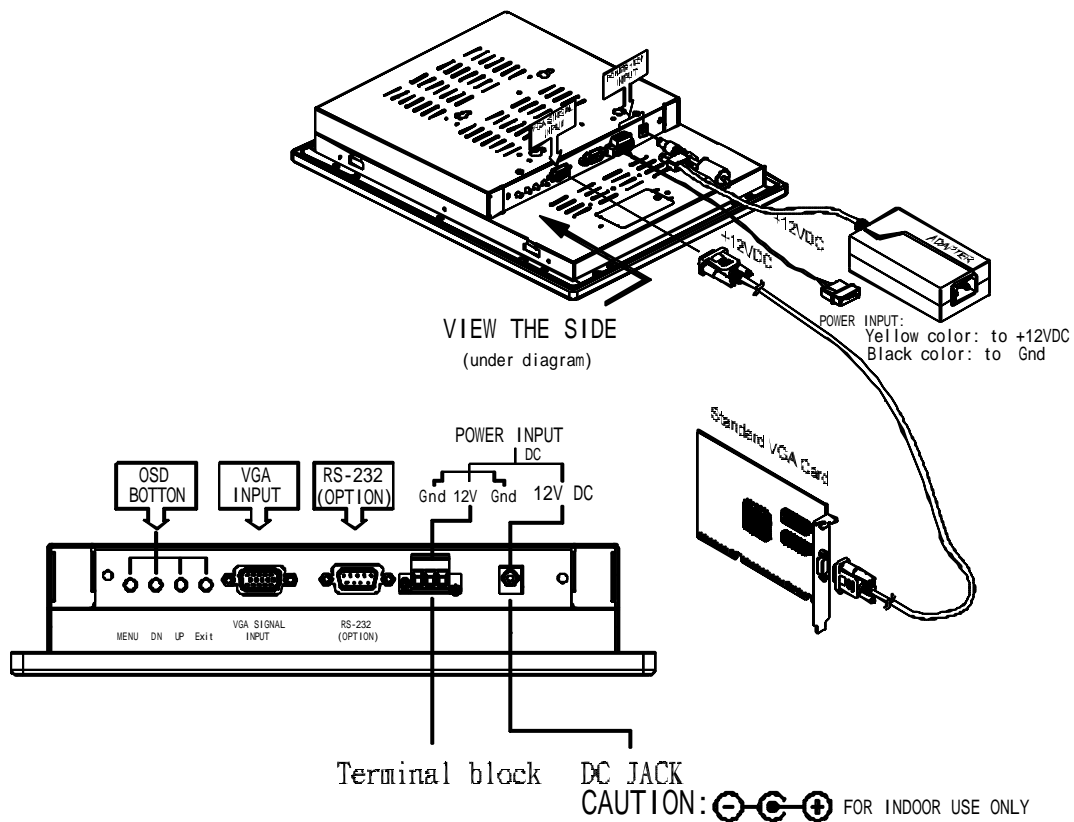
Down Button

Menu Button

POWER LED Indicate

2.2 LCD Installation

DM-121/SRM-121 provides two features for your choosing: one is LCD only; the other is LCD with touch screen. You can use VGA cable connects from LCD panel to your system VGA interface.

2.2.1 LCD without Touch Screen

There are five LCD adjustment switches on the rear panel of DM-121/SRM-121. Also, there are two ports for VGA and RS-232. If you want to install LCD without Touch Screen, just connect the VGA Card to the VGA Signal Input port. The power connection you can choose 12V DC jack or terminal block use to 12V DC input.


VIEW THE SIDE
(under diagram)

POWER INPUT
Yellow color: to +12VDC
Black color: to Gnd

Terminal block   DC JACK

CAUTION ⊖─🄫─⊕ FOR INDOOR USE ONLY

2.2.2 LCD with Touch Screen

If you want to install LCD with Touch Screen, please connect RS232 connector from LCD to your COM port from CPU card. The driver for touch screen we used the CD disk with system shipping.
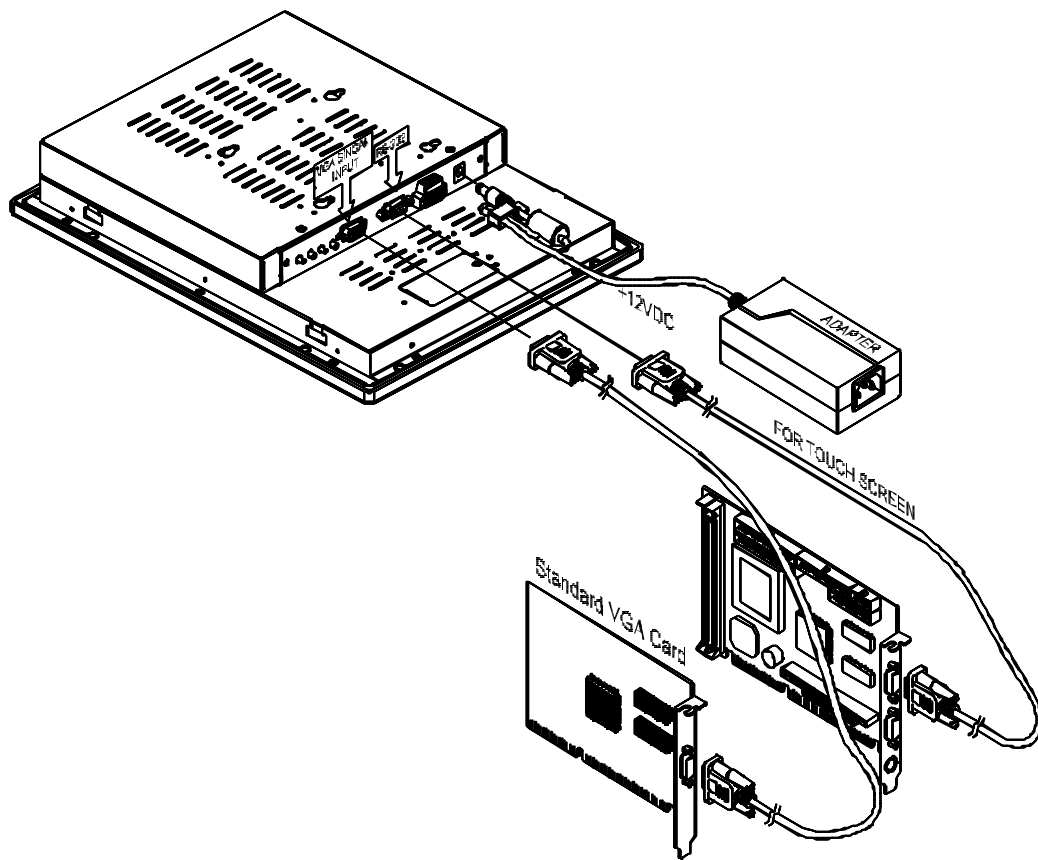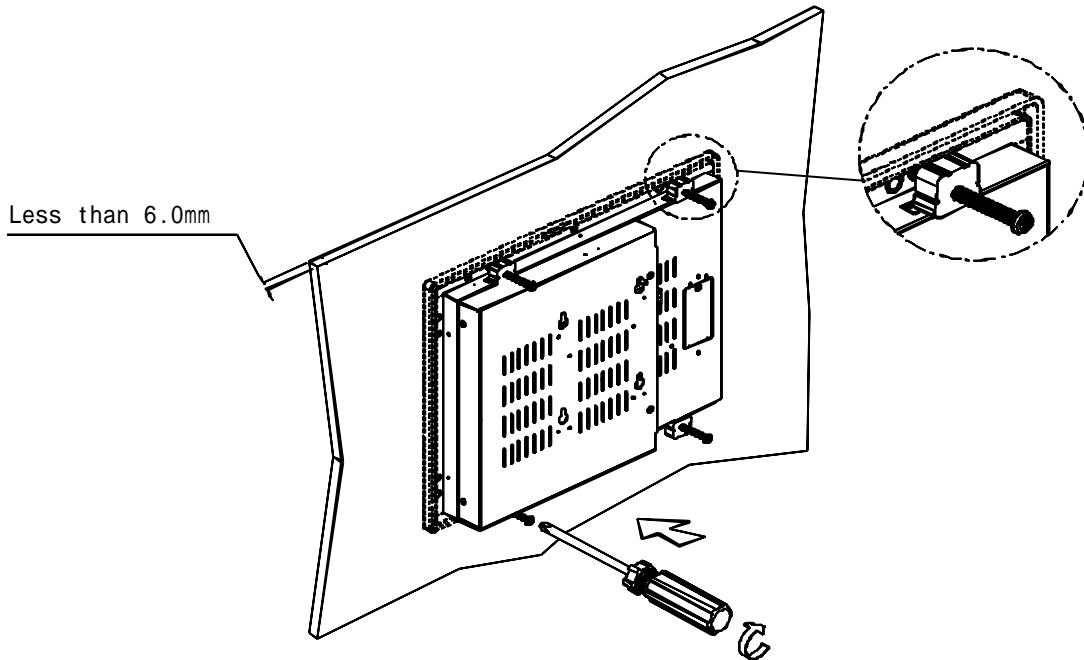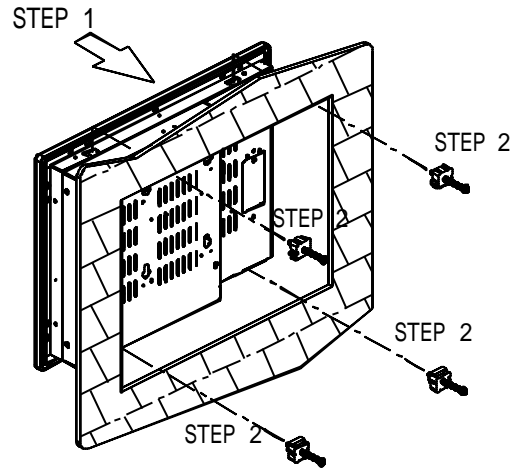
2.3 Panel Mounting

DM-121/SRM-121 is either suitable for panel mounting. As you mount this flat panel display, please refer to the diagram below.
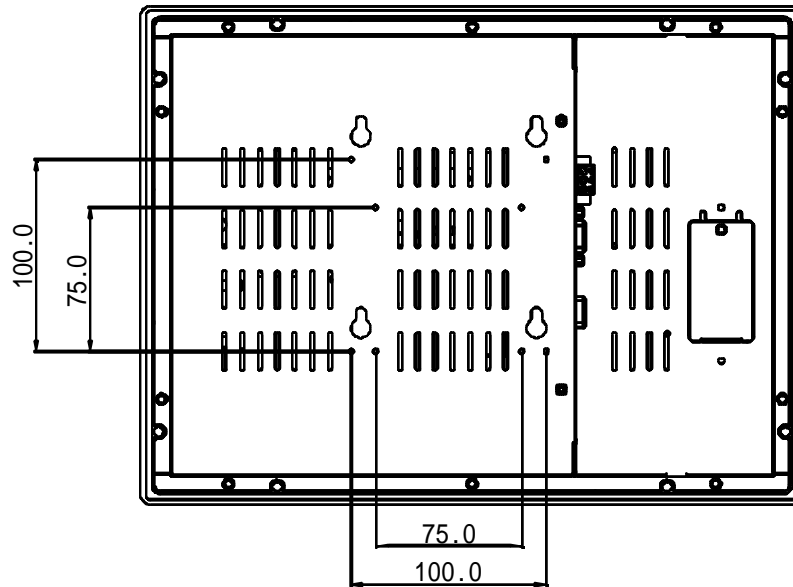

312.0

232.0

UNIT:mm
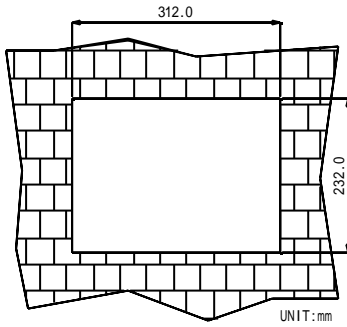
THE DIMENSION IS FOR PANEL MOUNTING.
(The flat panel thickness is 6mm or less than 6mm)

STEP 1

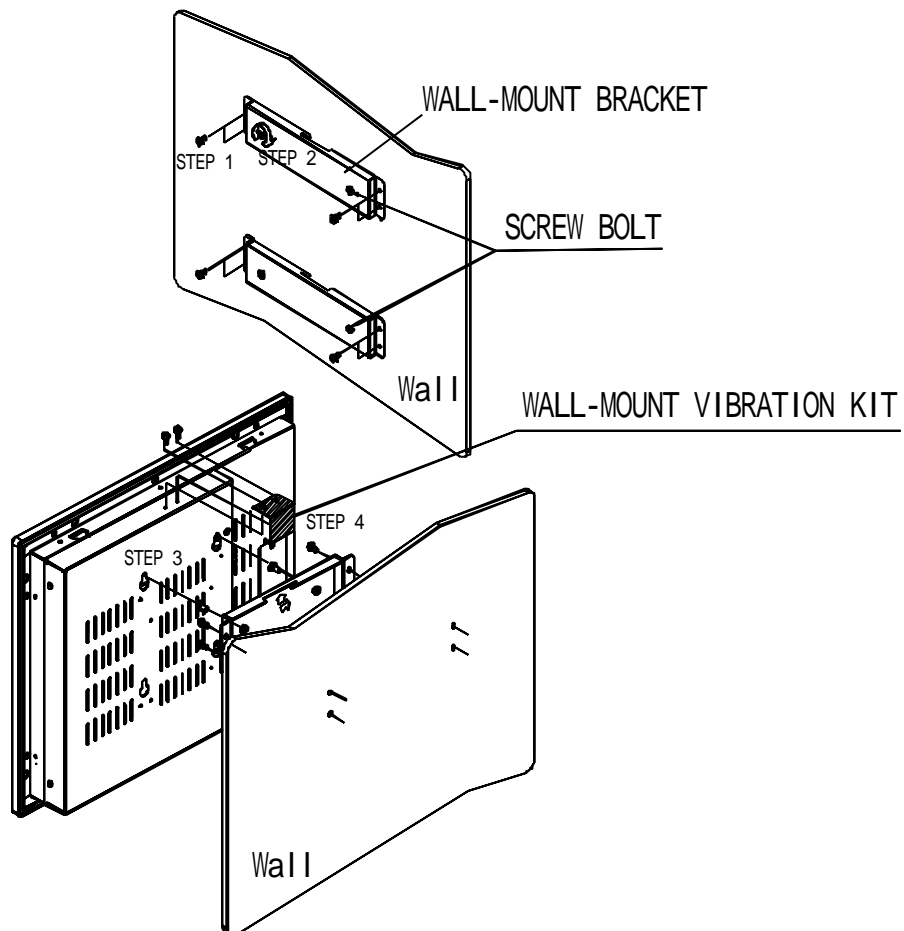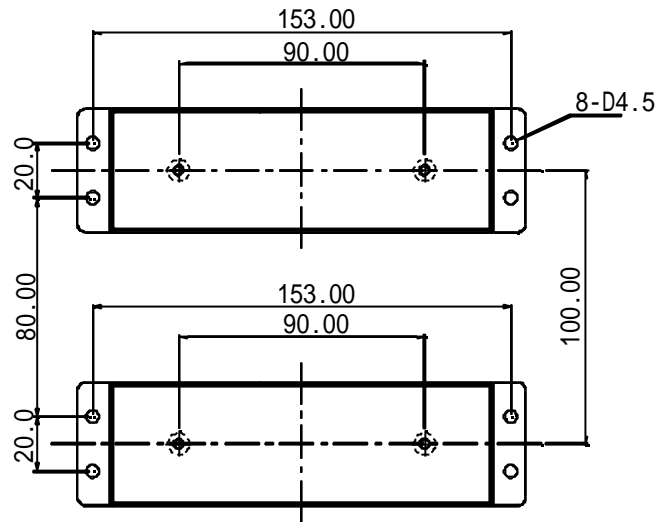STEP 2

STEP 2

STEP 2

STEP 2

Less than 6.0mm

2.4 Arm Mounting

DM-121/SRM-121 is suitable for 75/100mm interface pads or for arm mounting.
arm mounting and the specification conform to the proposed VESA standard.

2.5 Wall Mounting

DM-121/SRM-121 is suitable for wall mounting and the specification conform to the proposed.

2.6 Rack Mounting

DM/SRM-121 provide option rackmount kit for industrial Rack. The following diagram shows how to mount DM/SRM-121 onto the 19" Rack.

Rackmount Kit Dimension

STEP 1

STEP 2

STEP 3

STEP 4

Rackmount-Kit

Chapter 3 User Mode OSD Information

3.1 User Mode OSD Structure

LEVEL 0	LEVEL 1	VALUE
RGB Menu	Brightness	Press Select Button
	Red	-127 ~ 127
	Green	-127 ~ 127
	Blue	-127 ~ 127
	Color Temp	0 ~ 7
	Sharpness	0 , 1
	Main Menu	Press Select Button
Geometry Menu	Auto-Adjustment	Press Select Button
	H. Position	0 ~ 252
	V. Position	1 ~ 26
	H. Total	1004 ~ 1108
	Auto Phase	Press Select Button
	Delay	0 ~ 61
	Main Menu	Press Select Button
Contrast Menu	Auto-Balance	Press Select Button
	Contrast	Press Select Button
	Red	0 ~ 511
	Green	0 ~ 511
	Blue	0 ~ 511
	Balance	Press Select Button
	Red	0 ~ 127
	Green	0 ~ 127
	Blue	0 ~ 127
	Main Menu	Press Select Button
Language Menu	English	Press Select Button
	Spanish	Press Select Button
	Main Menu	
Auto Training		ON/OFF
DOS/GFX		ON/OFF
NVRAM init		Press Select Button
Power Down		Press Select Button
Revert		Press Select Button
Save		Press Select Button

3.2 User Mode OSD Item description

- **Auto-Adjustment**

  This item will automatically adjust the H/V position, frequency, phase, and black level.

- **Auto Phase**

  This item will automatically adjust the sampling.

- **Brightness**

  It is used to adjust the brightness of screen. This function will adjust the offset value of ADC. Please take note that setting this value too high or too low will destroy the quality of image.
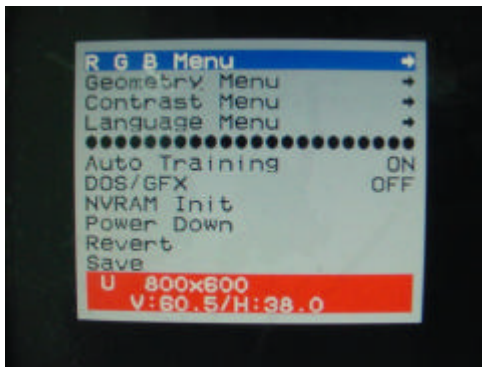

- **Contrast**

  It is used to adjust the contrast of screen, this function will adjust the gain value of ADC. Please take note that adjusting this value too high or too low will destroy the quality of image.
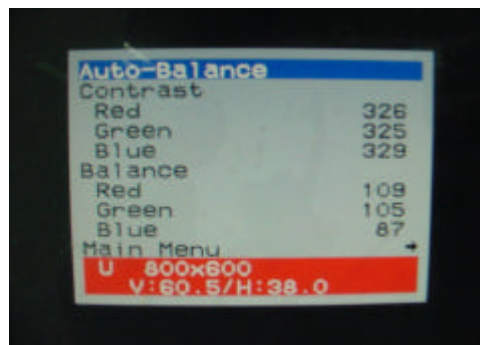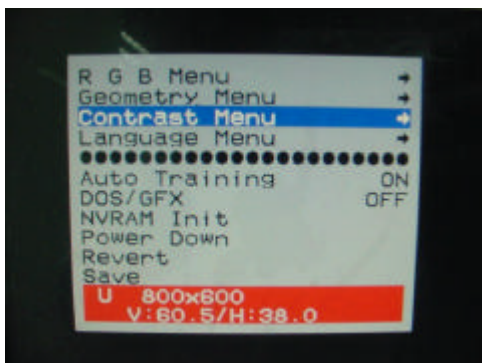
- **DOS/GFX**

  It is used to choose VGA Input signal that is text mode or graphic mode. (It is only selectable on resolution of 720/640x400 or 720/640x350.) 400 and 350 standard IBM mode have the same Hsync. and Vsync. Value. AV-9261 MPU can not differentiate them automatically and users need to adjust them by manual to match proper VGA mode.
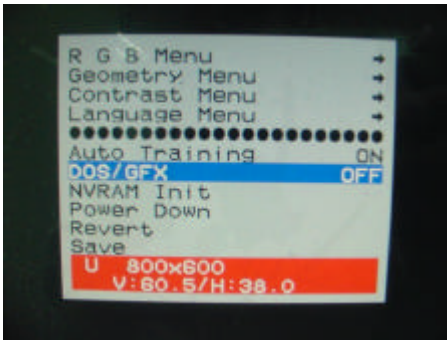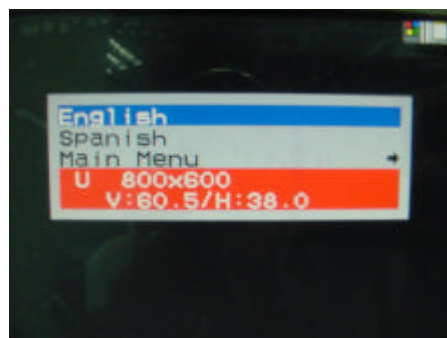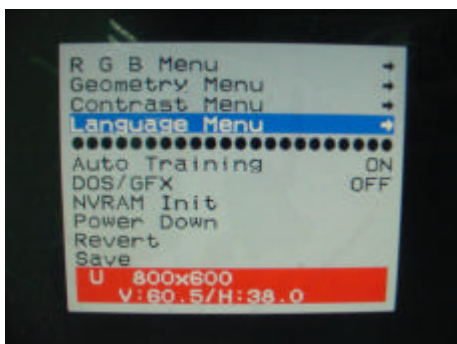

- **H. Position**

  It is used to adjust horizontal display position of image.

- **V. Position**

  It is used to adjust vertical display position of image.

- **Language**

  It is used to select the languages using on OSD display. AV-9261 now can support 2 languages on OSD display. English is the default language.

- **Revert**

  It is used to reload original parameters from the factory's OSD data area of the system EEPROM 24c16 device to re-initialize AV-9261 system device. When users adjust OSD data too much and can not see better quality than before, users can select this item, Revert, and MPU will reload default BIOS setting and re-initialize the system.
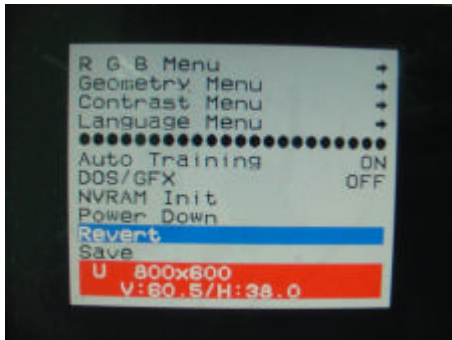
- **Save**

  It is used to save the parameters into the user OSD adjustment data area of the system EEPROM 24c16 device and close OSD. Whenever users adjust any parameters, it is necessary to execute this item to save data into EEPROM. And next time power on, the MPU will use the storied data to initialize the AV-9261 system.
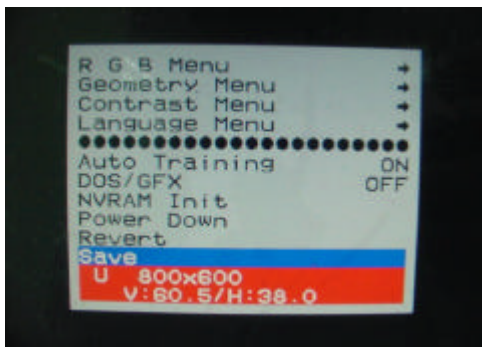
- **Main Menu**

  Every level of OSD has the item name, **Main Menu** that lets users leave current level and jump to upper level, or press the **Return** key.

- **Exit**

  Press the **EXIT** key to exit the OSD menu when the OSD menu is on the top of the level.

Appendix Check List

Item	Part No.	Description	Qty.
1	14106031120A-00-020 63PSA65U120-000	POWER SUPPLY..POTRANS POWER(DM-121) POWER SUPPLY..POTRANS POWER(SRM-121)	1
2	32000-000002	POWER CORD/175CM	1
3	32000-000042	VGA CABLE D-SUB 15P M TO M/180CM	1
4	32100-041000	WIRE CABLE/40CM	1
5	42011-000150	PANEL-MOUNT KIT	4
6	41014-011602	WALL-MOUNT VIBRATION KIT	1
7	41020-002702	WALL-MOUNT BRACKET	2
8	42005-000603	SCREW BOLT	4
9	44003-050501	SCREW M5X50	4
10	44033-030061	SCREW M3	10
11	44033-040062	SREW M4	8
12	32000-000098	ROUND CABLE D-SUB 9P /180CM, For: TOUCH SCREEN (OPTIONAL)	1