

DM-170/SRM-170/SRM-170A

User Manual

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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-170/ SRM-170/SRM-170A is a 17.0" flat panel display specially designed to meet the applications for industrial environment.

SRM-170A with auto-dimmer function. The LCD brightness base on environment light to auto-adjust the LCD brightness.

- Suitable for panel mounting and 75/100mm interface pads for arm mounting (conform to the proposed VESA standard)
- Panel Interface: DVI and Analog VGA signal (by AV-0911A DVI and Analog VGA to Digital LCD Interface Board)
- DVI (Digital Video Interface) input
 - Sync Detect: for Plug & Display.
 - Cable Distance Support: over 3m with twisted-pair .
 - Compliant with DVI 1.0: DVI is backwards compatible with VESA® P&D™ and DFP.
- 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-170-AL/ SRM-170-AL)
- Ship with power adapter for 100-240 VAC input
- **Display Model (DM-170)**
 - CHIMEI 17" LCD M170E4-L01 17.0" TFT LCD
 - Support digital input by DVI connector and VGA connector
 - Resolution: 1280X1024
 - MAX. Colors: 16.0 M
 - Brightness: 250 cd/m²
 - Hor. Frequency: 15-80KHz
 - Ver. Frequency: 55-75Hz

Operating Temperature: 0-50 °C
Storage Temperature: -20~60 °C
Viewing Angle (degree): Vertical viewing angle: 160°
Horizontal viewing angle: 160°
LCD MTBF: 50,000 hrs
Backlight MTBF: 25,000 hrs

Display Model (SRM-170/SRM-170A)

LiteMax 17" LCD SAM1711 17.0" high brightness TFT LCD
Support digital input by DVI connector and VGA connector
Resolution: 1280X1024
MAX. Colors: 16.7 M
Brightness: 725cd/m²
Hor. Frequency: 15-80KHz
Ver. Frequency: 50-75Hz
Operating Temperature: 0-40 °C
Storage Temperature: -20~60 °C
Viewing Angle (degree): R/L:160° U/D:160°
LCD MTBF: 50,000 hrs
Backlight MTBF: 20,000 hrs

● **Option Touch Screen: Dynapro 17.0"**

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

● **Option Touch Screen: Micro touch**

Type: Capacitive
Light transmission: Typical value 83 ±3%
Surface Hardness: 2H or more
Touch screen interface: RS-232
Operation Voltage: DC 5V±10%
Support driver: Supports : Linux,MS-DOS,Windows 3.1/95/

Power supply (DM-170) :

Model no: PSA65U-120

Input requirements:

Input Voltage range: 90 to 264 VAC.
Line frequency: 47 to 63 HZ.

Output:

Output Voltage range: +12V ±0.5V 3.8A 45 Watt
Ripple and Noise: Voltage 120 mvP

** System Power Consumption: 12V / 1.8A (not include touch screen)

Power supply (SRM-170/SRM-170A) :

Model no: PSU65-105

Input requirements:

Input Voltage range: 100 to 240 VAC.
Line frequency: 47 to 63 HZ ; 1.9A

Output:

Output Voltage range: +12V ±1.0V 7.27A 80 Watt
Ripple and Noise: 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 / 4.8A (not include touch screen)

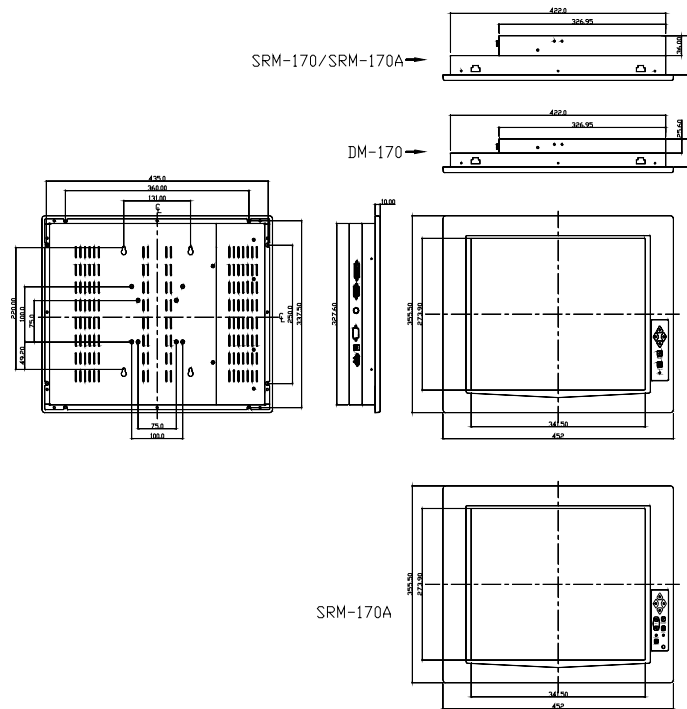
1.2 Product Dimensions

The following diagrams indicate the dimensions of DM-170/ SRM-170/SRM-170A.

Front Panel: 452mm x 355.5mm x 10mm (WxHxD)

Cabinet: 422.0mm x 327.6mm x 50.8mm (WxHxD) →DM-170

Cabinet: 422.0mm x 327.6mm x 70.8mm (WxHxD) →SRM-170/SRM-170A

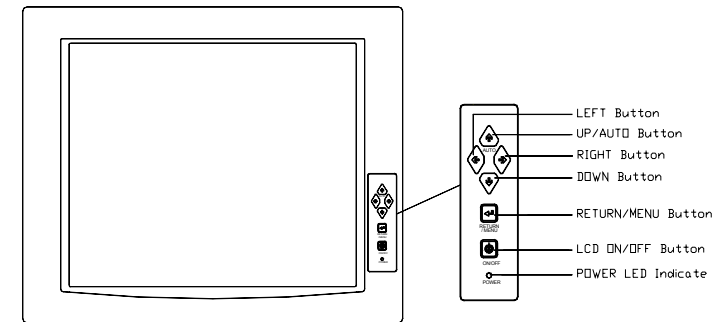


(Unit: mm)

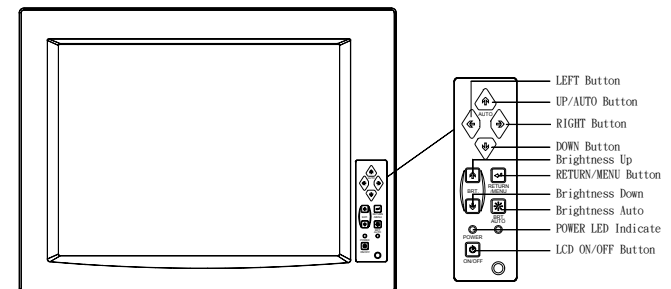
Chapter 2 System Setup

The DM-170/ SRM-170/SRM-170A 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



SRM-170A with auto-dimmer function. The LCD brightness base on environment light to auto-adjust the LCD brightness.

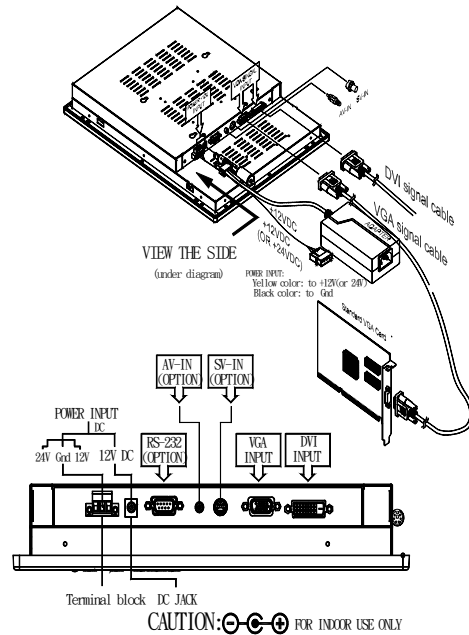


2.2 LCD Installation

DM-170/SRM-170/SRM-170A 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. If your system provides the DVI interface, you can choose the DVI cable to used it function. On the rear panel of DM-170/SRM-170/SRM-170A, there are two ports for signal input VGA and DVI (DVI cable is option). DM/SRM-170-VI provideo standard composite and S-video input function.

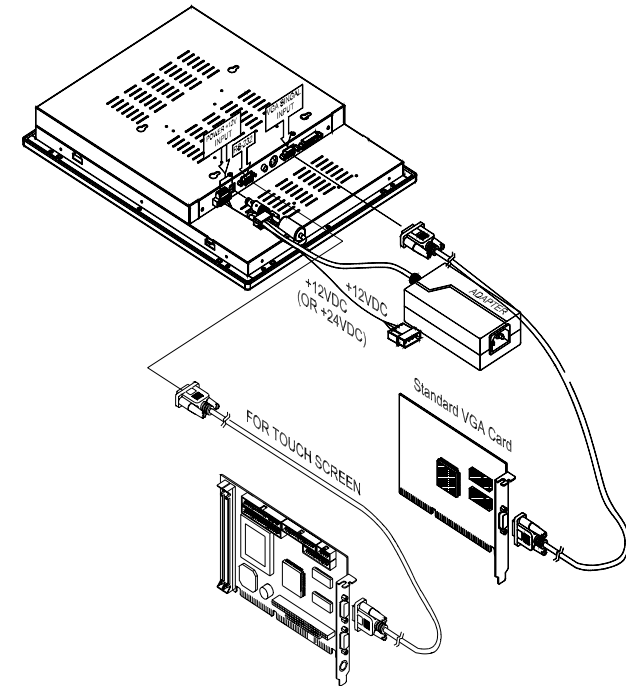
2.2.1 LCD without Touch Screen and power input

If you want to install LCD without Touch Screen, just connect the VGA cable from LCD connector to the system VGA Signal Input port. The power connection you can choose 12V-DC jack (DC 12V power adaptor that ship with it) or terminal block. In the terminal block connector, we choose 12V or 24C DC input.



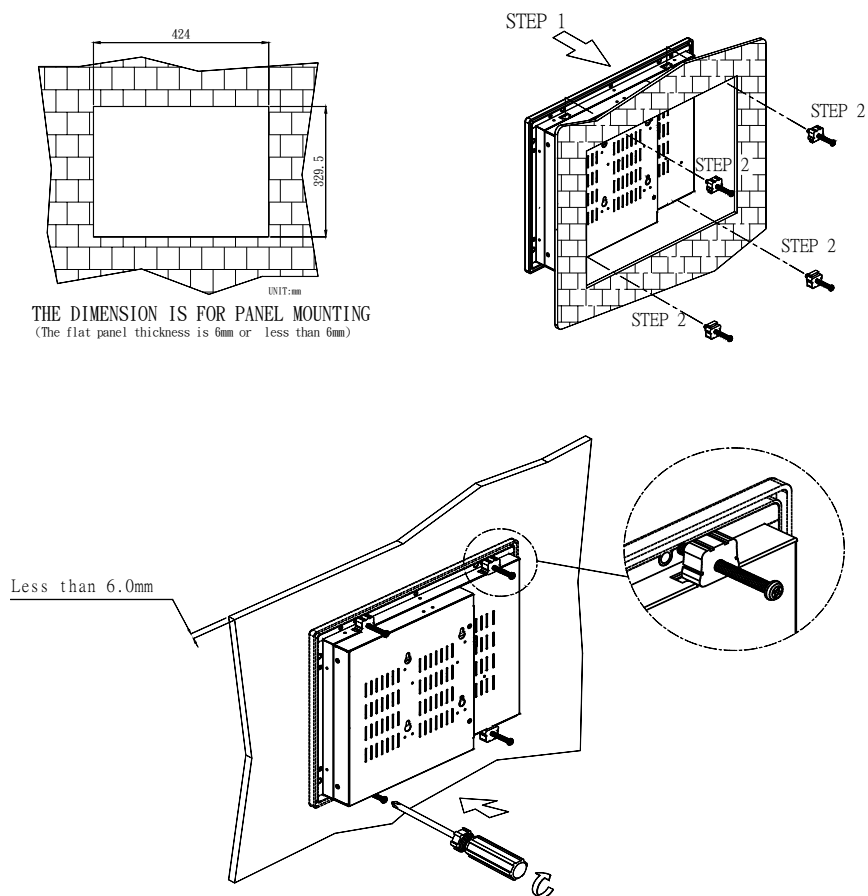
2.2.2 LCD with Touch Screen

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.



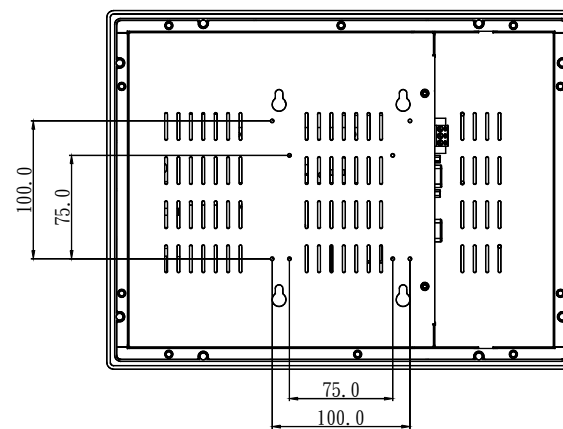
2.3 Panel Mounting

DM-170/ SRM-170/SRM-170A is either suitable for panel mounting. As you mount this flat panel display, please refer to the diagram below.



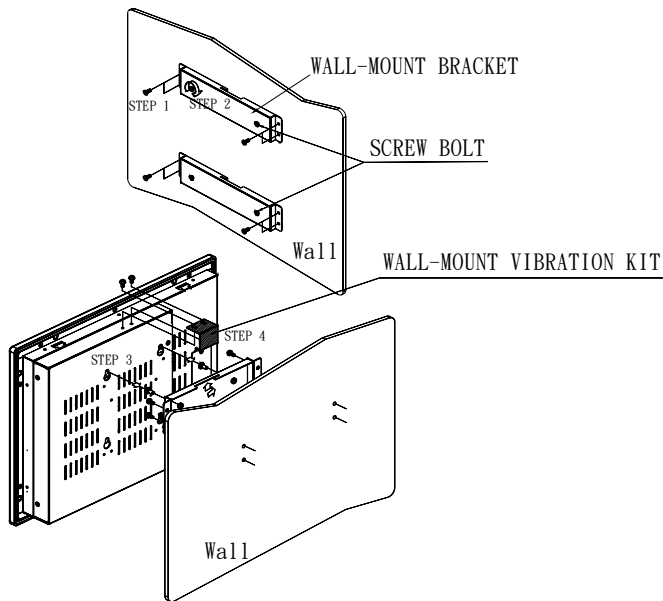
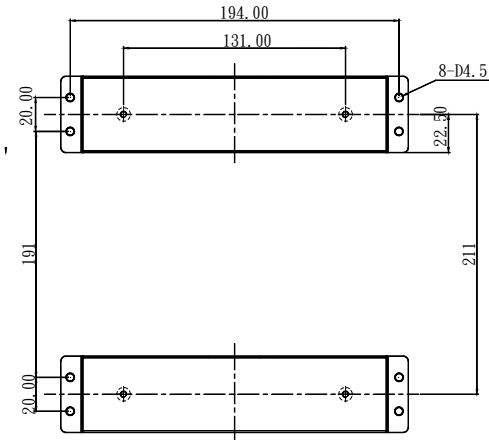
2.4 Arm Mounting

DM-170/ SRM-170/SRM-170A are suitable for 75/100mm interface pads or for arm mounting. arm mounting and the specification conform to the proposed VESA standard.



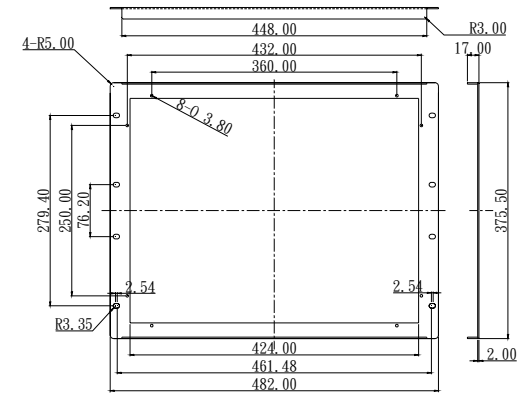
2.5 Wall Mounting

DM-170/ SRM-170/SRM-170A is suitable for wall mounting and the specification conform to the proposed.

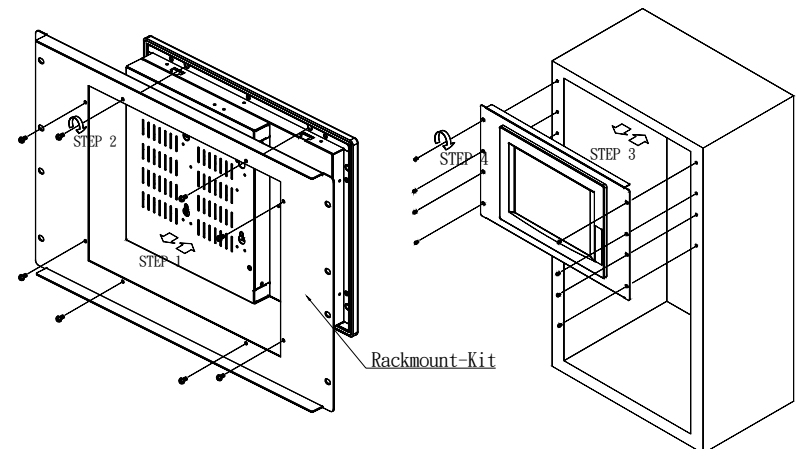


2.6 Rack Mounting

DM-170/SRM-170/SRM-170A provide option rackmount kit for industrial Rack. The following diagram shows how to mount DM/SRM-170/SRM-170A onto the 19" Rack.



Rackmount Kit Dimension



Chapter 3 User Mode OSD Information

3.1 Features(AV-0911)

- **VGA Input** : RGB VGA input
 - Horizontal Sync. : 15K – 80KHz
 - Vertical Sync. : 50 – 75Hz
 - Maximum pixel rate: 24bit pixel at 100MHz
48bit pixel at 135MHz
- **Flat Panel resolution up to 1280x1024**
- **Color TFT LCD Panel support**
 - 48bit 2-pixel/clock data interface
 - 24bit 1-pixel/clock data interface
- **Flat Panel function support:**
 - Amplitude modulation for color TFT LCD panel
 - Panel horizontal/vertical expansion
 - Panel horizontal/vertical scale up and down
- **LCD panel display enhancement:**
 - Filter & interpolation
 - 10bit Gamma correction table.
 - 16-stage of DDC data read/write buffer
- **VESA DPMS:**
 - Automatic flat panel power sequencing
 - Delayed power-on control for flat panel protection
- **AD converter:** Trumpion ZURACIII t0911

3.2 Button Function

There are six buttons on OSD panel: ON/OFF, Auto (Up) Down, Right , Left, and Menu (Return). The functions of these six buttons are as follows:

- **Menu (Return) Button**

Press it to open or close OSD window and enter user mode to do the function adjustment or selection of the item .It may have many levels in one item. As you select this kind of item, you will enter the next level and see the sub-items.
- **Right Button**

Press it to Scroll item right or down to decrease the value or to switch the selected item to another.
- **Left Button**

Press it to Scroll item left or up to increase the value or to switch the selected item to another.
- **Auto (Up) Button**

Press it to Auto adjust LCD.
- **ON/OFF Button**

Press it to Control power ON / OFF.
- **Down Button**

Reserved.
- **Green LED**

Power ON and Active.
- **Orange LED**

Power ON and Sleep.
- **LED No Display**

Power OFF.

3.3 User Mode OSD Structure

LEVEL 0	LEVEL 1	VALUE
DISPLAY ADJUST	H-Position	0-255
	V-Position	0-30
	CLOCK	0-1788
	PHASE	0-31
	AUTO	YES , NO
	EXIT	Press Menu Button
INPUT SELECT	ANALOG	Press Menu Button
	DIGITAL	Press Menu Button
	VIDEO COMPOSITE	Press Menu Button
	VIDEO S-VIDEO	Press Menu Button
	EXIT	Press Menu Button
COLOR ADJUST	COLOR TEMPERATURE	6500K , 9300K
	RED GAIN	0-255
	GREEN GAIN	0-255
	BLUE GAIN	0-255
	EXIT	Press Menu Button
OSD ADJUST	H-Position	0-255
	V-Position	0-255
	OSD-OFF TIME	0-120
	LANGUAGE	English , Espanol , Deutsch , Frangais , Italiao
	EXIT	Press Menu Button
ZURAC ADJUST	BRIGHTNESS-Z	0-255
	CONTRAST-Z	0-255
	DOS-MODE	TEXT , GRAPHICS
	CONTRAST-ADC	0-255
	EXIT	Press Menu Button
EXIT	EXIT OSD	Press Menu Button

3.4 User Mode OSD Item Description

- **AUTO (Auto-Adjustment)**

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

- **PHASE**

This item will adjust the sampling Phase.

- **BRIGHTNESS-Z**

It is used to adjust the brightness of screen. This function will adjust the offset value of ZURAC. Setting this value too high or too low will destroy the quality of image.

- **CONTRAST-Z**
- **CONTRAST-ADC**

It is used to adjust the contrast of screen. This function will adjust the gain value of ZURAC or ADC. Adjusting this value too high or too low will destroy the quality of image.

- **DOS-MODE**

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 modes have the same H-sync. and V-sync. Value. AV-0911 MPU cannot 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-0911
now can support 5 language on OSD display. English is the default language.

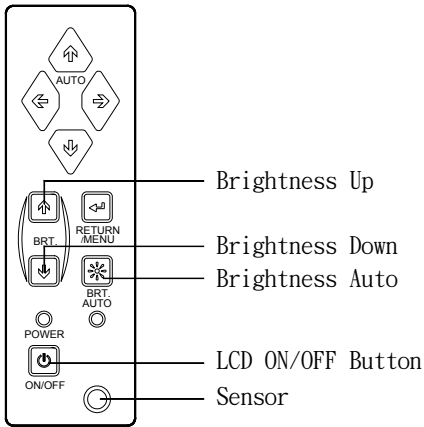
- English
- Espanol
- Deutsch
- Frangais
- Italiao

● Exit

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

3.5 Brightness Adjustment

Press Brightness Up Button , will increase LCD backlight ;
Press Brightness Down Button , will decrease LCD backlight.



Appendix Check list

Item	Part No.	Description	Qty.
1	63PSA65U120-000 63SPU65105-000	POWER SUPPLY..POTRANS POWER(DM-170) POWER SUPPLY..POTRANS POWER(SRM-170/170A)	1
2	32000-000002	POWER CABLE	1
3	32000-036200	VGA CABLE D-SUB 15P M TO M/180CM	1
4	32100-041000	WIRE CABLE/40CM	1
5	42011-000150	PANEL-MOUNT KIT	10
6	41014-020202	WALL-MOUNT VIBRATION KIT	1
7	41020-003302	WALL-MOUNT BRACKET	2
8	42005-000603	SCREW BOLT	4
9	44003-050501	SCREW M5 * 50	10
10	44033-030061	SCREW M3	10
11	44033-040062	SREW M4	8
12	32000-000098	ROUND CABLE D-SUB 9P /180CM, For TOUCH SCREEN(OPTION)	1

