

**DM-84T**

**User Manual**

**Version 1.0**

August 27, 2003



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# Chapter 1. Product Information

## 1.1 Introduction

ICP Electronics Inc. is an expert in providing customers with Industrial Computer Solutions. We are manufacturer of Industrial PC related products as well as System Integrator. We specializes in single board computers, chassis, workstations, panel PC, flash disk, PC/104 products, power supply, and backplanes. 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 harshest operating environments such as inside a steel plant or warehouse. The DM-84T is a small size flat panel display specially designed to meet the applications for your specific industrial environment.

## 1.2 Specifications

- **Panel Interface:**

- ✓ Analog VGA signal (by **AV-9261** Analog VGA).
- ✓ Front OSD control keys for users to adjust to best display quality.
- ✓ Side cabling design to lessen LCD monitor's overall thickness
- ✓ Power Input: 5V by D type power connector (MOLEX 8981-04M)

- **Display Model:**

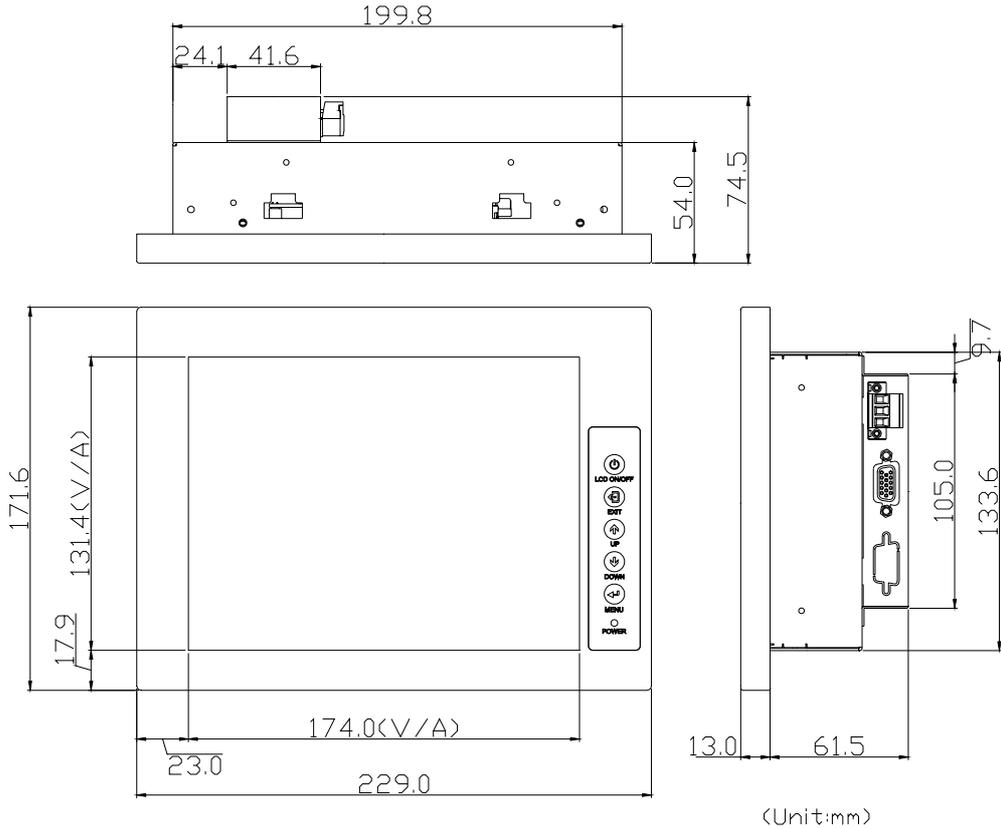
- ✓ PRIME VIEW 8.4" UB084S01H TFT high brightness TFT LCD
- ✓ Resolution: 800X600
- ✓ LCD Display Colors: 262K, 18 bits
- ✓ Brightness: 250 cd/m<sup>2</sup>
- ✓ Hor. Frequency: 15-80KHz
- ✓ Ver. Frequency: 50-85Hz
- ✓ Operating Temperature: 0~55 °C
- ✓ Storage Temperature: -20~70 °C
- ✓ Viewing Angle (degree): R:40 L:40 U:30/ B: 10
- ✓ LCD MTBF: 50,000 hrs

- ✓ Backlight MTBF: 20,000 hrs
  
- **Option Touch Screen: Dynapro 8.4"**
  - ✓ Type: Analog Resistive
  - ✓ Resolution: Continuous
  - ✓ Light Transmission: Typical value 75%
  - ✓ Surface Hardness: 4H (Test Condition: ASTM D3363-92A)
  - ✓ 4-wire Touch Screen
  - ✓ Touch Screen Interface: RS-232
  - ✓ Support Driver: Supports MS-DOS, Windows 3.1, Windows 9X/Me, Windows NT, Windows 2000 and Linux.
  
- **Environmental Specifications**
  - ✓ Operating Temperature : 0 ~ 50°C
  - ✓ Relative Humidity: 10-95% @0~50 °C, non-condensing
  - ✓ Vibration: 5 to 17 Hz 0.1" double-amplitude displacements  
17 to 640 Hz 1.5 G peak to peak
  
- **Power Consumption:** +5V/0.7A and +12V/0.9A (Without touch screen)
  
- **Weight:** N.T: 2.5Kg / G.T: 5.0Kg

### 1.3 Dimensions

The following diagrams indicate the dimensions of DM-84T.

- Front Panel: 229.0mm x 171.6mm x 13.0mm (WxHxD)
- Cabinet: 199.8mm x 133.6mm x 61.5mm (WxHxD)

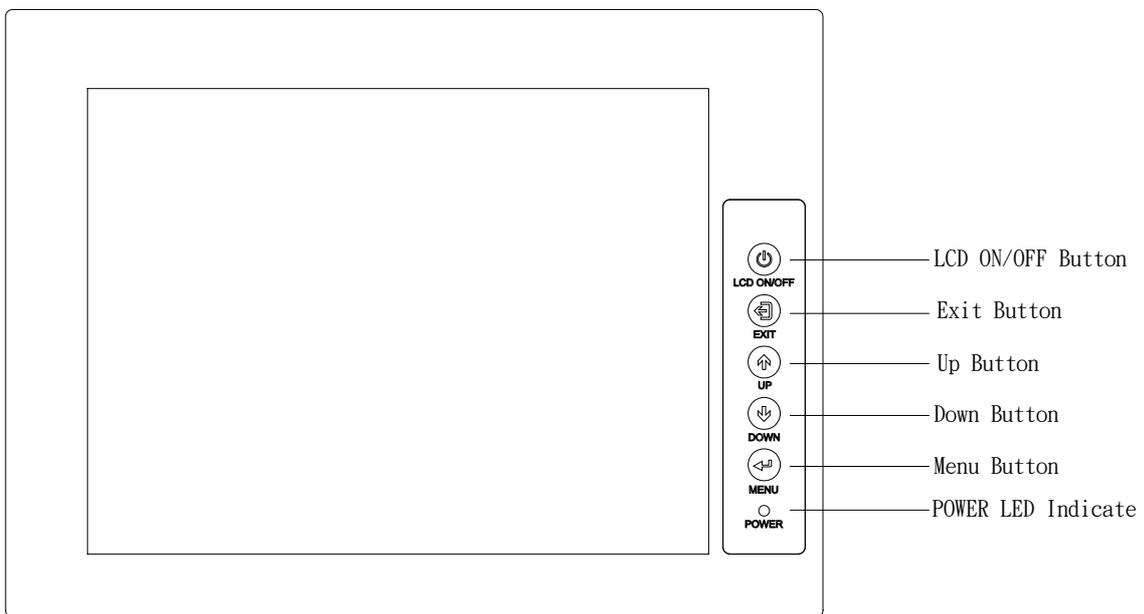


**(UNIT: mm)**

## Chapter 2. System Setup

It is very easy to setup DM-84T for operation. Please refer to the following procedures while you set up your system.

### 2.1 Front Panel Operation



- **LCD ON/OFF Button**

Turning ON/OFF the power of LCD monitor.

- **EXIT Button**

Exit from menu or slide bar. Press this key again to re-enter the menu selection.

- **UP Button**

Adjust the value up of slide bar or press it to select up slide bar.

- **DOWN Button**

Adjust the value down of slide bar or press it to select down slide bar.

- **MENU Button**

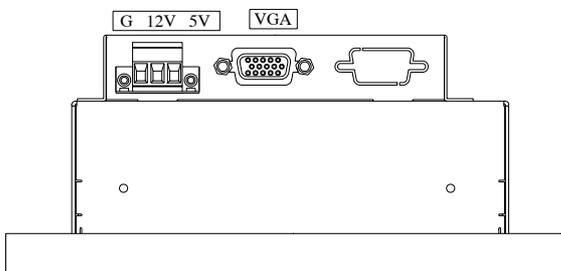
1. Press it to enter menu for function selections.
2. Pressing this button repeatedly will sequentially open OSD window changing from page-1 to page-2 and so on.
3. Enable ON/OFF function change on slide bar
4. Select slide bar and press menu button, you will see it turn red in color and then you can use Up/Down button to configure setting values.

- **POWER LED Indicate**

Indicating whether the power supply is in ON or OFF mode.

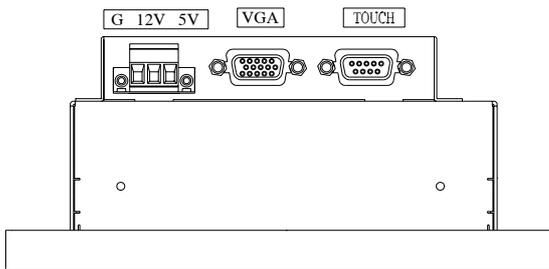
## 2.2 DM-84T without Touch Screen

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. As for power connection, please choose the terminal block making use of the 12V DC input.



## 2.3 DM-84T with Touch Screen

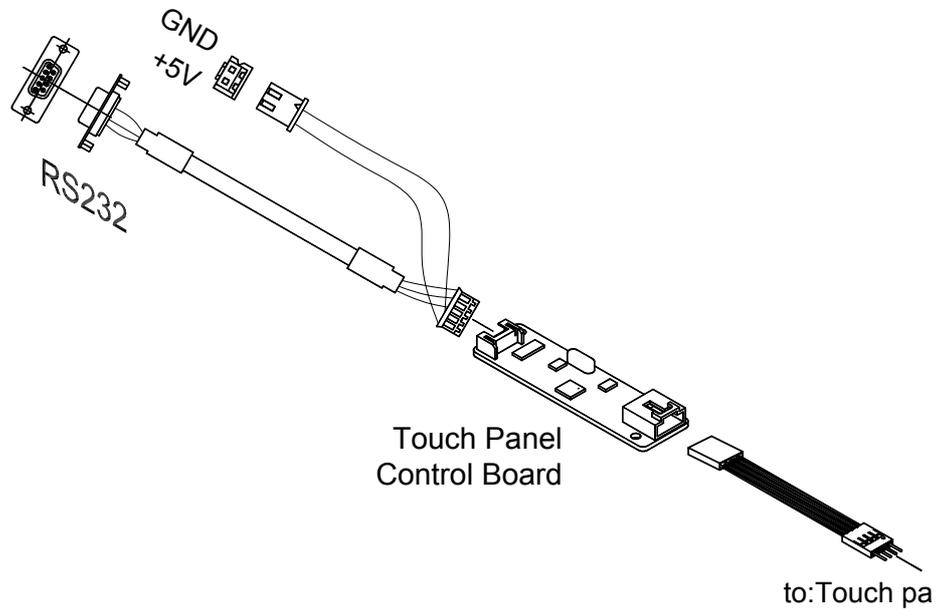
If you want to install LCD with Touch Screen, please connect RS232 connector from LCD to your COM port from CPU card. As for Touch Screen's driver, we have enclosed it in the form of a CD shipped along with the system package.



## 2.4 Touch Screen Controller

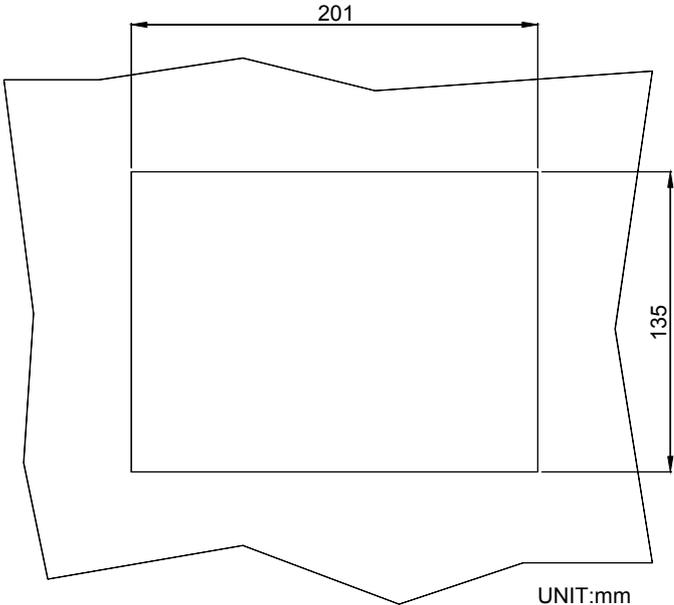
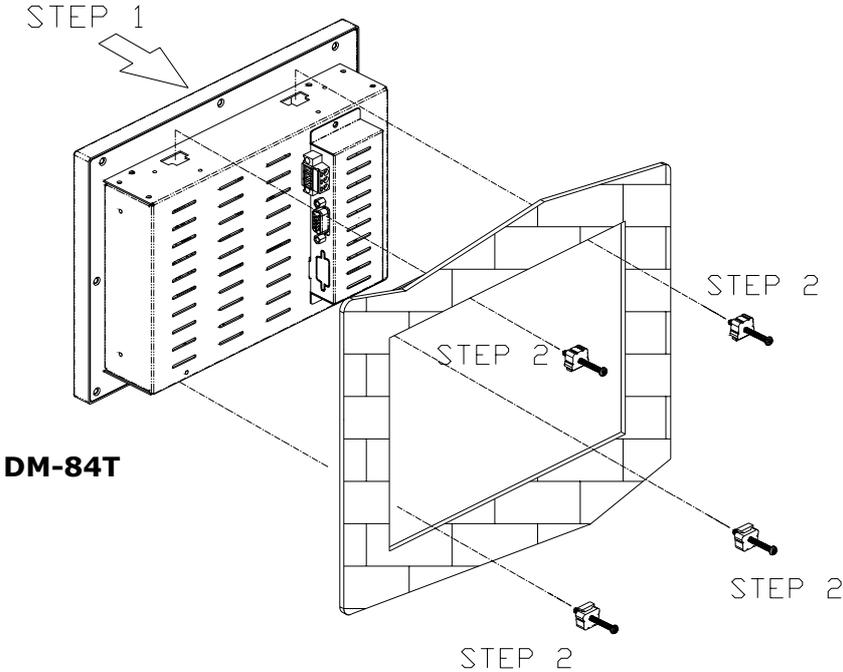
The optional touch screen provides RS-232 interface. A diagram of wiring instruction of this controller is shown in the figure below.

For detailed specification of Touch Screen, please refer to Touch Screen Accessory kits found on the last page of this manual.



## 2.5 Panel Mounting

Fasten the panel to holder with the four screws provided as shown in the diagram below.



**Mountin Hole Size**

## Chapter 3.

### OSD Function Description

#### 3.1 OSD Structure

LEVEL 0	LEVEL 1	VALUE
<b>RGB Menu</b>	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
<b>Geometry Menu</b>	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
<b>Contrast Menu</b>	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
<b>Language Menu</b>	English	Press Select Button
	Spanish	Press Select Button
	Main Menu	
<b>Auto Training</b>		ON/OFF
<b>DOS/GFX</b>		ON/OFF
<b>NVRAM init</b>		Press Select Button
<b>Power Down</b>		Press Select Button
<b>Revert</b>		Press Select Button
<b>Save</b>		Press Select Button

## 3.2 OSD Function Description

- **Auto-Adjustment**

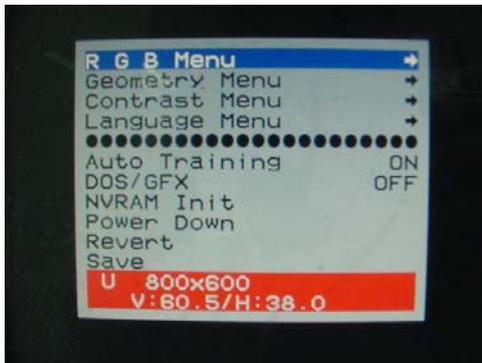
This item will automatically adjust the H/V position, frequency, phase, and black level.

- **Auto Phase**

This item will automatically adjust the sampling Phase.

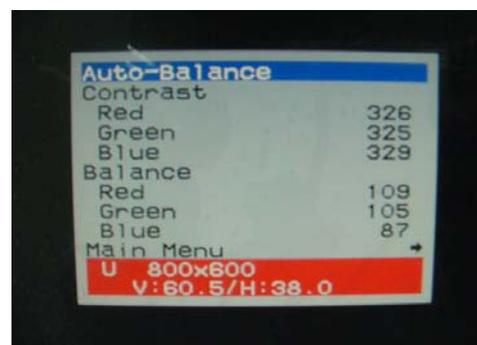
- **Brightness**

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



- **Contrast**

This function is used to adjust the contrast of screen; it will adjust the gain value of ADC. Adjust this value too high or too low will also destroy the quality of image.



- **DOS/GFX**

Through this function item, users can chose VGA input signal to text mode or graphic mode. (This function is only available when the resolution is 720/640x400 or 720/640x350.) As 400 and 350 standard IBM modes have the same Hsync, and Vsync. Value, AV-9261 MPU cannot differentiate them automatically so users need to adjust them manually as to match the proper VGA mode.



- **H. Position**

This item is used to adjust horizontal display position of image.

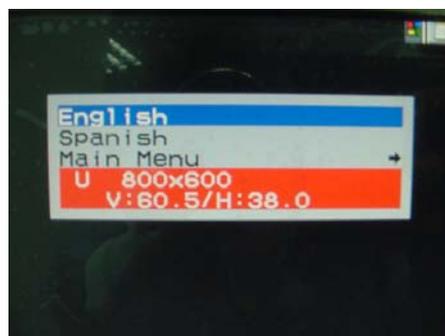
- **V. Position**

This item is used to adjust vertical display position of image.

- **Language**

This function is used to select the type of language on the OSD display. AV-9261 now can support 2 languages on OSD display. English is the default language.

**English/Spanish**



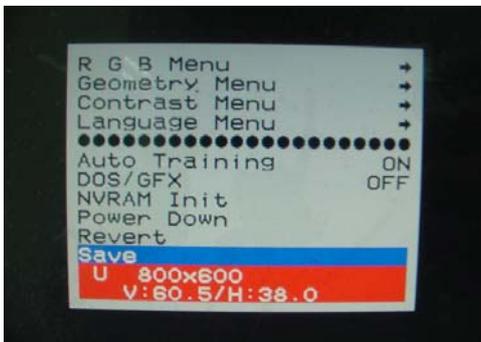
- **Revert**

Choose this function to reload original parameters from factory's OSD data area of the system EEPROM 24c16 device as to re-initialize AV-9261 system device. When user adjust OSD data too much but still cannot see better quality, then the user can select this item and the MPU will reload default BIOS setting moreover re-initialize the system.



- **Save**

This function is used to save parameters into the user OSD adjustment data area of the system EEPROM 24c16 device and close OSD. Whenever users adjust any parameters, it is needed 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 have the item name Main Menu, this item enables users to leave the current level, either jumping to the upper level or press *Enter*.

- **Exit**

Press the **EXIT** key to leave OSD menu screen when it is in the top level.

# Appendix A. Accessory Kit List

Please check that the following items are included in your system package before you start installation.

1. 19600-000053...Unit screw of.DM-74S
    - 44003-632071...screw.6#32\*7.....5PCS...1
    - 44003-030062...screw.M3\*6.....5PCS...2
    - 44013-030061...sunk screw.M3\*6.....5PCS...3
    - 44013-030041...sunk screw.M3\*4..Φ5mm.....5PCS...4
    - 44313-440051...HEX HEAD STUD..4#40\*5mm.....2PCS...5
    - 44003-050501...screw.M5\*50.....5PCS...6
  2. 42011-000150...SNAP KIT.AL A606IP-T6.....4PCS...7
  3. 41014-016102...DM-74S.SPCC.setting bracket.....1PCS...8
  4. 32000-036200...VGA CABLE.ROUND CABLE.FOR DM/SRM DISPLAY SERIES.180CM...(A)D-SUB 15PIN(male).(B)D-SUB 15PIN(male).....1PCS...9
  5. DM-84T User Manual.....1PCS...10
- Option: Touch Screen Accessory Kits (ROUND CABLE D-SUB 9P /180CM)

