

RM6380

9U Rackmount LCD Monitor
20.1 1600 x 1200 LED LCD Panel
Wide Range Working Temperature -15°C to 55°C

User Manual

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Preface

Copyright Notice

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Disclaimer

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Warranty

Our warranty guarantees that each of its products will be free from material and workmanship defects for a period of one year from the invoice date. If the customer discovers a defect, we will, at his/her option, repair or replace the defective product at no charge to the customer, provide it is returned during the warranty period of one year, with transportation charges prepaid. The returned product must be properly packaged in its original packaging to obtain warranty service. If the serial number and the product shipping data differ by over 30 days, the in-warranty service will be made according to the shipping date.

Customer Service

We provide a service guide for any problem by the following steps: First, visit the website of our distributor to find the update information about the product. Second, contact with your distributor, sales representative, or our customer service center for technical support if you need additional assistance.

You may need the following information ready before you call:

- Product serial number.
- Detailed description of the problem.
- The exact wording of error messages.

In addition, free technical support is available from our engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products.

Advisory Conventions

Four types of advisories are used throughout the user manual to provide helpful information or to alert you to the potential for hardware damage or personal injury. These are Notes, Important, Cautions, and Warnings. The following is an example of each type of advisory.



Note:

A note is used to emphasize helpful information



Important:

An important note indicates information that is important for you to know.



Caution/ Attention

A Caution alert indicates potential damage to hardware and explains how to avoid the potential problem.



Warning!/ Avertissement!

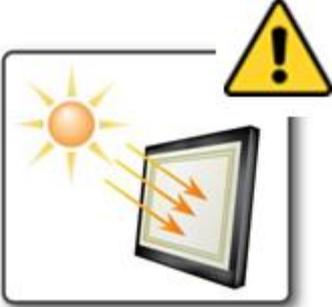
An Electrical Shock Warning indicates the potential harm from electrical hazards and how to avoid the potential problem.



Alternating Current/ Mise à la terre !

The Protective Conductor Terminal (Earth Ground) symbol indicates the potential risk of serious electrical shock due to improper grounding.

Safety Information

CAUTION!	POSSIBLE PROBLEM	PREVENTION
 <p>Do not expose the display to direct sunlight.</p>	<p>Sunlight shines directly will cause the panel damage.</p>	<p>You should avoid placing the product under direct sunlight.</p>
 <p>Do not place the display in wet environment.</p>	<p>If the product is close to the wet ground such as grassplot, the moisture between panel and glass will make the product malfunction.</p>	<p>You should avoid placing the product in wet environment.</p>

Important Safety Information

Federal Communications Commission Radio Frequency Interface Statement



This device complies with part 15 FCC rules.

Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a class "A" digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

European Union



Thus equipment is in conformity with the requirement of the following EU legislations and harmonized standards. Product also complies with the Council directions.

Electromagnetic Compatibility Directive (2014/30/EU)

- EN55024: 2010 EN 55022: 2010 Class B
 - IEC61000-4-2: 2009
 - IEC61000-4-3: 2006+A1: 2007+A2: 2010
 - IEC61000-4-4: 2012
 - IEC61000-4-5: 2014
 - IEC61000-4-6: 2013
 - IEC61000-4-8: 2010
 - IEC61000-4-11: 2004
- EN55022: 2010/AC:2011
- EN61000-3-2:2014
- EN61000-3-3:2013

Low Voltage Directive (2014/35/EU)

- EN 60950-1:2006/A11:2009/A1:2010/A12:2011/ A2:2013

Chapter 1: Introduction

This chapter gives you product overview, describes features and hardware specification. You will find all accessories that come in the package.

1.1 Introduction

Thank you for choosing this Military Grade Rack Mount Display. Military Grade Displays feature anti-corrosive coating with aluminum alloy housing withstands the harshest military environments. Armored power connector MIL-DTL-38999 Type I initially developed for aerospace industry perfectly fit in our Military grade product line.

Withstanding rigors of harsh environments and tough weather conditions these Displays meet the most demanding requirements. Suitable for Army Headquarters and being connected to mobile devices on the field Display can provide up-to-date information for immediate commands.

1.2 Product Features

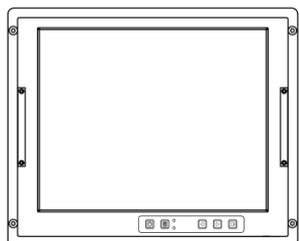
The Military Grade Rack Mount Display offers the following features:

- 17~32" LCD
- Aluminum housing with anti-corrosive coating.
- Compliance with military standard MIL-STD-810G/F.
- Flush Rack / Rack Mount Mechanical Design
- AC 110~240V Power input (default) or isolation DC IN 9~36V (Optional)
- Convenient On-Screen Display Controls
- Built-in Light Sensor for auto brightness control (optional)
- Military Grade Power Connector (MIL-DTL-38999/1)
- Standard AR Glass
- EMI ITO Glass (Optional)
- 5-wire Resistive Touch (Optional)

1.3 Package Contents

Carefully remove the box and unpack your device. Please check if all the items listed below are inside your package. If any of these items are missing or damaged contact us immediately.

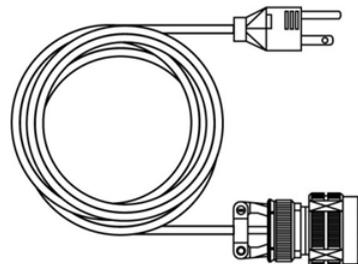
Standard factory shipment list:



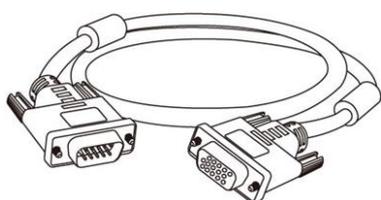
- **Display**



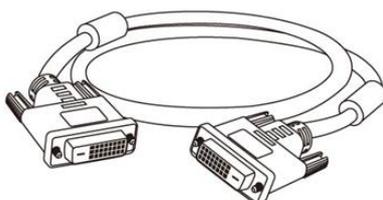
- **User Manual (Hardcopy)**



- **Power Cord
MIL-DTL-38999 1.5m**

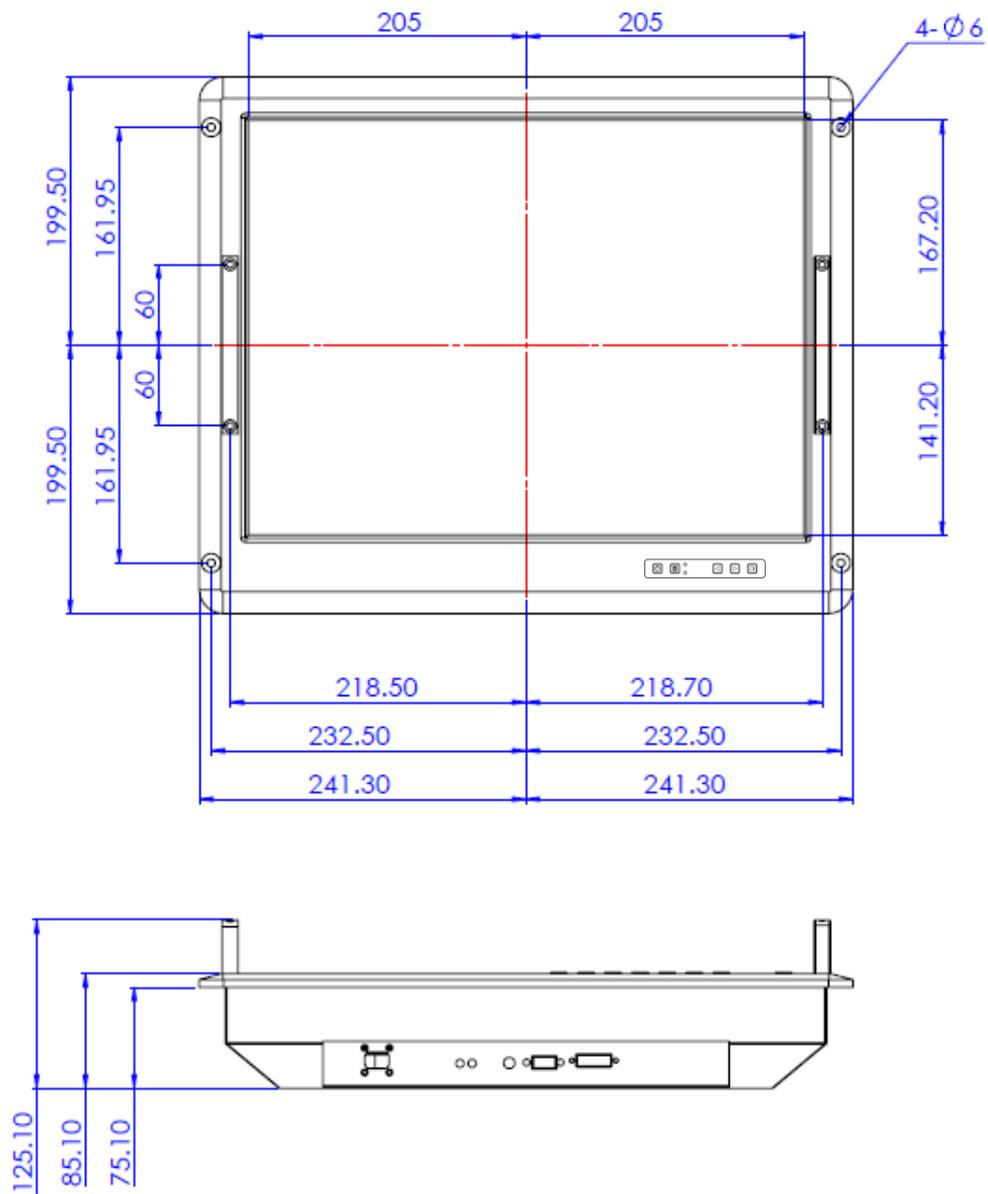


VGA Cable, 1.5m



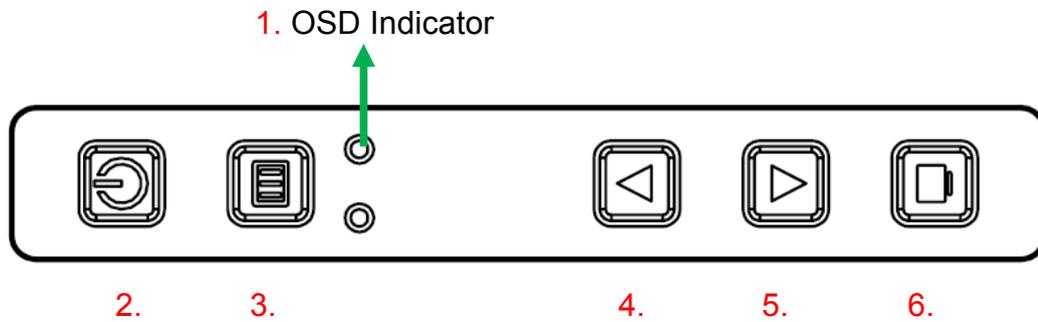
DVI Cable, 1.5m

1.4 Dimension



1.5 Physical Buttons and LED Indicators

On-Screen Display (OSD) is a user-friendly interface to remote the display function and to adjust the display's image properties. It also supports special Hot Keys for easy control, such as auto-adjustment and brightness control for backlight.



1. Power LED Indicator: Green Light is with the input signal received
Red Light is no signal input or in searching input.
2. 「 On/Off 」 : Press the button to turn on/off the display.
3. 「 Menu/Select 」 : 1. Call the Menu 2. Confirm the selection.
4. 「 > 」 : 1. Increasing 2. Move to left. 3. Quick input source selection
5. 「 < 」 : 2. Decreasing 2. Move to right.
6. 「 Auto/Exit 」 : 1. Exit the menu 2. Jump out the menu /sub<menu

Chapter 2: Getting Started

This chapter provides information on how to connect the device to the source of power, connector pinouts and the guideline to turn on/off the Display.

2.1 Powering On

2.1.1 Power Considerations

Follow the recommendations below when powering on the equipment.

- Plug-in the power cord to easy accessible AC outlet.
- Plug-in the AC adapter to a grounded outlet.



Alternating Current Mise à la terre !

This product must be grounded. Use only a grounded AC outlet. Install the additional PE ground wire if the local installation regulations require it.

**If you do not use a grounded outlet while using the device, you may notice an electrical tingling sensation when the palms of your hands touch the device.*

Ce produit doit être mis à la terre. Utiliser seulement un cordon d'alimentation avec mise à la terre. Si les règlements locaux le requiert, installer des câbles de mise à la terre supplémentaires.

**Si vous n'utilisez pas une prise d'alimentation avec mise à la terre, vous pourriez remarquer une sensation de picotement électrique quand la paume de vos mains touche à l'appareil.*

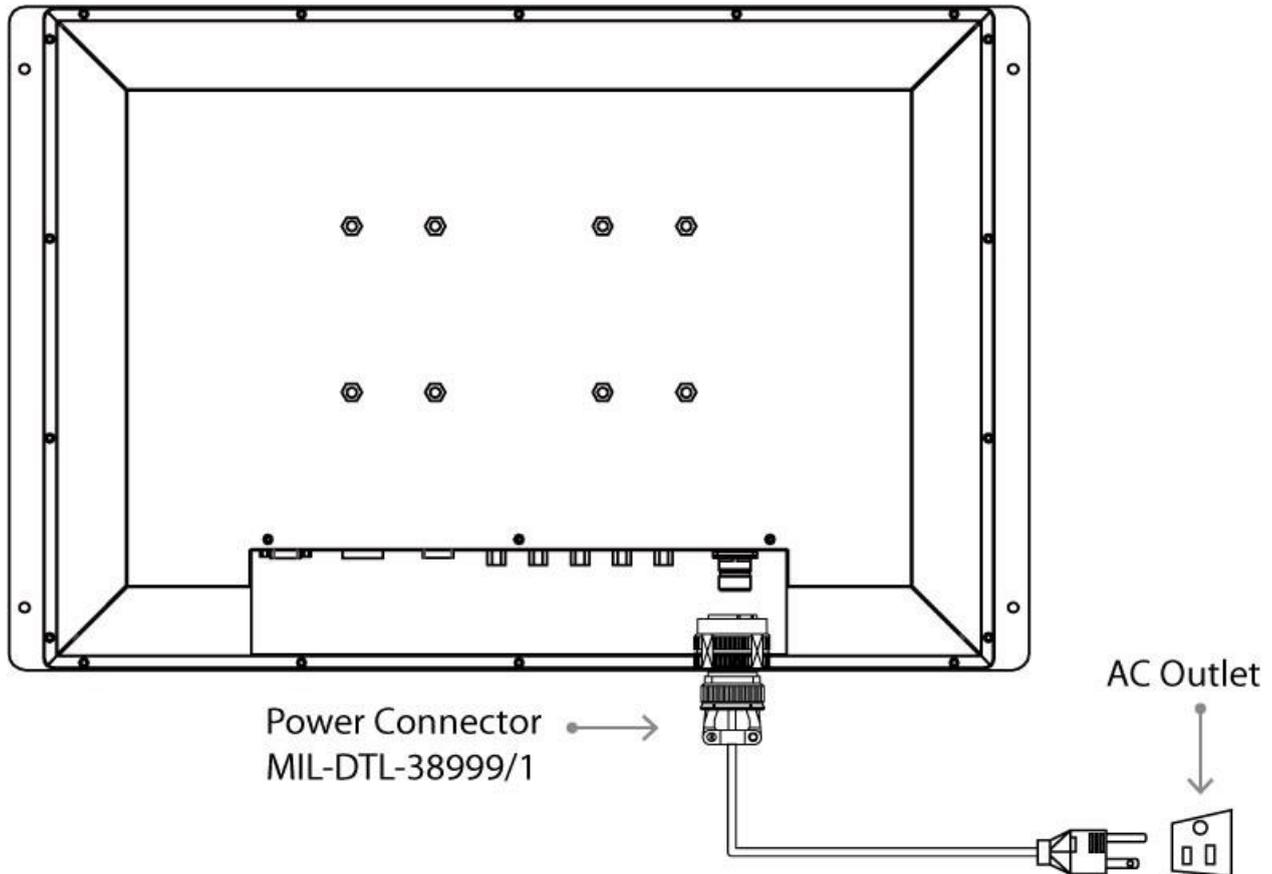
2.1.2 Connecting the Power

2.1.2.1 Connecting to AC Input Power Source (Default)

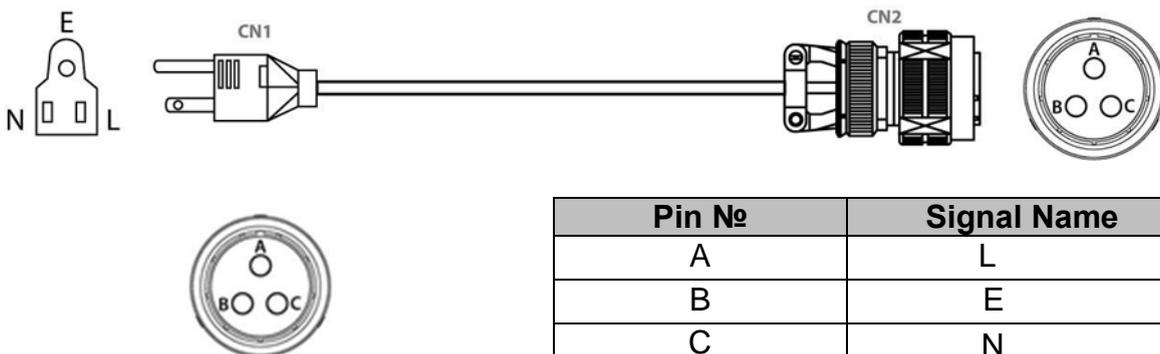
AC Power Input Requirements: AC 100~240V, Universal, $\pm 10\%$

Connect one end of the Military Grade power connector MIL-DTL-38999/1 to the Display (CN2), and plug the other end of the power connector (CN1) in to a working AC outlet.

Note: Power cords vary in appearance by region and country.



Connector Pinouts:



Pin No	Signal Name
A	L
B	E
C	N



Warning! / Avertissement!

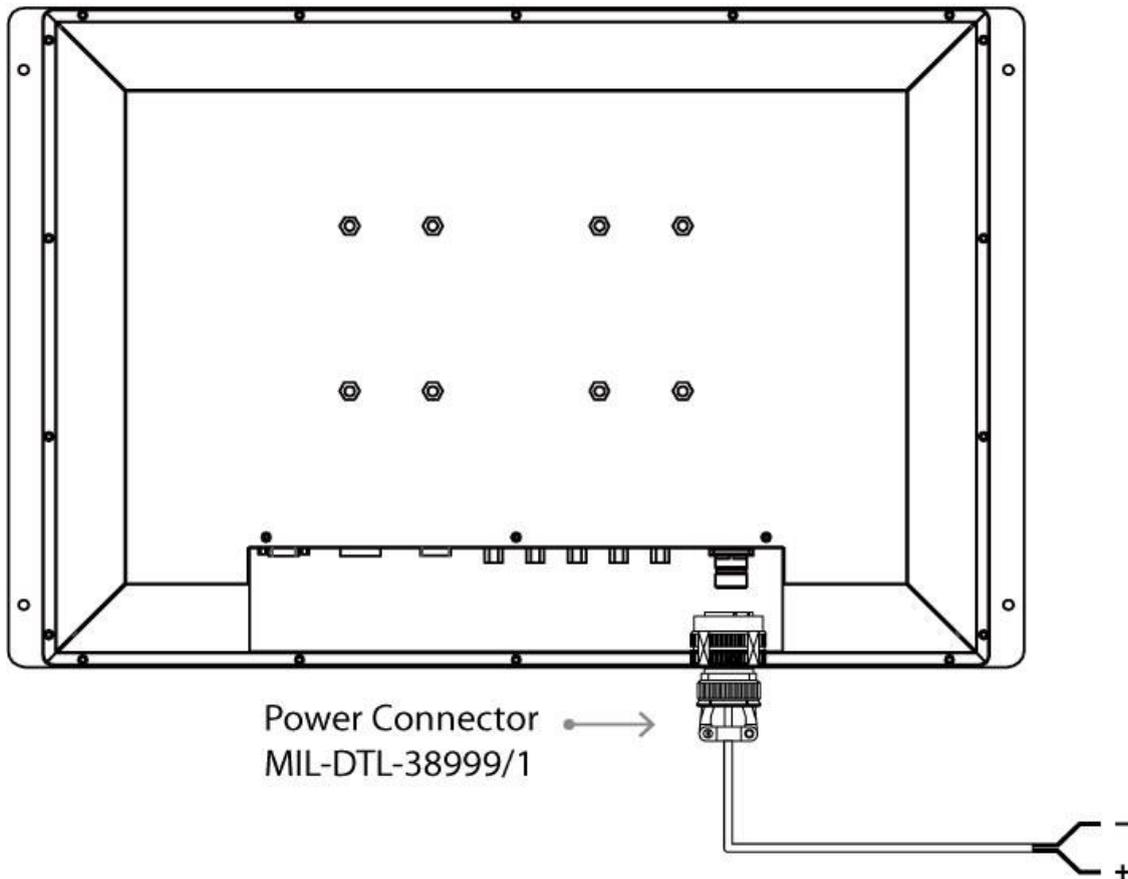
Serious injury due to shock is possible if unit is wired incorrectly or connected to voltage exceeding the input voltage range.

Des blessures graves en raison du choc est possible si l'unité est mal câblé ou connecté à la tension maximale de la plage de tension d'entrée.

2.1.2.1 Connecting to DC Input Power Source (Optional)

DC Power Input Requirements: 9~36V DC IN

1. Insert the exposed wires of the DC Power Cable to the appropriate connectors on the terminal block plug.
2. Plug the terminal block plug firmly to the DC IN Jack.
3. Connect the other end of the DC power cable (wires with lug terminals that are labeled + and - to the terminals of the 9-36V DC Power Source). Ensure that the power connections maintain the proper polarity.



Warning!/ Avertissement!

Make sure that the polarization of the power lines is correct and complete including earth ground.

Assurez-vous que la polarisation des lignes électriques est correcte et complète, y compris la terre.



Pin No	Signal Name
A	+
B	-
C	NC

2.2 Connecting Other Devices

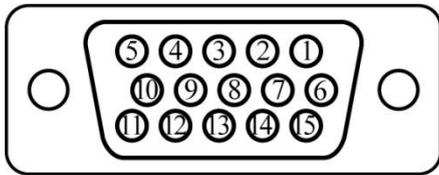
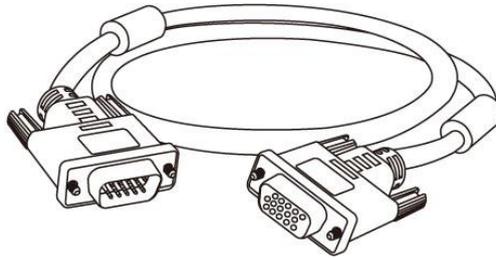


Warning!/ Avertissement!

Make sure the power is off when connecting and disconnecting the connectors.
Assurez-vous que l'alimentation est coupée lors de la connexion et la déconnexion des connecteurs.

2.2.1 VGA Connector

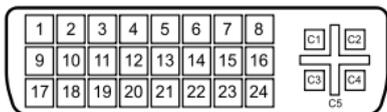
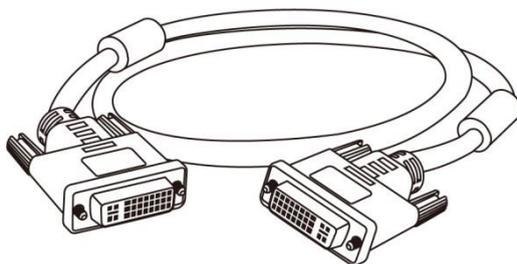
Plug one end of the 15-pin signal cable to the video signal connector at the rear of the PC system and the other end to the Display. Secure the connectors with the screws on the cable connector at both ends.



Pin №	Signal Name	Pin №	Signal Name
1	RED	2	GREEN
3	BLUE	4	ID2/RES
5	GND	6	RED_RTN
7	GREEN_RTN	8	BLUE_RTN
9	KEY/PWR	10	GND
11	ID0/RES	12	ID1/SDA
13	HSync	14	VSync
15	ID3/SCL		

2.2.3 DVI-I Connector

Plug one end of the DVI signal cable to the video signal connector (DVI-I Dual Link) at the rear of the PC system and the other end to the Display.

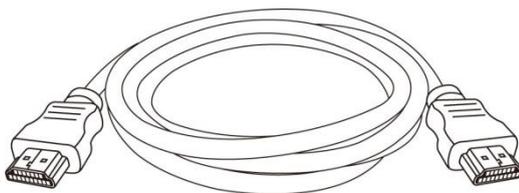


Pin №	Signal Name	Pin №	Signal Name
1	DVI_RX2-	2	DVI_RX2+
3	GND	4	NC
5	NC	6	DVI_SCL
7	DVI_SDA	8	NC
9	DVI_RX1-	10	DVI_RX1+
11	GND	12	NC
13	NC	14	+5V
15	DVI_CON_CABLE	16	DVI_CON_HP
17	DVI_RX0-	18	DVI_RX0+
19	GND	20	NC
21	NC	22	GND
23	DVI_CLKP	24	DVI_CLKN
C1	NC	C2	NC
C3	NC	C4	NC
C5	NC		

2.2.4 HDMI Connector

Notice that only 32" Display has HDMI connector.

Use HDMI A Type19-pin female output connector to connect the HMI device to an external display.



Pin №	Signal Name	Pin №	Signal Name
1	TMDS_DATA2+	2	GND
3	TMDS_DATA2-	4	TMDS_DATA1+
5	GND	6	TMDS_DATA1-
7	TMDS_DATA0+	8	GND
9	TMDS_DATA0-	10	TMDS_CLOCK+
11	GND	12	TMDS_CLOCK-
13	CEC	14	NC
15	DDC_CLOCK	16	DDC_DATA
17	GND	18	5V
19	Hot Plug Detect		

Chapter 3: Mounting

This chapter provides mounting guide for all available mounting options. Pay attention to cautions and warning to avoid any damages.



Caution/ Attention

Follow mounting instructions and use recommended mounting hardware to avoid the risk of injury.

Suivez les instructions de montage et d'utilisation recommandé le matériel de montage pour éviter le risque de blessure.

Safety Precautions

Observe the following common safety precautions before installing any electronic device:

- Use separate, non-intersecting paths to route power and networking wires. If power wiring and device wiring paths must be crossed make sure the wires are perpendicular at the intersection point.
- Keep the wires separated according to the interface. Wires that share similar electrical characteristics must be bundled together.
- Do not bundle input wiring with output wiring. Keep them separate.
- When necessary, it is strongly advised that you label wiring to all devices in the system.

3.1 Cable Mounting Considerations

For a nice look and safe installation, make sure cables are neatly hidden behind the device.



Caution/ Attention

Observe all local installation requirements for connection cable type and protection level.

Suivre tous les règlements locaux d'installations, de câblage et niveaux de protection.



Caution/ Attention

Turn off the device and disconnect other peripherals before installation.

Éteindre l'appareil et débrancher tous les périphériques avant l'installation.



Alternating Current Mise à le terre !

To prevent electrical shock, the Safety Ground location on the rear must be bonded to the local earth ground through a minimum 12 AWG wire as short as possible.

Pour éviter les chocs électriques, l'emplacement de la prise terre à l'arrière doit être lié à terre locale, à travers un 12 AWG minimum et aussi court que possible.

Chapter 4: On-Screen Display Control

This chapter provides information about On-Screen Display (OSD) Control interfaces.

4.1 Navigating the OSD Menu

This section describes how to navigate the OSD Menu.

Quick Selecting Menu

1. 「>」 : Press this key can quickly go to signal input selection menu, (if the monitor has more than one input source), there are “Auto/VGA/DVI” three modes. Press > , < to choose, press Menu to confirm the selection.
3. 「Auto/Exit」 : Press this key can adjust the display to the best position and resolution.

OSD Menu Operation

Press 「MENU」 and the screen will appear the following OSD icons:



4.2 OSD Menu Adjustments

OSD Menu Adjustments:

Press 「>」, 「<」 to increase or decrease the light bar for moving to the right icon you want to adjust.

Press 「MENU/ENTER」 again to confirm in the selected item.

Then, the selected bar will become yellow at bottom under the item.

Press 「>」 or 「<」 to select the item and press 「MENU/ENTER」 again, the value will turn red, press 「>」 or 「<」 to increase or decrease the value.

When it is finished, press 「MENU/ENTER」 to exit; the red value will turn back to yellow. Then you can continue to next adjustment.

Color Luminance Adjustment

Contrast: Adjust the contrast level of brightness and darkness of the screen.

Brightness: Adjust the brightness of the screen.

BLACKLIGHT : The backlight has default set in the most bright.
Normally the function has no effect.

BRIGHTNESS : Adjust the brightness of the screen.

CONTRAST : Adjust the contrast level of brightness and darkness of
the screen.

SHARPNESS: Adjust the sharpness of display



Display

Image H./V. Position

Contrast: Adjust the contrast level of brightness and darkness of the screen.

Brightness: Adjust the brightness of the screen.

AUTO ADJUSTMENT : Auto adjusting the display position and its best phase and clock settings.

H. POSITION : Adjust the size of horizontal image (left and right sides).

V. POSITION : Adjust the size of vertical image (up and down sides).

PIXEL CLOCK : This is normally set by different clocks, factory default has been setup

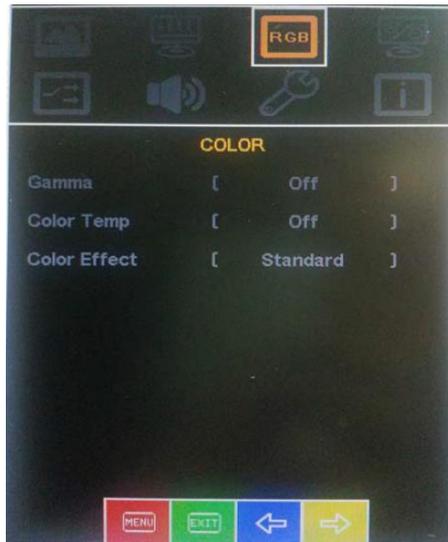
PHASE : Adjust the image distortion appearing as horizontal “noise” on the screen.



COLOR Temp

9300K :	Asian Area.
7500K :	Asian Area.
6500K :	Europe and North American Area.
SRGB :	Europe and North American Area.
USER COLOR :	User's setting.
RED :	Red adjustment. User's setting
GREEN :	Remark 1 Green adjustment.
BLUE :	User's setting Remark1 Blue adjustment. User's setting Remark1

Remark 1.: When moving the light bar to the selected item, press ENTER (MENU/ENTER), the bar and value will become yellow (or red), then press 「>」 or 「<」 to adjust the value.



OSD

OSD POSITION :	Display the location of OSD
OSD TIME OUT :	Menu. Display time duration of OSD Menu. Recall Setting
Reset :	Value Yes/No.
LANGUAGE :	Select Languages Remark2

Remark 2: Language

Selection English

Français : French

Deutsch : German

Español : Spanish

日本語 : Japanese

繁體中文 : Traditional Chinese

簡體中文 : Simplified Chinese

Others

Reset: Recall settings to the factory default setting

Menu Time: OSD Menu showing period during no any instructions given.

OSD H. Position : Present the position of the OSD horizontal position

OSD V. Position : Present the position of the OSD vertical position

Language: English / French / German / Japanese

Transparency: Adjust the OSD transparency shown on the display

Rotate: Default is "Off", for others please request to your distributor or sales representative.



Source Selection

Input Signal Selection:

Two Input are supported: Digital and Analog

If both digital and analog are connected, use the switch to select either Digital or Analog input

Auto Select: Default the OSD should auto detect the signal input

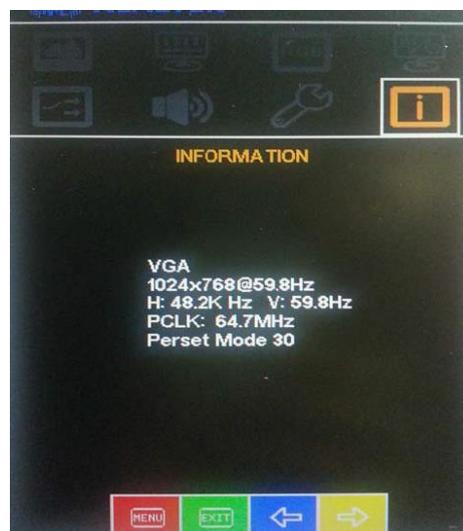
D<SUB : Input analog signal.

DVI : Input digital signal.



Information

Display the video information presenting to the current states.



Chapter 5: Maintenance

This chapter includes regular cleaning and maintenance procedures. Follow all the recommendations in this chapter in order to ensure long product lifecycle.

This equipment is extremely rugged and does not require a lot of maintenance. Remember that electrical equipment should be handled with care and used accordingly to its specifications.

5.1 Cleaning the Display Screen

- Wipe the screen with a clean, soft, lint-free cloth. This removes dust and other particles. Do not use acetone, ethyl alcohol, toluene, ethyl acid or methyl chloride to clear the panel. It may permanently damage the display screen.
- You can apply a small amount of non-ammonia; non-alcohol based glass cleaner onto a clean, soft, lint-free cloth and wipe the screen.
- Never spray or pour any liquid directly on the screen or case.
- **Do Not** use water or oil directly on the display screen. If droplets are allowed to drop on the screen, permanent staining or discoloration may occur.

5.2 Cleaning the Casing

Use the following procedure to clean the equipment.



Caution/ Attention

Always turn off the device and disconnect other peripherals before cleaning and maintenance procedures.

Toujours éteindre l'appareil et débrancher tous les périphériques avant que les procédures de nettoyage et d'entretien.

Before Cleaning:

- Make sure the device is turned off.
- Disconnect the power cable from any AC outlet.

When Cleaning:

- Wipe dust off the outside casing with a cloth slightly moistened with water or mild ammonia-based cleaning solution. Do not use this cloth on a display screen!
- Do not use an abrasive cleaner or high pressure washer on the screen.
- Do not rub the unit with a dry cloth. This action can result in a static charge being built up and cause a spark. Always use damp cloth while cleaning the unit.



Warning!/ Avertissement!

POTENTIAL ELECTROSTATIC CHARGE HAZARD – SEE INSTRUCTIONS
POTENTIEL ÉLECTROSTATIQUE CHARGE DANGER - VOIR
INSTRUCTIONS

Chapter 6: Technical Support

This chapter includes troubleshooting guide and problem report form. Free technical support is available from our engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products. If any problem occurs fill in problem report form enclosed and immediately contact us.

6.1 Troubleshooting

If your monitor fails to operate correctly, consult the following chart for possible solution before calling for repairs:

Condition	Check Point
The picture does not appear	<ul style="list-style-type: none">• Check if the signal cable is firmly seated in the socket.• Check if the Power is ON at the computer• Check if the brightness control is at the appropriate position, not at the minimum.
The screen is not synchronized	<ul style="list-style-type: none">• Check if the signal cable is firmly seated in the socket.• Check if the output level matches the input level of your computer.• Make sure the signal timings of the computer system are within the specification of the monitor.• If your computer was working with a CRT monitor, you should check the current signal timing and turn off your computer before you connect the VGA Cable to this monitor.
The position of the screen is not in the center	<ul style="list-style-type: none">• Adjust the H-position, and V-position, or Perform the Auto adjustment.
The screen is too bright (too dark).	<ul style="list-style-type: none">• Check if the brightness or contrast control is at the appropriate position, not at the Maximum (Minimum).
The screen is shaking or waving	<ul style="list-style-type: none">• Press ◀ (the Auto - adjustment control) to adjust.• Moving all objects which emit a magnetic field such as motor or transformer, away from the monitor. Check if the specific voltage is applied.• Check if the signal timing of the computer system is within the specification of monitor.

Note: if you are unable to correct the fault by using this chart, stop using your monitor and contact your distributor or dealer for further assistance.