

User Manual 10.4" LCD



iAP-1000

Aluminum front bezel

iNAP-1000

Front NEMA4 / IP65



iOP-1000

Universal Mounting Open Frame



REACH

Legal Information

First English printing, October 2002

Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. We are not liable for any injury or loss that results from the use of this equipment.

Safety Instructions

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

- Unplug equipment before cleaning. Don't use liquid or spray detergent; use a moist cloth.
- Keep equipment away from excessive humidity and heat. Preferably, keep it in an air-conditioned environment with temperatures not exceeding 40° Celsius (104° Fahrenheit).
- When installing, place the equipment on a sturdy, level surface to prevent it from accidentally falling and causing damage to other equipment or injury to persons nearby.
- When the equipment is in an open position, do not cover, block or in any way obstruct the gap between it and the power supply. Proper air convection is necessary to keep it from overheating.
- Arrange the equipment's power cord in such a way that others won't trip or fall over it.
- If you are using a power cord that didn't ship with the equipment, ensure that it is rated for the voltage and current labeled on the equipment's electrical ratings label. The voltage rating on the cord should be higher than the one listed on the equipment's ratings label.
- Observe all precautions and warnings attached to the equipment.
- If you don't intend on using the equipment for a long time, disconnect it from the power outlet to prevent being damaged by transient over-voltage.
- Keep all liquids away from the equipment to minimize the risk of accidental spillage. Liquid spilled on to the power supply or on other hardware may cause damage, fire or electrical shock.
- Only qualified service personnel should open the chassis. Opening it yourself could damage the equipment and invalidate its warranty.
- If any part of the equipment becomes damaged or stops functioning, have it checked by qualified service personnel.

What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
 - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
 - Repair or attempted repair by anyone not authorized by us.
 - Any damage of the product due to shipment.
 - Removal or installation of the product.
 - Causes external to the product, such as electric power fluctuation or failure.
 - Use of supplies or parts not meeting our specifications.
 - Normal wear and tear.
 - Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

Regulatory Notices Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-position or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Contents

< Part. 1 > **iAP-1000 / iNAP-1000**

- | | | |
|-----|----------------------------------|---------|
| 1.1 | Package Content | P.1 |
| 1.2 | Structure Diagram & Dimension | P.2 - 3 |
| 1.3 | Mounting Hardware & Installation | P.4 - 5 |

< Part. 2 > **iOP-1000**

- | | | |
|-----|----------------------------------|---------|
| 2.1 | Package Content | P.6 |
| 2.2 | Structure Diagram & Dimension | P.7 - 8 |
| 2.3 | Mounting Hardware & Installation | P.9 |

< Part. 3 > **Specifications / OSD**

- | | | |
|-----|-------------------------------------|-----------|
| 3.1 | Product Specifications | P.10 - 11 |
| 3.2 | On-screen Display Operation (OSD) | P.12 |

< Part. 4 > **Options**

- | | | |
|-----|---|-----------|
| 4.1 | Option Table | P.13 |
| 4.2 | AV1.2 Upgrade : S-Video + BNC & Audio | P.14 |
| 4.3 | Projected Capacitive (2-point touch) Resistive / Capacitive (single point touch) | P.15 - 16 |
| 4.4 | 48V, 24V or 12VDC power | P.16 |
| 4.5 | TV (Analog) | P.17 - 18 |

Before Installation

- It is very important to mount the equipment in a suitable cabinet or on a stable surface.
- Make sure the place has a good ventilation, is out of direct sunlight, away from sources of excessive dust, dirt, heat, water, moisture and vibration.

Unpacking

The equipment comes with the standard parts shown in package content. Check and make sure they are included and in good condition. If anything is missing, or damaged, contact the supplier immediately.

How To Clean Your LCD Monitor



Caution :

- To avoid the risk of electric shock, make sure your hands are dry before unplugging your monitor from or plugging your monitor into an electrical outlet.
- When you clean your monitor, do not press down on the LCD screen. Pressing down on the screen can scratch or damage your display. Pressure damage is not covered under warranty.
- Use only cleansers made specifically for cleaning monitors and monitor screens. Cleansers not made to clean monitors and monitor screens can scratch the LCD display or strip off the finish.
- Do not spray any kind of liquid directly onto the screen or case of your monitor. Spraying liquids directly onto the screen or case can cause damage which is not covered under warranty.
- Do not use paper towels or abrasive pads to clean your monitor. Using an abrasive pad or any wood based paper product such as paper towels can scratch your LCD screen.

Cleaning Your Monitor

To clean your LCD safely, please follow these steps :

- ① Disconnect the power cord.
- ② Gently wipe the surface using a clean, dry microfiber cloth. Use as little pressure as possible.

Cleaning Tough Marks and Smudges

To remove tough marks and smudges, please follow these steps :

- ① Disconnect the power cord.
- ② Spray a small amount of non-abrasive cleanser on a microfiber cloth.



Caution : Do not spray or apply any liquids directly onto the monitor. Always apply the solution to your microfiber cloth first, not directly on the parts you are cleaning.

- ③ Gently wipe the surface. Use as little pressure as possible.
- ④ Wait until your monitor is completely dry before plugging it in and powering it up.

< Part 1 >

< 1.1 > Package Content - iAP-1000 / iNAP-1000

10.4" LCD Display

iAP-1000 / iNAP-1000



- 10.4" LCD display X 1**
- 6ft VGA cable X 1**
- Power adapter X 1**
- Power cord X 1**

Mounting hardware X 1 pack

- Mounting bracket x 2 pcs
- M4* 6mm screw x 4 pcs
- M4* 50mm screw x 4 pcs

Basic I/O

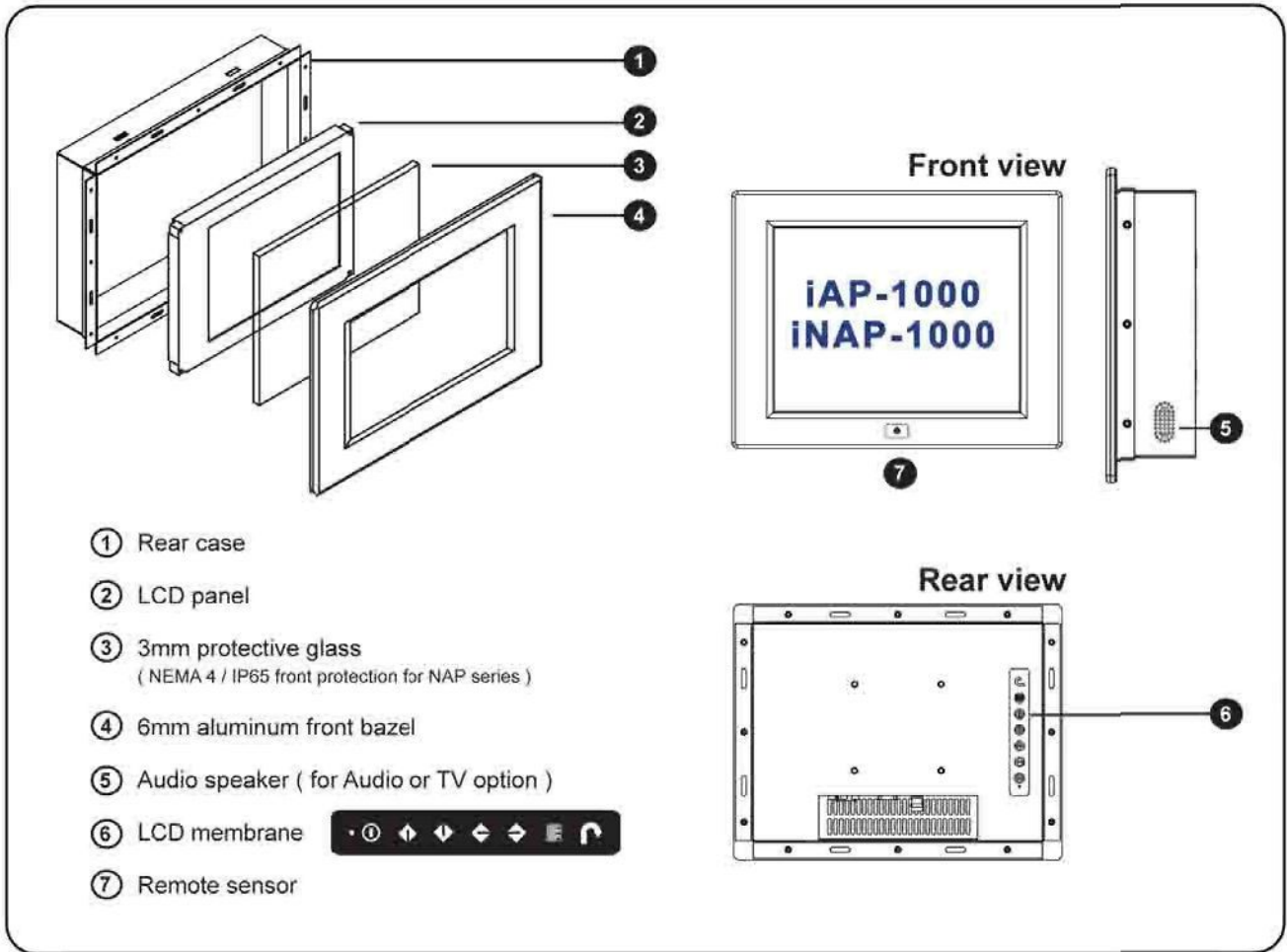


AV1.2 upgrade I/O



- Options : S-Video + BNC, Audio

< 1.2 > Structure Diagram - iAP-1000 / iNAP-1000

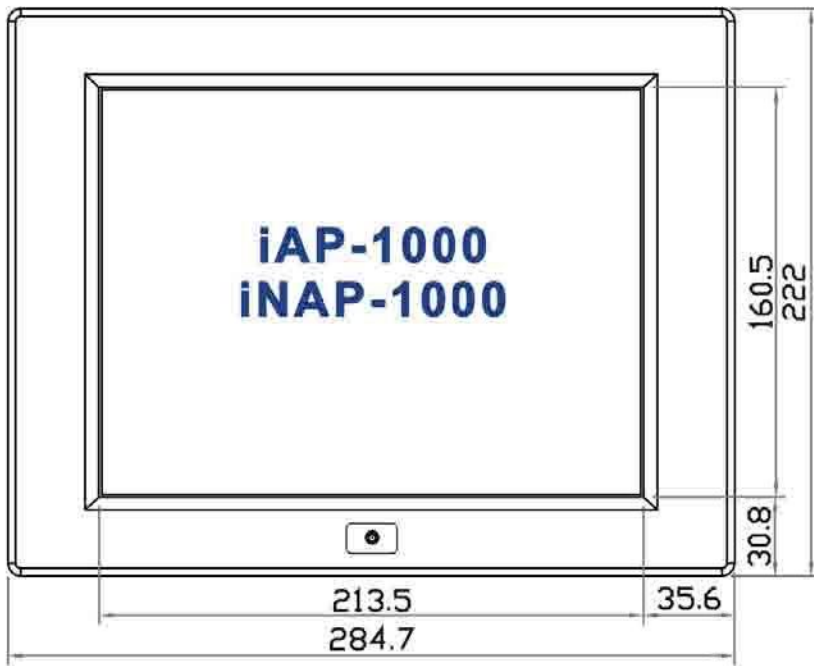


| Model | Product Dimension (W x D x H) | Packing Dimension (W x D x H) | Net Weight | Gross Weight |
|-------------------------------------|--|--|-------------------|--------------------|
| iAP-1000 iNAP-1000 | 284.7 x 62.8 x 222 mm 11.2 x 2.5 x 8.7 inch | 515 x 117 x 429 mm 20.3 x 4.6 x 16.9 inch | 2.6 kg 5.7 lbs | 4.6 kg 10.1 lbs |

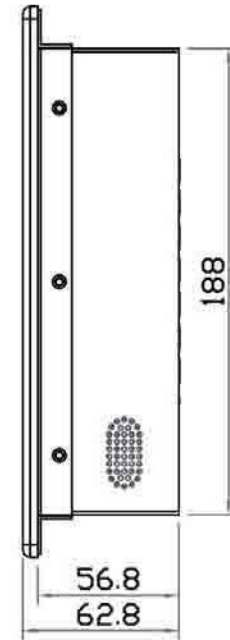
< 1.2 > Dimension - iAP-1000 / iNAP-1000

10.4" LCD Display

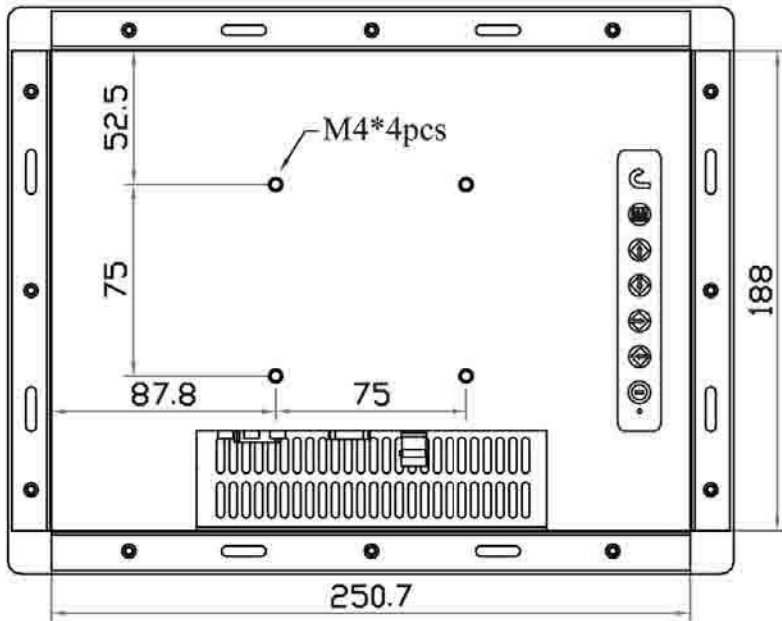
Front View



Side View

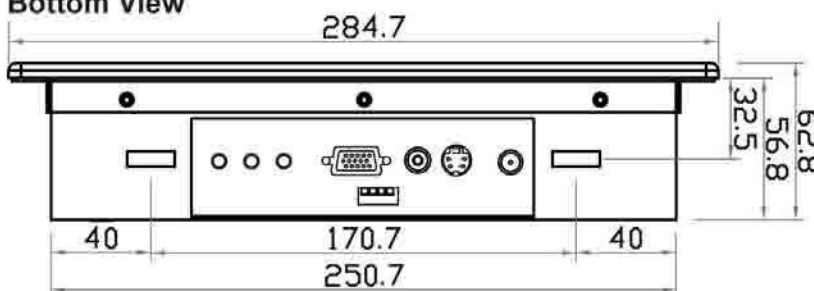


Rear View



UNIT : mm
1mm = 0.03937 inch

Bottom View



< 1.3 > Panel Mount Installation - iAP-1000 / iNAP-1000

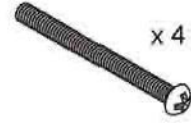
- 1 Mounting bracket
x 2 pcs



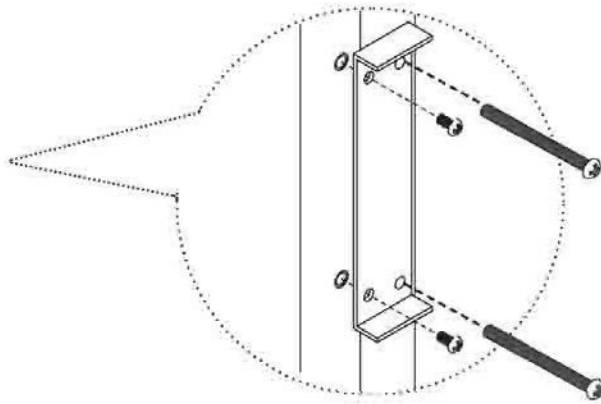
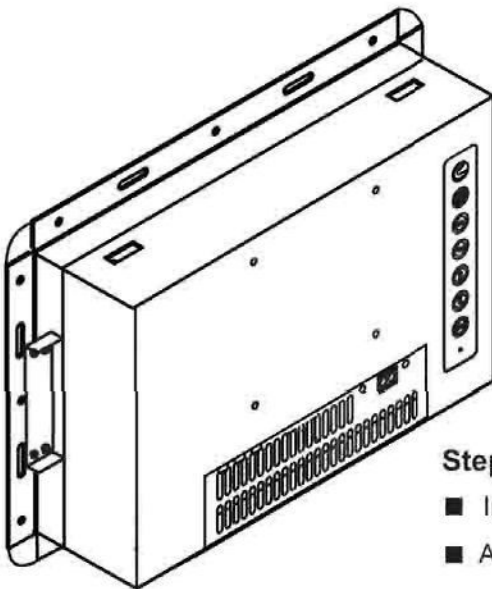
- 2 M4*6mm screw
x 4 pcs



- 3 M4*50mm screw
x 4 pcs

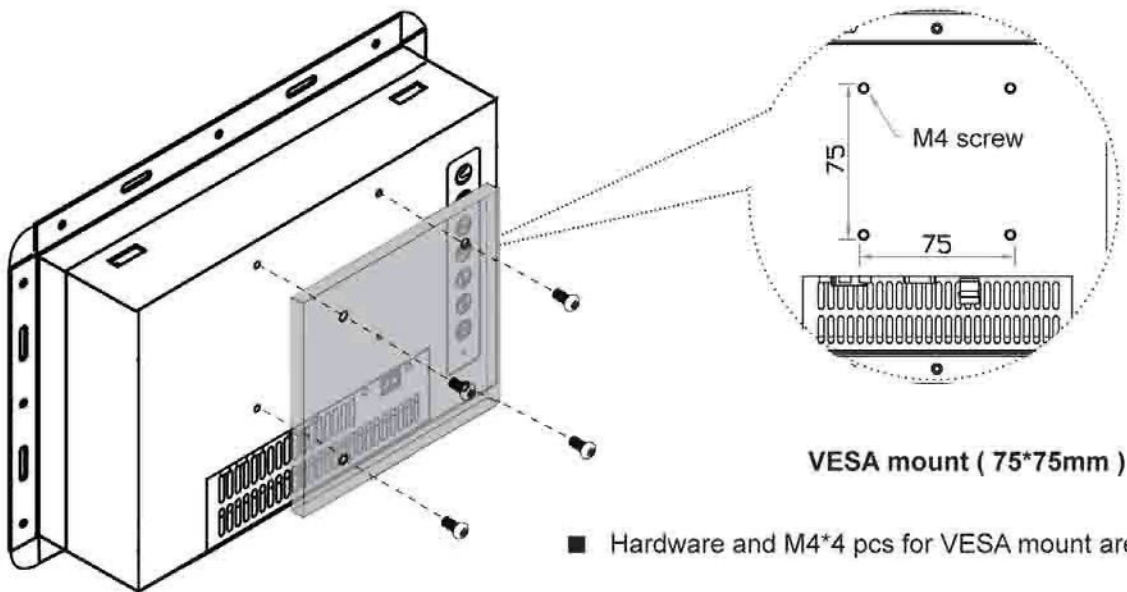


Hardware set part no. UV-BK#1



Steps

- Install 2 mounting brackets with 4 x M4*6mm screws
- Adjust the LCD panel with 4 x M4*50mm screws and fix it on the surface.



< Part 2 >

< 2.1 > Package Content - iOP-1000

iOP-1000



- 10.4" LCD display X 1
- 6ft VGA cable X 1
- Power adapter X 1
- Power cord X 1

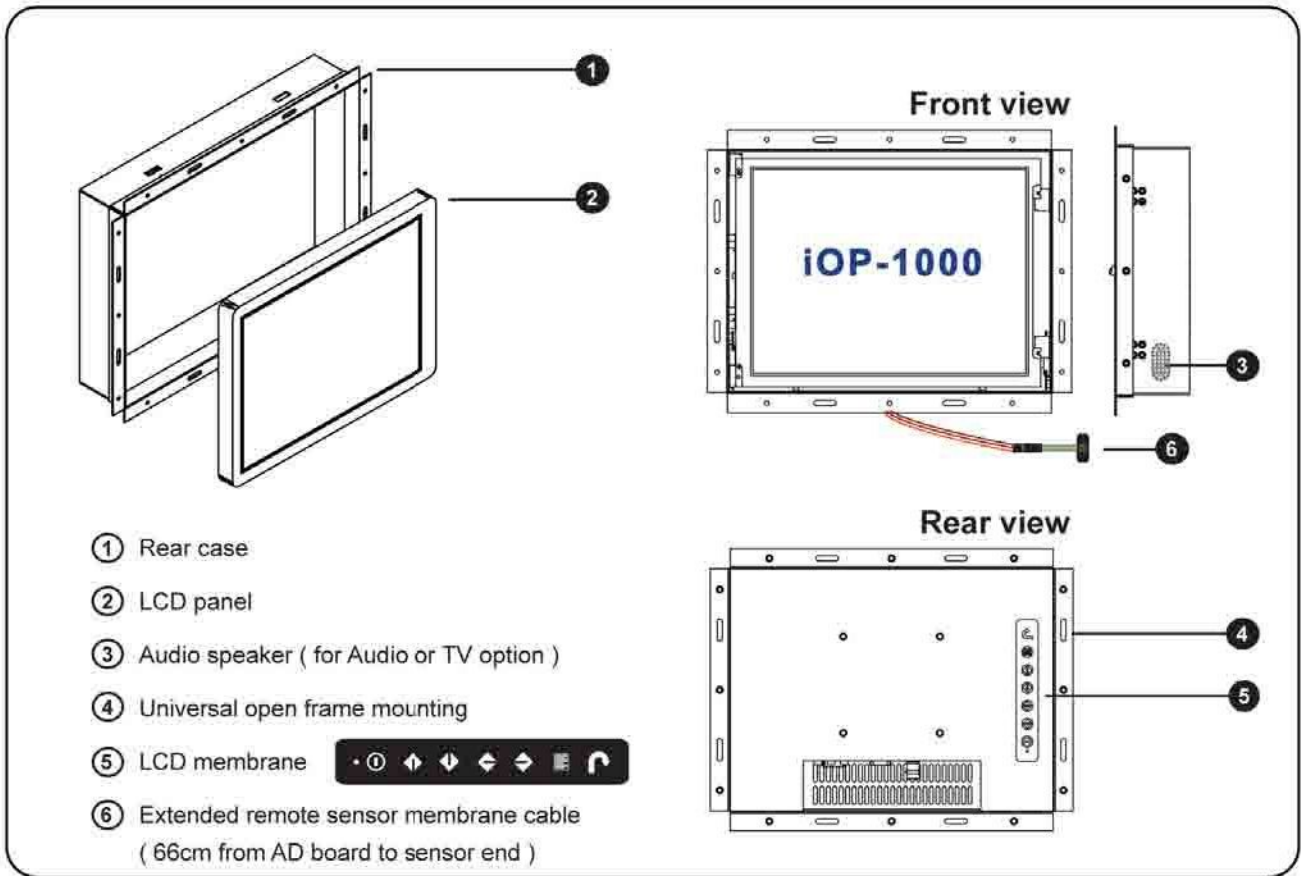
Basic I/O



AV1.2 upgrade I/O

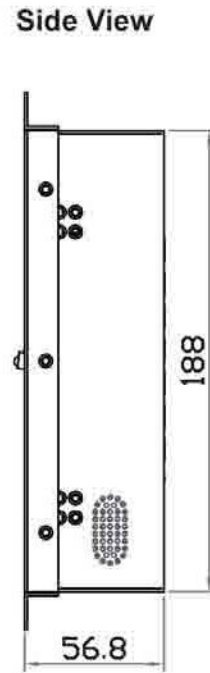
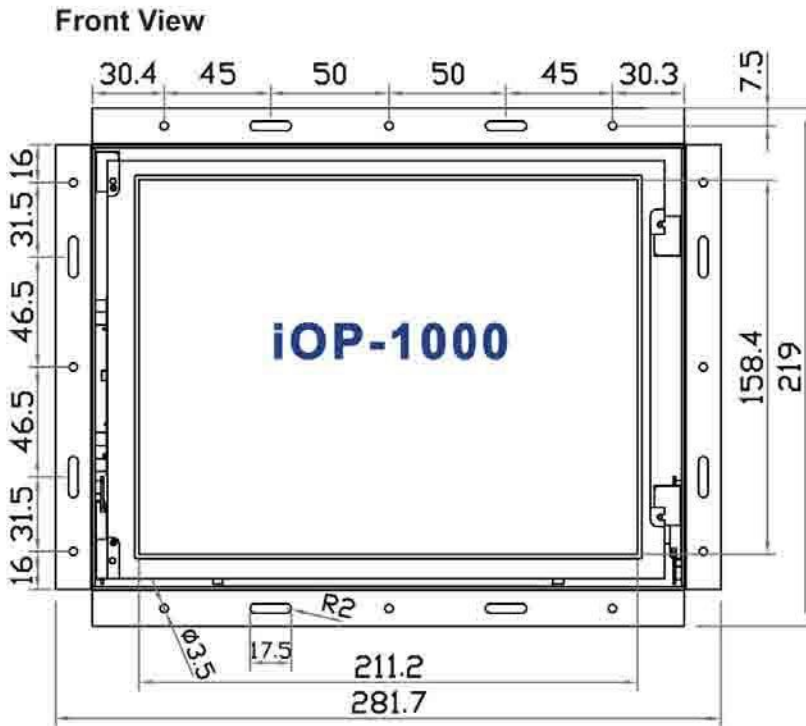


- Options : S-Video + BNC, Audio

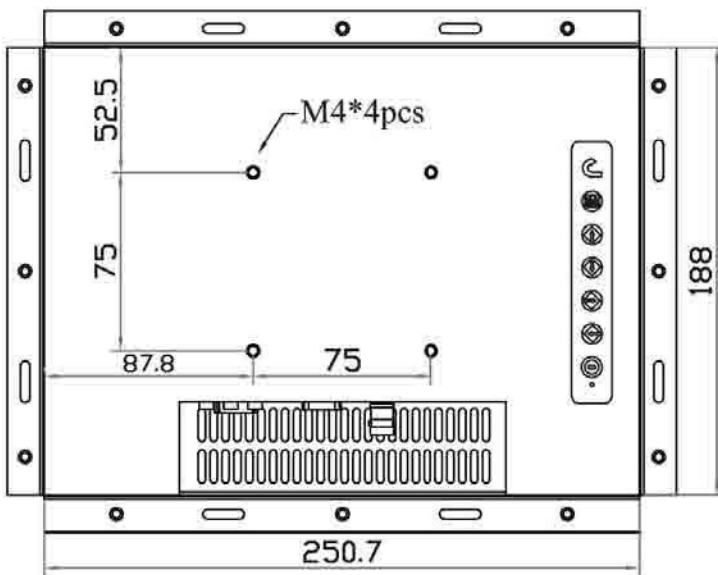


| Model | Product Dimension (W x D x H) | Packing Dimension (W x D x H) | Net Weight | Gross Weight |
|-----------------|--|--|-----------------|-------------------|
| iOP-1000 | 281.7 x 56.8 x 219 mm 11.1 x 2.2 x 8.6 inch | 515 x 117 x 429 mm 13.5 x 2.5 x 10 inch | 1.8 kg 4 lbs | 3.7 kg 8.1 lbs |

< 2.2 > Dimension - iOP-1000

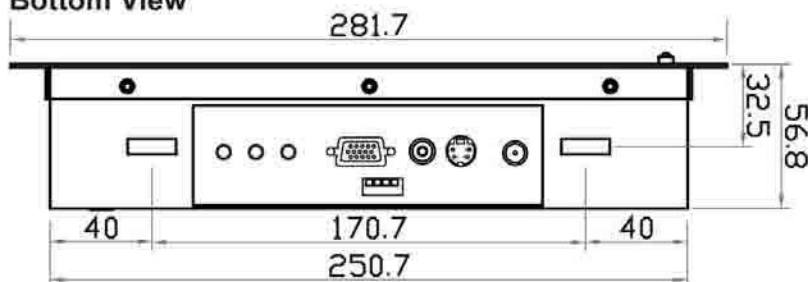


Rear View

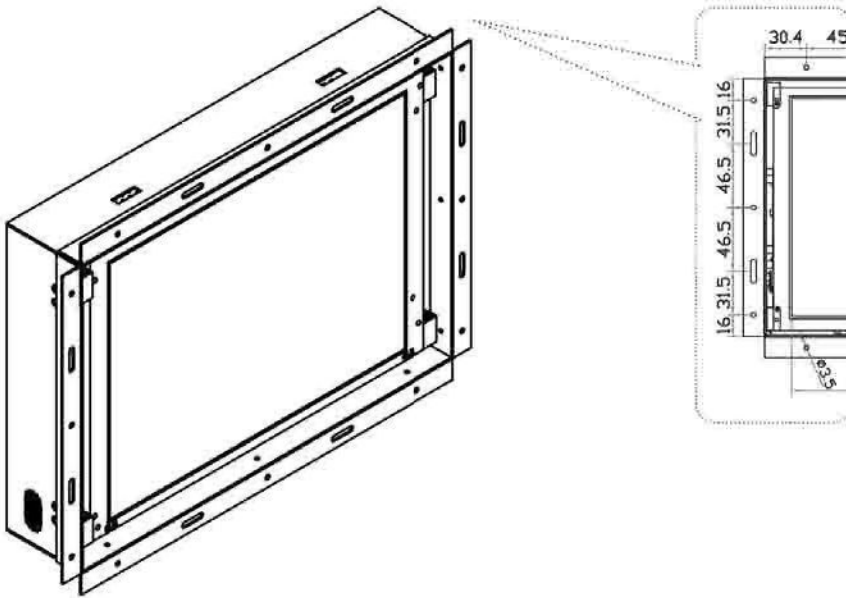


UNIT : mm
1mm = 0.03937 inch

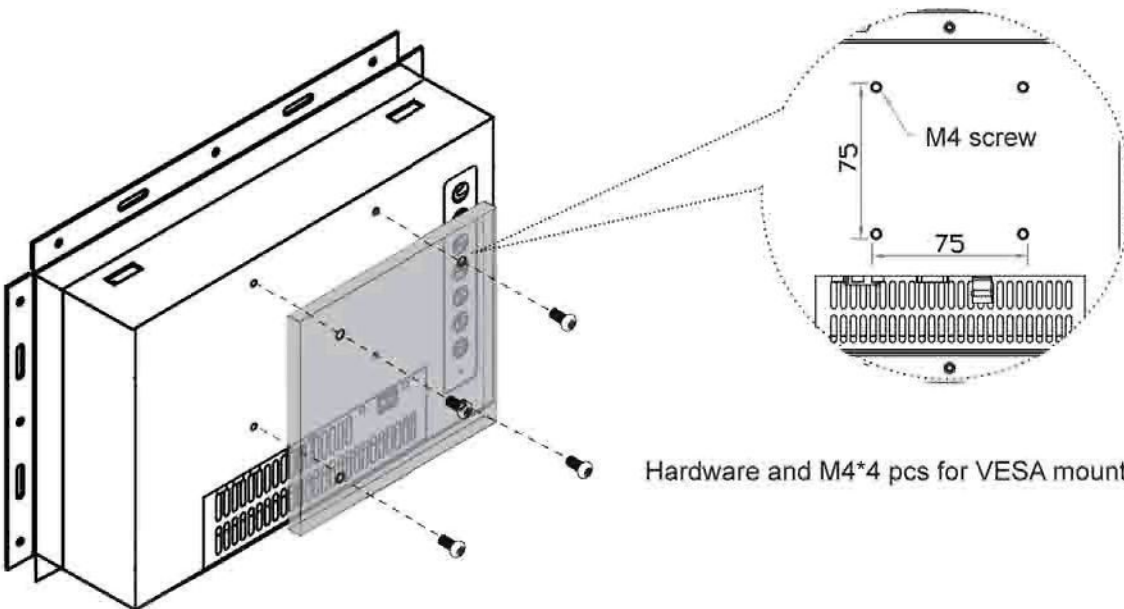
Bottom View



(I) Universal mount




(II) VESA mount (75*75mm)



< Part 3 >

< 3.1 > Product Specifications

| Mechanical Design | | iAP / iNAP-1000 | iOP-1000 |
|-------------------|----------------------|-----------------|-----------------|
| | Front Panel | Black, RAL 9005 | - |
| | Rear Casing | Black, RAL 9005 | Black, RAL 9005 |
| | VESA Mounting | 75 x 75mm | 75 x 75mm |
| | Other Mounting | Panel mount | Universal mount |
| Protection | 3mm protective glass | - | |

| LCD Panel | Manufacturer |  |
|--------------|--------------------------------|---|
| | Panel Size (diagonal) | 10.4-inch TFT color LCD |
| | Display pixel (dots x lines) | 800 x 600 |
| | Brightness (typ.) | 230 |
| | Contrast Ratio (typ.) | 500:1 |
| | Color | 262 K |
| | Viewing Angle (L/R/U/D) | 80/80/60/70 |
| | Response Time (ms) | 35 |
| | Dot pitch (mm) | 0.213 |
| | Display Area (mm) | 211.20H x 158.40V |
| | Surface treatment | Anti-glare |
| | Surface hardness | 3H |
| | Backlight Type | LED |
| MTBF (hrs) | 30,000 | |

| Video Connectivity | Analog | VGA | Analog 0.7Vp-p |
|--------------------|--------|-----|----------------|
|--------------------|--------|-----|----------------|

| Power | Power Supply | Range | Auto-sensing 100 to 240VAC, 50/60Hz |
|-------|-------------------|-------------------|-------------------------------------|
| | Power Consumption | Screen display ON | 14W or less |
| | | Power saving mode | 4W or less |
| | | Power button OFF | 1W or less |

| Regulatory | Safety | FCC & CE certified |
|------------|---------------|-------------------------|
| | Environmental | RoHS2 & REACH compliant |

| Environmental Conditions | Operating | Temperature | 0 to 50°C degree |
|--------------------------|-----------|-------------|----------------------------------|
| | | Humidity | 20~90%, non-condensing |
| | Storage | Temperature | -5 to 60°C degree |
| | | Humidity | 5~90%, non-condensing |
| | | Shock | 10G acceleration (11ms duration) |
| | | Vibration | 5~500Hz 1G RMS random |

10.4" LCD Display

| Physical Specification | | iAP / iNAP-1000 | iOP-1000 |
|------------------------|-----------------------|--|--|
| | Product (W x D x H) | 284.7 x 62.8 x 222 mm 11.2 x 2.5 x 8.7 inch | 281.7 x 56.8 x 219 mm 11.1 x 2.2 x 8.6 inch |
| | Packing (W x D x H) | 515 x 117 x 429 mm 20.3 x 4.6 x 16.9 inch | 515 x 117 x 429 mm 20.3 x 4.6 x 16.9 inch |
| | Net Weight | 2.6 kgs / 5.7 lbs | 1.8 kgs / 4 lbs |
| | Gross Weight | 4.6 kgs / 10.1 lbs | 3.7 kgs / 8.1 lbs |

| Applicable Format | VGA Input | PC Signal | 800 x 600 x 60 / 72 / 75Hz |
|-------------------|-----------|-----------|----------------------------|
| | | | 720 x 400 x 70Hz |
| | | | 640 x 480 x 60 / 72 / 75Hz |
| | | | 640 x 400 x 70Hz |
| | | | 640 x 350 x 70Hz |

< 3.2 > On-screen Display Operation (OSD)

- Power light
- Green = On
- Orange = Power saving



| Membrane Switch | Function |
|-----------------|--|
| | Power on / off LCD |
| | Display the OSD menu |
| | Scrolls through menu options and adjusts the displayed control (To auto adjustment by pressing the button for 5 seconds) |
| | Exit the OSD screen Toggle analog, digital & video connection (DVI-D and video options only) |

Ver: G56SN20SSTD701 1024 x 768 59.8Hz

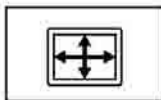
| | |
|--|--|
| | Image |
| | Brightness 50 |
| | Contrast 50 |
| | Color Temp User |
| | Red 255 |
| | Green 255 |
| | Blue 255 |
| | |
| | |
| | |
| | |

Adjust: ←→ Select: ↑↓ Set: ●/■ Exit: ↵

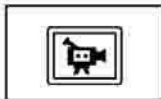
OSD Configuration Page



Image:
for the brightness, contrast, color temp, red, green, and blue



Geometry:
for the auto adjust, H position, V position, phase and clock



Video:
for the colour, tint, sharpness, noise reduction, DCDi and TV Setup



Audio:
for volume, bass, treble, balance, AVL and mute



Misc:
for the language, OSD position, graphic mode, ratio, reset and timer

< 4.1 > Option Table

| Options | IAP / INAP | IOP |
|-----------------------------|------------|-----|
| S-Video + Composite (BNC) | ✓ | ✓ |
| Audio | ✓ | ✓ |
| Touchscreen | ✓ | ✓ |
| DC Power | ✓ | ✓ |
| TV * | ✓ | ✓ |



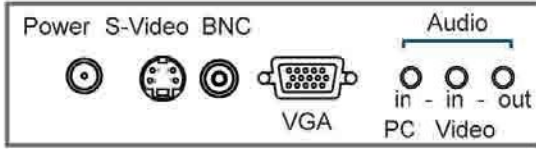
*** Remote Controller**

- (1) AV1.2 upgrade comes with RC-1 remote controller.
- (2) TV option comes with RC-2 remote controller.

< 4.2 > AV1.2 Upgrade Options :

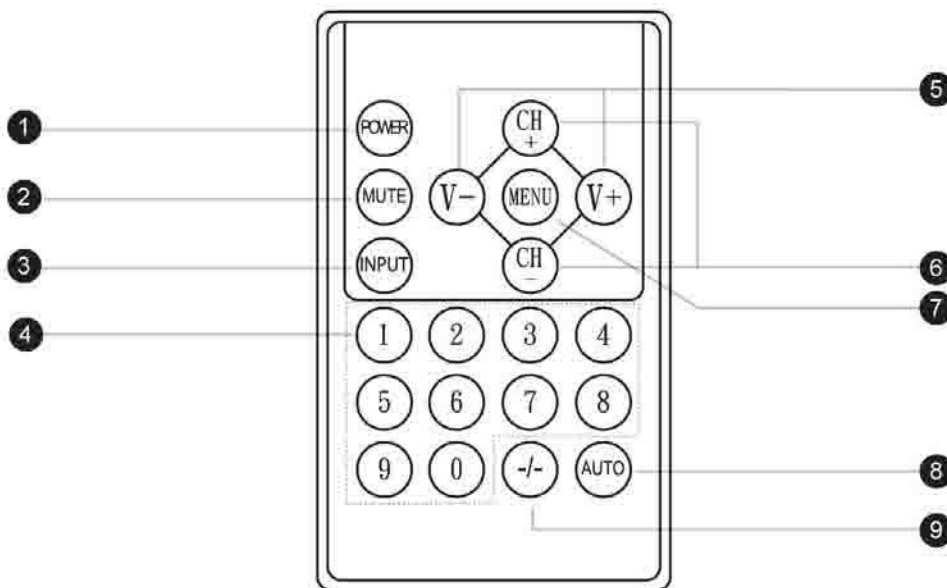
- **AV** (S-Video + Composite, BNC)

- **Audio** (3.5mm audio jacks for audio in & out, and 2W + 2W speakers)



AV1.2 upgrade option comes with RC-1 remote controller x 1.

How to Use RC-1 Remote Controller



| | | |
|---|---------------|---|
| ① | POWER | Switches on or off the TV |
| ② | MUTE | Turn on or off the speaker |
| ③ | INPUT | Switch to signal input mode |
| ④ | 0-9 | Select channels. For channel numbers 10 and above, enter the second digit within two seconds. |
| ⑤ | V +/- | Increase or decrease the speaker volume |
| ⑥ | CH +/- | Increase or decrease the channel number |
| ⑦ | MENU | Display the menu on the screen or go to the previous menu |
| ⑧ | AUTO | For auto searching |
| ⑨ | - / - | For setting one or two input digit |

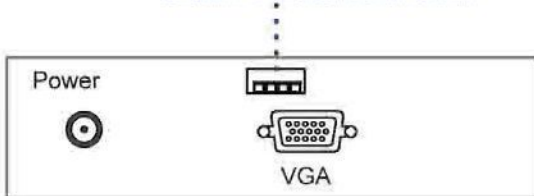


10.4" USB Touchscreen Specification

| Model | TPC-10 Multi-touch | TRB e-Resistive | TCB e-Capacitive |
|----------------------|-----------------------------|-------------------------------|---------------------|
| Technology | Projected Capacitive | 5-Wire Resistive | Capacitive |
| Touch Point | 2 | Single | Single |
| Input Type | Finger or Capacitive Stylus | Finger or Stylus | Finger |
| Resolution | 2048 x 2048 | 2048 x 2048 | 2048 x 2048 |
| Touch Point Accuracy | ± 5 mm offset | - | - |
| Response Speed | Max. 20 ms | 15 ms | 20 ms |
| Activation Force | ≤ 10 g | ≤ 50 g | ≤ 50 g |
| Surface Hardness | 7H | 3H | 9H |
| Light Transmission | ≥ 88% | 80% ± 3% | 92% ± 2% |
| Haze | ≤ 2% | 8% ± 3% | 7% |
| Durability | > 100 million touches | 10 million touches | 300 million touches |
| Top Layer | 1.1 mm Tempered Glass | ITO Film | Glass |
| Bottom Layer | Film | ITO Glass | |
| Thickness | 1.3 mm | 2.2 ± 0.2 mm | 1.8 mm ± 10% |
| Connector | USB Type A | USB Type A | USB Type A |
| Compatibility | Windows 7 | Windows 7 / XP / Vista, Linux | |

- Dimension will be changed if Multi-touch required
- USB touchscreen package includes 1 x 6ft USB cable, quick reference guideline and CD disc
- For detailed information, please refer to the attached CD disc
- As the touchscreen unit is not made of toughened glass, please handle it carefully

USB Touchscreen



< 4.3 > Options : Touchscreen & driver



TPC-10 Driver



Connect the USB cable from the USB port on the LCD to a computer. The touch screen supports easy Plug-and-Play operations. There is no need to install additional drivers on the computer.

TRB / TCB Driver

Please follow the below steps to setup the touch screen:-

Step 1. Run the bundled CD disc or download the driver

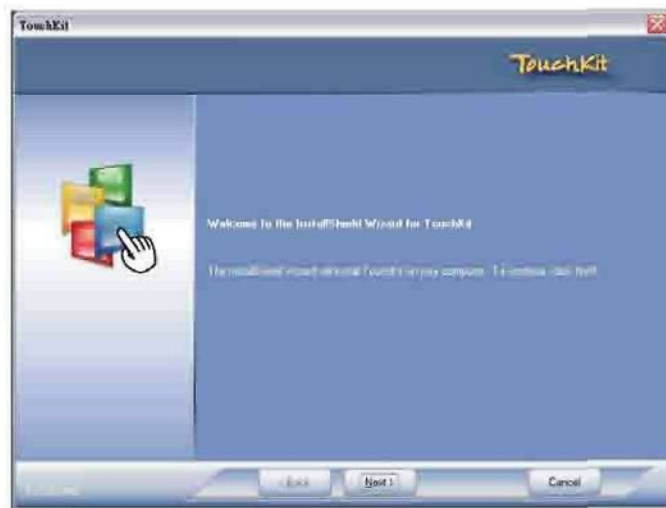
Step 2. Double click the Setup.exe

Step 3. Follow the installation instruction to finish the setup

Step 4. After installation, run the TouchKit program & the "4 point calibration"



Please do the initial calibration after the first setup



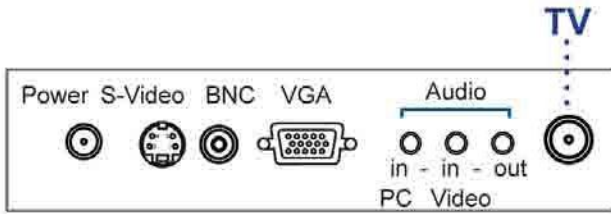
< 4.4 > Options : DC Power



| Model | 12V | 24V | 48V |
|----------------------|---------|----------|----------|
| Input rating | | | |
| Input voltage: | 12-Volt | 24-Volt | 48-Volt |
| Input range: | 9 ~ 18V | 18 ~ 36V | 36 ~ 75V |
| Input current | | | |
| - No load | 50 mA | 50 mA | 50 mA |
| - Full load | 4950 mA | 2450 mA | 1220 mA |
| Output rating | | | |
| Output voltage: | 12-Volt | 12-Volt | 12-Volt |
| Output current: | 4.16A | 4.16A | 4.16A |
| Efficiency | 84% | 85% | 85% |

< 4.5 > Options : TV (Analog)

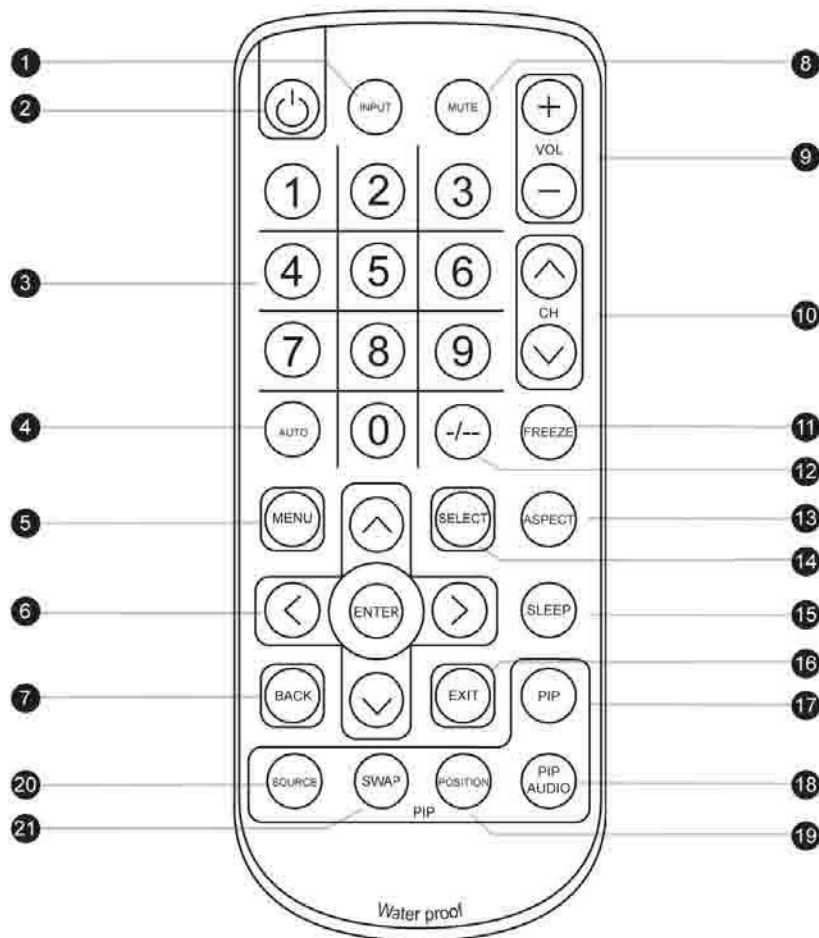
10.4" LCD Display



*** For TV option :

- (1) 1 x RC-2 remote controller included.
- (2) Casing dimensions will be changed.

How to Use RC-2 Remote Controller



| | | |
|----------------------|------------------------------|--|
| ① | INPUT | Select the source |
| ② | | Switches on or off the TV |
| ③ | 0 - 9 | Only use in TV mode. Select channels. For channel numbers 10 and above, enter the second digit within two seconds. |
| ④ | AUTO | Auto adjust |
| ⑤ | MENU | Display the menu on the screen or go to the previous menu |
| ⑥ | ▲ / ▼ / ◀ / ▶ / ENTER | Go to the upper menu or select the previous value / Go to the next menu or select the next value / Decrease the setting value / Increase the setting value or enter to the select item setting Enter to the select item settings or excude the setting |
| ⑦ | BACK | Back to previous value |
| ⑧ | MUTE | Turn on or off the speaker |
| ⑨ | Vol + / - | Increase or decrease the speaker volume |
| ⑩ | CH + / - | For TV model only, increase or decrease the channel number |
| ⑪ | FREEZE | Reserve for OEM model |
| ⑫ | - / -- | For setting input single or double digits |
| ⑬ | ASPECT | Adjust the screen size |
| ⑭ | SELECT | To select the existing item |
| ⑮ | SLEEP | Select the sleeping time |
| ⑯ | EXIT | Exit the menu or cancel |
| PIP functions | | |
| ⑰ | PIP | Picture in picture |
| ⑱ | PIP AUDIO | To set the audio of in PIP mode |
| ⑲ | POSITION | To set the screen position in PIP mode |
| ⑳ | SOURCE | PIP Source |
| ㉑ | SWAP | Swap screen in PIP mode |



iTech Company LLC
TOLL FREE: (888) 483-2418 • EMAIL: info@iTechLCD.com • WEB: www.iTechLCD.com