Display User's Manual

RCC-MS-GMD27G-01R

27" Color LCD Display

Model No.: RTAP2712AMC (Medical)

Revision History

The revision letter changes with related comments each time the document is updated.

Revision	Revision Comment	Release date
V0	Initial	2026/02/10

Contents

1. Information

Safety Precautions

CAUTION

Symbol Description

Caution!-This symbol alerts you to important operating considerations or a potential operating condition that could damage equipment. Refer to user's manual or operation's manual for precautionary instructions.

Consignes de sécurité

ATTENTION

Description des symboles

Attention ! - Ce symbole vous avertit sur les considérations d'utilisation importantes ou d'une condition de fonctionnement potentiellement dangereuse pour l'équipement. Reportez-vous au manuel de l'utilisateur ou au manuel d'utilisation pour les consignes de sécurité.

External Equipment

External equipment intended for connection to signal input / output or other connectors, shall Comply with EN 60601-1 for medical electrical equipment. In addition, all such combination system shall comply with the standard IEC 60601-1-1, Safety requirements for medical electrical systems. Equipment not complying with EN/IEC 60601-1 shall be kept outside the patient environment, as defined on the systems standard.

Intended Use

The equipment is intended to be used as a component of a medical patient monitoring system.

The monitor can be integrated as part of a primary device (System) MEE/MES to fulfill the intended medical purpose of the primary device (system), such as medical system for monitoring or for treatment purpose.

● The Monitor cannot be used for a life-support system.

● The Monitor must not be used in digital mammography.

● The Monitor shall not be used for direct diagnostic purpose.

● This display is not intended to be used for direct diagnosis and therapeutic interventional radiology.

$C\epsilon$

CE Declaration of Conformity

We declare under our own responsibility that the product satisfies all the technical relations application to the product within the scope of council:

Medical Devices Regulation (2017/745/EU)

with applicable standards listed below.

EN60601-1

EN60601-1-2

FCC Information

FCC (U. S. Federal Communications Commission)

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. 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 unacceptable 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:

• Reorient 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.

• Consult your dealer or an experienced radio/TV technician for help.

FCC Warning:

To assure continued FCC compliance, the user must use a grounded power supply cord and the provided shielded video interface with bonded ferrite cores. Also, any unauthorized changes or modifications to this monitor would void the user's authority to operate this device.

General recommendations

- Make sure to carefully read the Operating Manual prior to using the monitor in order to properly use the monitor.
- Note that, excluding those cases where a responsibility for legal compensation is recognized, the manufacturer shall bear absolutely no responsibility for damage to this product by a customer or a third party that results from the ignoring of contents entered in this Operating Manual and mistaken use.
- Follow the instructions below for safety use of the LCD Monitor.
- To avoid electric shock, do not attempt to remove any cover or touch the inside of the monitor. Only a qualified service technician should open the monitor case.
- Do not insert metal objects or spill liquid into the LCD monitor through cabinet slots. They may cause accident fire, electric shock or failure. If a foreign object inserted or water penetrated, unplug the AC cable and have the monitor serviced.
- Do not cover or block the vent holes in the case.
- Disconnect the power plug from the AC outlet if you will not use it for an indefinite period of time.
- Do not apply pressure to the screen. The LCD is very delicate.
- If your LCD monitor uses an AC/DC Adapter: Only use the Adapter, which accompanied with this device. Use of another AC/DC Adapter may cause a malfunction or danger.
- If your LCD monitor does not operate normally-in particular, if there are any unusual sounds or smells coming from it-unplug the AC cable immediately and contact the manufacturer, authorized or service center.
- Warning – Do not modify this equipment without authorization of the manufacturer.

Recommandations générales

- Lisez les consignes de sécurité et de fonctionnement avant d'utiliser l'appareil.
- Notez que, sauf dans les cas où la responsabilité de la compensation légale est reconnue, le fabricant n'endossera absolument aucune responsabilité pour les dommages occasionnés à ce produit par un client ou un tiers, résultant de l'ignorance du contenu de ce manuel d'utilisation et d'une erreur d'utilisation.
- Suivez les instructions ci-dessous pour utiliser l'écran LCD en toute sécurité.
- Pour éviter un choc électrique, ne tentez pas de retirer un couvercle ou de toucher l'intérieur du moniteur. Seul un technicien qualifié peut ouvrir le boîtier du moniteur.
- N'insérez pas d'objets métalliques ou ne renversez pas de liquide dans le moniteur LCD par les fentes du boîtier. Cela pourrait provoquer un incendie, un choc électrique ou une panne. Si un corps étranger est inséré ou si de l'eau a pénétré, débranchez le câble secteur et faites réparer le moniteur.
- Ne couvrez ni n'obstruez les trous de ventilation du boîtier.
- Débranchez le cordon d'alimentation de la prise secteur si vous ne l'utilisez pas pendant une période indéfinie.
- N'appliquez pas de pression sur l'écran. L'écran LCD est très délicat.
- Si votre moniteur LCD ne fonctionne pas normalement en particulier, s'il produit des bruits inhabituels ou des odeurs, débranchez le câble secteur immédiatement et contacter le fabricant, ou un centre de réparation agréé.
- Ne touchez pas d'autre patient et cet appareil médical en même temps.
- Avertissement - Ne modifiez pas cet équipement sans l'autorisation du fabricant.

General warnings

- All devices and complete setup must be tested and validated before taking into operation.
- The installer needs to foresee a backup system in case the video falls away.
- This equipment shall not be serviced or maintained while in use with the patient.
- WARNING: To avoid the risk of electric shock, this equipment must only be connected to a supply main with protective earth.
- The plug is used as disconnect to the mains supply, do not to position the ME EQUIPMENT so that it is difficult to operate the disconnection device.
- When replacing parts or check refer servicing to qualified service personnel.

Avertissements généraux

- Tous les appareils et l'installation complète doivent être testés et validés avant la mise en service.
- L'installateur doit prévoir un système de sauvegarde en cas de chute de la vidéo.
- Cet équipement ne doit pas être réparé ou entretenu pendant son utilisation avec le patient.
- ATTENTION: Pour éviter le risque de choc électrique, cet équipement doit être raccordé à un réseau électrique protégé par une mise à la terre.
- La fiche est utilisée pour la déconnexion du réseau électrique, ne placez pas l'ÉQUIPEMENT ME de telle sorte qu'il soit difficile d'utiliser le dispositif de déconnexion.
- Faites appel à un personnel qualifié pour le remplacement de pièces ou la vérification de l'appareil.

Installation

- Place the equipment on a flat, solid and stable surface. Do not used on the floor. If you use an unstable cart or stand, the equipment may fall, causing serious injury to a child or adult, and serious damage to the equipment.

- Do not allow to climb, rest, sitting or stepping on the equipment.

- When adjusting the angle of the equipment, move it slowly so as to prevent the equipment from moving or slipping off from its stand or arm.

- When the equipment is attached to an arm, do not use the equipment as a handle or grip in order to move the equipment. Please refer to the instruction manual of the arm for instructions on how to move the arm with the equipment.

- Provide full attention to safety during installation, periodic maintenance and examination of this equipment.

- Sufficient expertise is required for installing this equipment, especially to determine the strength of the wall for withstanding the display's weight.

- Do not cover or block any ventilation openings in the cover of the set. When installing the device in a cupboard or another closed location, heed the necessary space between the set and the sides of the cupboard.

- Power on after rear cover installed while remove the rear cover after power off.

- The display panel, standard attached to a stand, is compatible with the VESA 100 mm standard.

1). Put the display face down on a clean and soft surface. Be careful not to damage the panel screen.

2). Unscrew the four fixation screws to detach the panel from the stand.

3). Use 4 M4*10 screws to attach the panel to a VESA approved arm.

Users to be considered

A) Installation personnel – only by manufacturer trained and authorized technician

B) Maintenance/repair personnel – only by manufacturer trained and authorize technician

C) Operating personnel – not in consideration for the graphical images at this stage

As there are none to consider, however user interfaces such as OSD and control buttons shall be considered.

Installation and OSD adjusting should only be carried by manufacturer trained and authorized personnel.

Technical data

The monitor is intended for indoor use

Operating Temperature:	0~40°C
Operating Humidity:	10%~90% RH (non-condensing)
Operating Pressure:	70 kPa-106 kPa
Storage/Transport Temperature:	-20 ~ +60°C
Storage/Transport Humidity:	10% ~ 90% RH (non-condensing)
Storage/Transport Pressure:	50 kPa-106 kPa
Rating:	DC24V - 2.5A

Operating Principle

The scaler is configured with a high-speed integrated triple-ADC(VGA), an integrated DVI/HDMI/DP receiver, a high quality display processing engine, an integrated micro-controller and output LVDS panel interface format.

The user can select the signal ports by front key of monitor then the scaler processing these signals as zoom in or out action to fit the panel resolution. Then through the cable line transmission LVDS signals to one of the LCD module.

The last by the clock controller (Timing Controller, TCON), the clock signal is transmitted to the drive IC on the panel and turn on Backlight for LCD module light source by Scaler control.
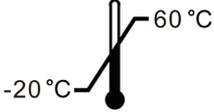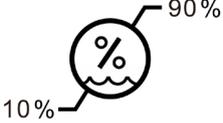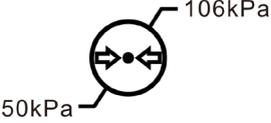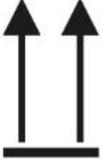
2. Equipment Symbols

Electrical and Electronic Equipment Symbols

In addition to the equipment symbols described in your user's manual, the following symbols may be appearing on the monitor.

$\sim$	Alternating current. (AC)
⎓	Direct Current (DC)
	Equipotentiality. Connect device to a potential equalization conductor.
CE	European Union Declaration of Conformity.
FC	FCC. USA only. Complies with applicable US government (Federal Communications Commission) radio-frequency interference regulations.
UK CA	UK Declaration of Conformity.
⚠	Caution: Consult accompanying documents.
⚡	Dangerous voltage. To reduce the risk of electric shock, do not remove cover. Refer servicing to qualified service personnel.

▲	Indicates front.
📖i	Consult the operating instructions
⏻	Standby or power indicator.
♻	This symbol indicates that the waste of electrical and electronic equipment must not be disposed as unsorted municipal waste and must be collected separately. Please contact an authorized representative of the manufacturer for information concerning the decommissioning of your equipment.
🏭	Indicates the manufacturing date.
🏭	Indicates the legal manufacturer.
☂	Indicates a device that needs to be protected from moisture when being stored.
🍷	Indicates a device that can be broken or damaged if not handled carefully when being stored.

60 °C / -20 °C	Indicates the temperature limits to which the device can be safely exposed when being stored.
90% / 10%	Indicates the range of humidity to which the device can be safely exposed when being stored.
106kPa / 50kPa	Indicates the range of atmospheric pressure to which the device can be safely exposed when being stored.
↑↑	Indicates the storage direction of the box.
n	Indicates the maximum number of identical boxes which may be stacked on each other, where "n" is the limiting number.
	Refer to instruction manual/ booklet.

3. Cleaning Instructions

Instructions

- Be sure to unplug the power cord from the mains when cleaning your LCD monitor.
- Take care not to scratch the front surface with any hard or abrasive material.
- Dust, finger marks, grease etc. can be removed with a soft damp cloth (a small amount of mild detergent can be used on the damp cloth).
- Wipe off water drop immediately.
- Using a spray applicator, apply 95% concentration of ethyl alcohol or 70% concentration of isopropyl alcohol and use a soft lint free cloth to clean the screen.
- Wipe the unit with a clean cloth that has been moistened in the pure water.
- Do not use thinner, benzene, wax or abrasive cleaner.
- Do not use organic solvent such as acetone and toluene.
- Do not use bleaching solvents (such as H_2O_2 or chlorides).

Possible cleaning solutions

- Ethyl Alcohol 95%
- Isopropyl Alcohol 70%

4. Disposal of the Unit

- Do not dispose of this product with general wastes.
- Follow your local regulations or rules upon dispose of this product.

5. Package Contents

Your monitor ships with the components shown below. Ensure that you have received all the components and contact agent if something is missing.

- LCD monitor *1
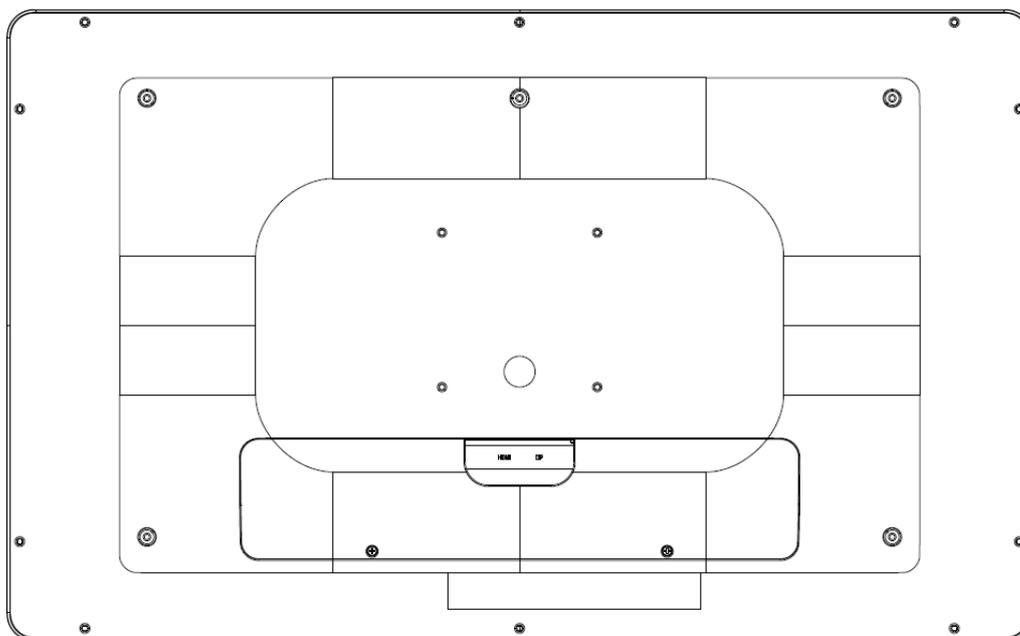- Adapter/24V *1
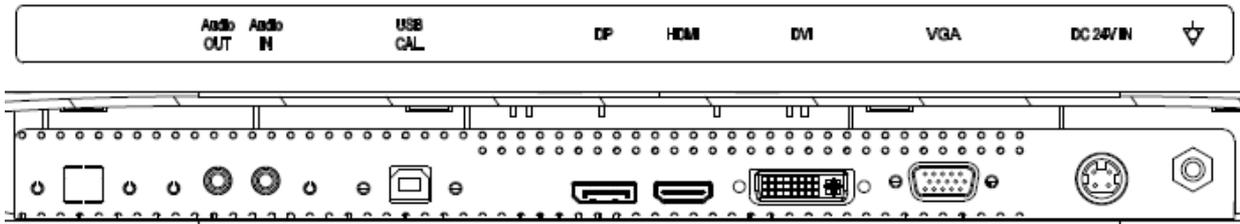- HDMI Cable *1
- Manual *1

6. Outline

Front view
Overview

Touch keypad is located on the front of the display.

Rear view
Overview

Connector view

DC 24V IN	Din 4Pin connector, DC input 24V
VGA	DSUB 15 pin connector, Use VGA cable to connect the VGA connector of the monitor and the VGA output connector from source device. (or DVI-I connector from source device via adapter DVI to VGA)
DVI	DVI 29 pin single link DVI support. Use DVI cable to connect the DVI connector of the monitor and the DVI output connector from source device.
HDMI	HDMI19 pin connector, Use HDMI cable to connect the HDMI connector of the monitor and the HDMI output connector from source device.
DP	DP20 pin connector, Use DP cable to connect the DP connector of the monitor and the DP output connector from source device.
USB CAL.	USB B type connector, link to PC, for calibration.
Audio In	3.5 mm phone jack, connect one end of the audio cable to the monitor's Audio-in port, the other end to the computer's audio-out jack.
Audio Out	3.5 mm phone jack, connect speaker or earphone, connect the end with plug type to the monitor's audio out jack.

Connection Method

To connect the video inputs

Connect one or more of the available video source(s) to the corresponding video inputs using the appropriate video cable(s).

To connect the power supply

Connect the DC cord into the DC IN terminal on the monitor

Connect the power cord to the AC IN terminal on the AC adapter.

Plug the other end of the power cord into a grounded power outlet.

Connector pin assignments

Main board Input signal connectors

VGA signal input	
Pin No.	Signal Assignment
1	RED SIGNAL
2	GREEN SIGNAL
3	BLUE SIGNAL
4	GND
5	DET
6	GND
7	GND
8	GND
9	DSUB_5V
10	GND
11	GND
12	DDC DATA
13	H.SYNC
14	V.SYNC
15	DDC CLOCK
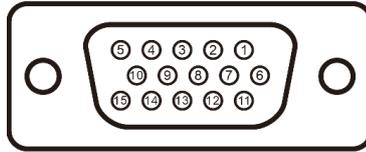
DVI signal input	
Pin No.	Signal Assignment
1	T.M.D.S. Data2-
2	T.M.D.S. Data2+
3	T.M.D.S. Data2/4 Shield
4	NC
5	NC
6	DDC Clock
7	DDC Data
8	NC
9	T.M.D.S. Data1-
10	T.M.D.S. Data1+
11	T.M.D.S. Data1/3 Shield
12	NC
13	NC
14	+5V Power
15	Ground
16	Hot Plug Detect
17	T.M.D.S. Data0-
18	T.M.D.S. Data0+
19	T.M.D.S. Data0/5 Shield
20	NC
21	NC
22	T.M.D.S. Clock Shield
23	T.M.D.S. Clock +
24	T.M.D.S. Clock -
C1	NC
C2	NC
C3	NC
C4	NC
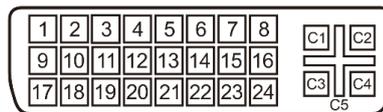
C5	GROUND

HDMI signal input

Pin No.	Signal Assignment
1	Data2+
2	Data2 Shield
3	Data2-
4	Data1+
5	Data1 Shield
6	Data1-
7	Data0+
8	Data0 Shield
9	Data0-
10	CK+
11	CK Shield
12	CK-
13	CE_REMOTE
14	NC
15	DDC_CLK
16	DDC_DATA
17	GND
18	+5V
19	HPD
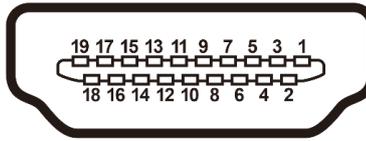
DP signal input

Pin No.	Signal Assignment
1	Lane 3 (negative)
2	Ground
3	Lane 3 (positive)
4	Lane 2 (negative)
5	Ground
6	Lane 2 (positive)
7	Lane 1 (negative)
8	Ground
9	Lane 1 (positive)
10	Lane 0 (negative)
11	Ground
12	Lane 0 (positive)
13	GND
14	GND
15	Aux Channel (positive)
16	Ground
17	Aux Channel (negative)
18	Hot Plug Detect
19	DP Power Return
20	+3.3V Power
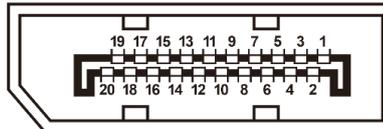
USB connector

USB B-type 4 Pin	
PIN NO.	Signal
1	5V
2	D-
3	D+
4	GND
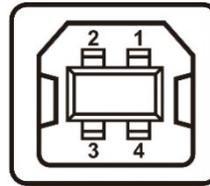
DC 24V Power connectors

24V input	
Pin No.	Signal Assignment
1	GND
2	GND
3	+24V
4	+24V
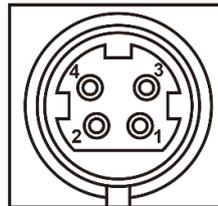
7. Operation

Touch Keypad

The Touch Keypad with 4-keys and automatic LED backlight is not illuminated and not visible in normal operation. Only by touching one of these keypads, the backlight is switched on for 10 seconds and the keypads are activated.

When the keypads turned on, press the preferred keypad to execute the function.

An OSD will appear. The keypad backlight will turn off, when the OSD disappears.

POWER Key with indicator LED
Press this button to turn on the monitor.
When the monitor is on, press this button until "HOLD UNTIL POWER OFF" will appear on the screen. Press for more than 3 seconds and the monitor turns off.

When the monitor is off, the green LED goes off and the blue LED of the Power key will light. You can press the power key to turn on the Monitor. (DC on)

UP (+) Key
Press "+" to increase the brightness 0 → 100
When the OSD menu appears, press the key to move the cursor up or to increase the value in a setting.

DOWN (-) Key
Press "-" to decrease the brightness 100 → 0
When the OSD menu appears, press the key to move the cursor down or to decrease the value in a setting.
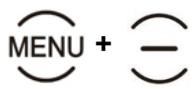
MENU
Press this button to open and close the OSD menu.
When the menu appears, press the button to confirm settings in a menu or to enter a sub-menu.

Combination Key:

MENU + —   KEY LOCK
Press the two buttons over 3 seconds and the monitor will go into the key lock mode. Press the two buttons again for 3 seconds and the monitor will release the keys again.

LED indication

Green: Monitor on
Orange: Power saving or no signal
No light: Monitor off

OSD menu

Brightness/Cont.
   Brightness
   Contrast
   Back
Color
  Normal
        Gamma
          1.8
          2.0
          2.2
          2.4
          Off
        Temperature
          Cool
          Neutral
          Warm
          User
             Red
             Green
             Blue
             Back
        Back
  DICOM
    AL 0.0 Nit
    AL 0.5 Nit
    AL 1.0 Nit
    AL 1.5 Nit
    AL 2.0 Nit
    AL 2.5 Nit
    AL 3.0 Nit
  Calibration
  Back
Display
  Auto adjust
  H.Position
  V.Position
  Clock
  Phase
  Back
Input
  Auto Select
  VGA
  DP
  HDMI
  DVI
ALS
  OFF
  ON

OSD
    H.Position
    V.Position
    Timeout
    Language
        English
        Deutsch
        Français
        Italiano
        Spanish
        日本語
        简体中文
    Transparency
    Back
System
    Volume
    Reset
    Back
Exit

OSD Selection

Photos Describe the OSD Adjustment Functions

The following photos introduce each menu of the OSD tree in detail and give a short explanation of the functions.

● Brightness/Cont. Settings

Adjust values of brightness and contrast for image display.
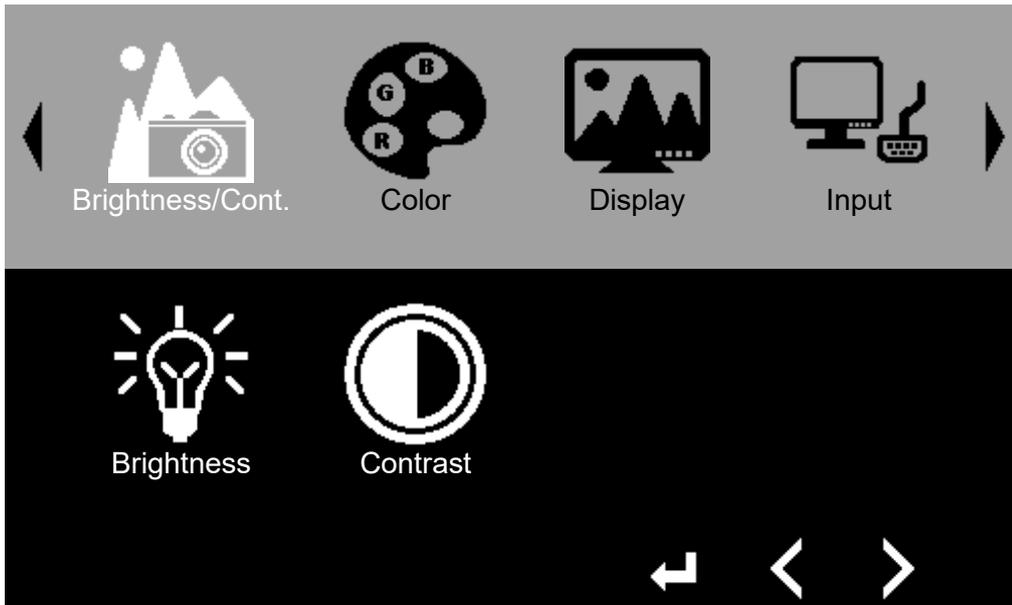
● Brightness/Contrast

Selecting this control allows you to make adjustment to the backlight dimming and contrast of the display screen by the range from 0 to 100.

*Press up/down to adjust the brightness any time while the OSD is off.
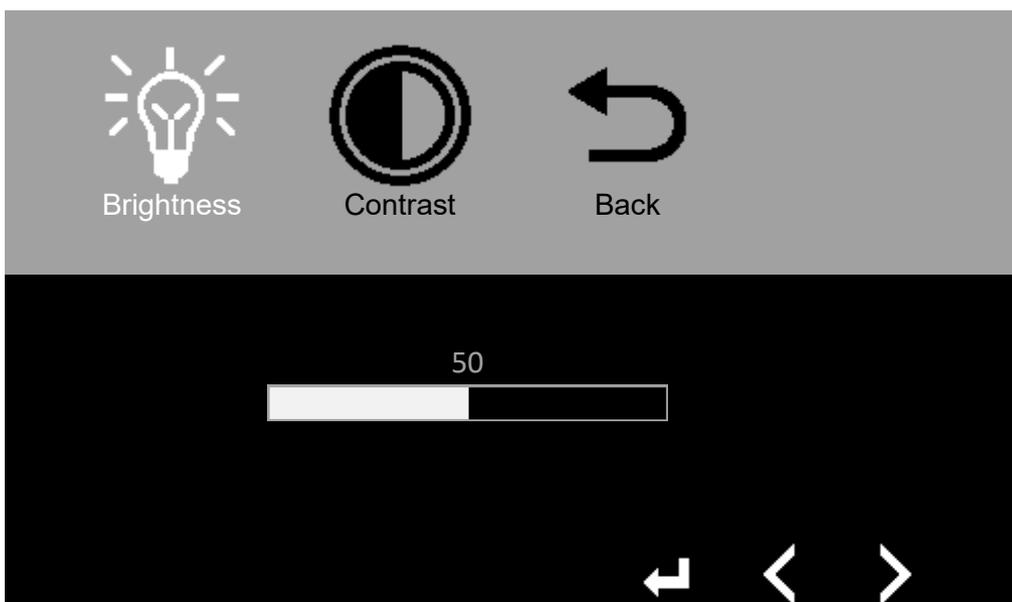
● Color Mode Setting

Select color mode to Normal or DICOM or Calibration mode.
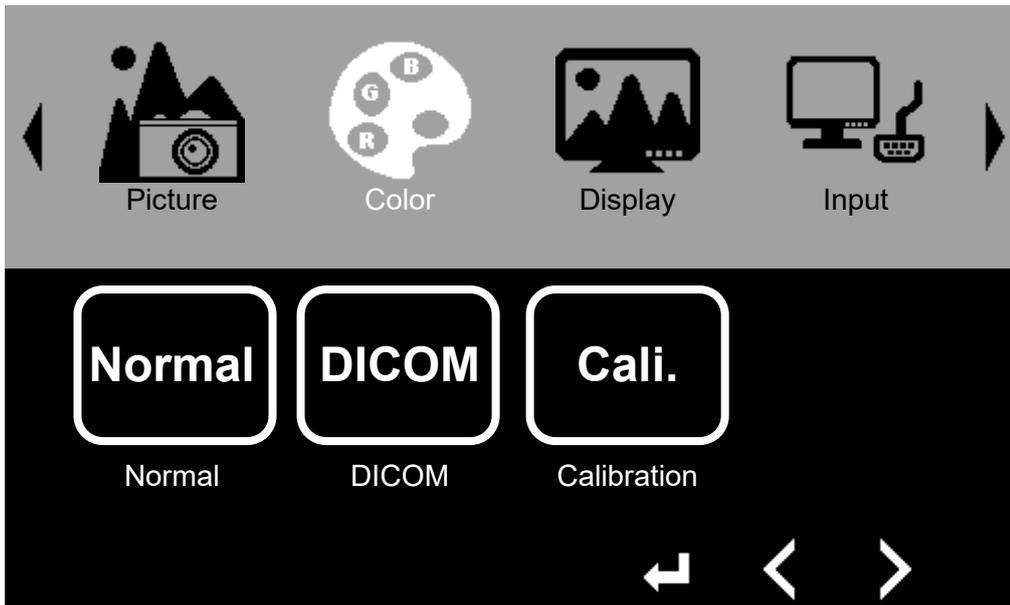
● Normal Mode

Adjust Gamma and Color Temperature.
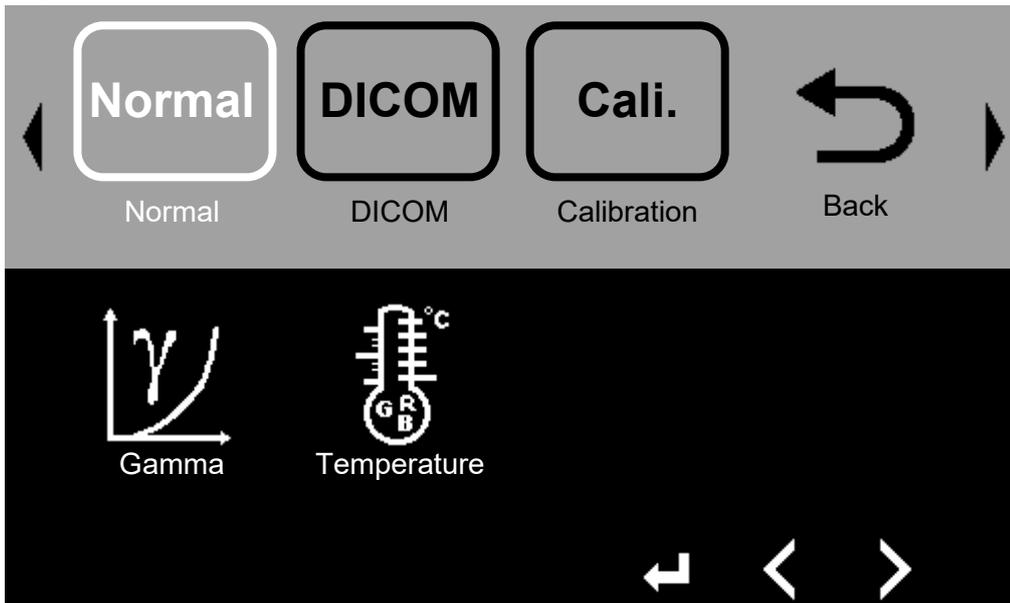
● **Gamma**

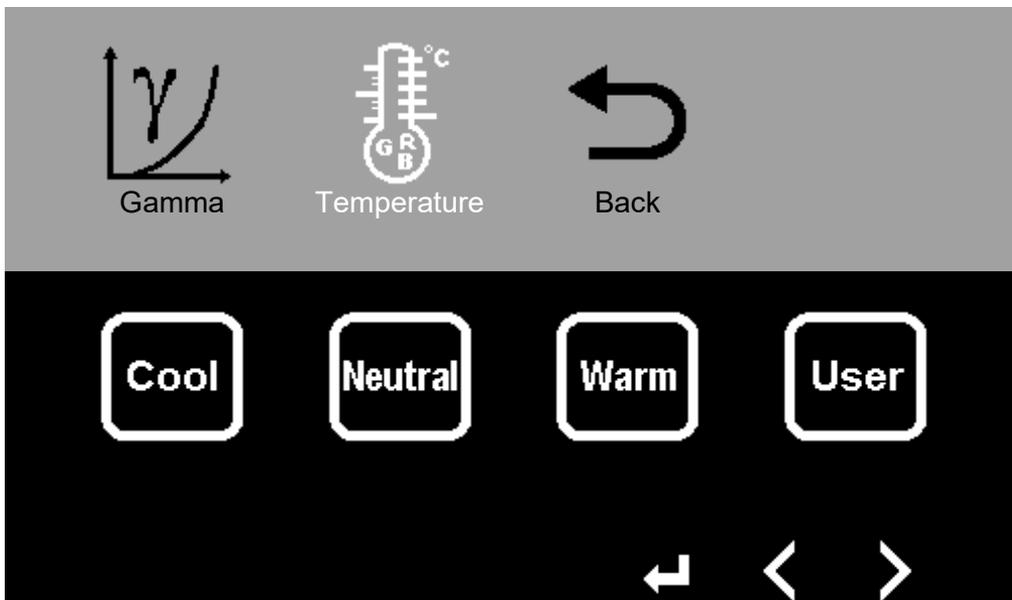Select gamma curve for gamma 1.8/2.0/2.2/2.4/Linear
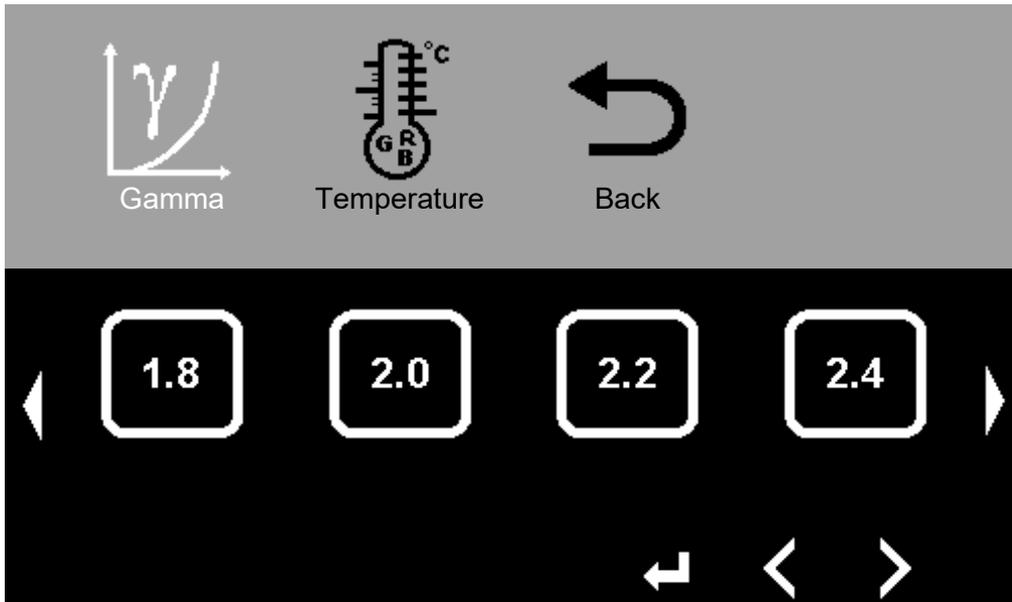
Select gamma curve for gamma 1.8/2.0/2.2/2.4/Linear

● **Temperature**

Select color temperature to Cool or Neutral or Warm or User
Furthermore, user can adjust the Red gain, Green gain and Blue gain individually to match personal preference in User mode.
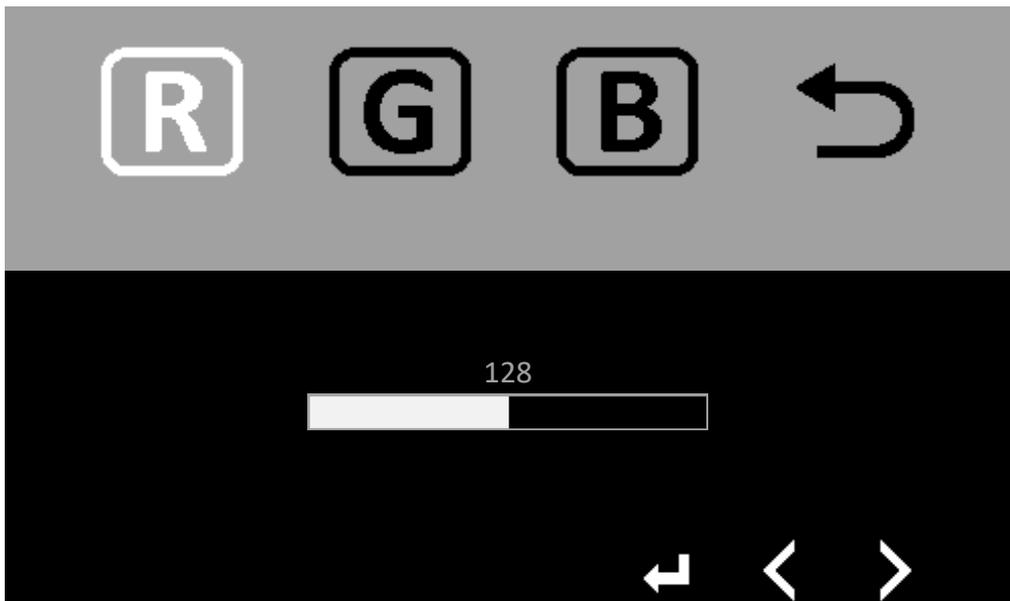
● User Mode

● Red
User can adjust the gain of Red by the range from 0 to 100.

● Green
User can adjust the gain of Green by the range from 0 to 100.

● Blue
User can adjust the gain of Blue by the range from 0 to 100.

● DICOM Mode
User can select different DICOM curve for different ambient light for room class application.

*In DICOM mode, Brightness and Contrast functions will be limited.

● Calibration Mode
Calibrate monitor setting by using external device, user can adjust brightness/gamma/RGB

Gain by calibration software.

*In Calibration mode, Brightness and Contrast functions will be limited.

● Display settings
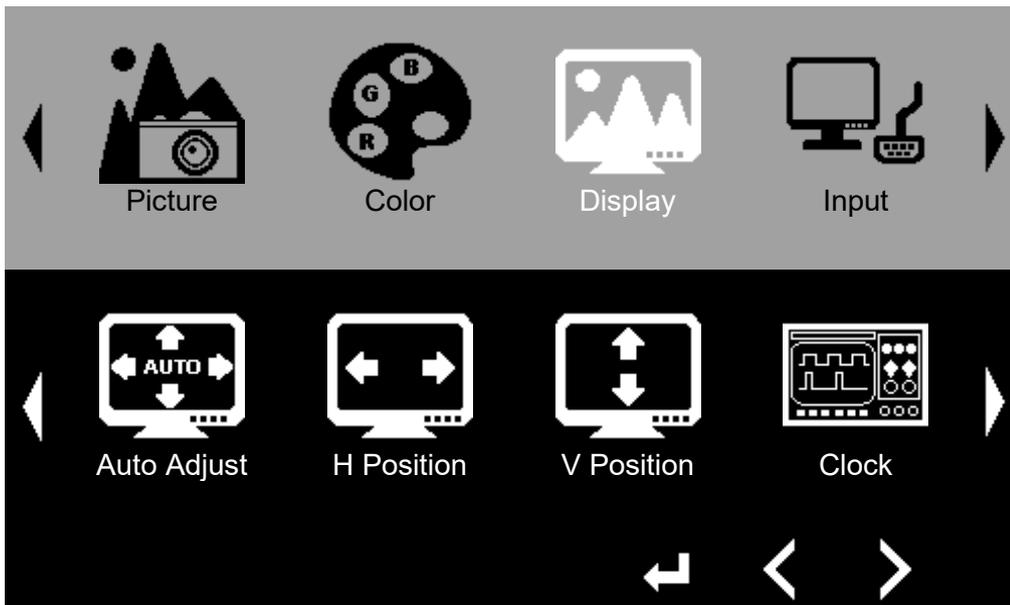
● Auto Adjust
When you execute ''Auto adjust'' will do automatically adjust the size and position.

● H.Position / V.Position
Adjust horizontal & vertical screen position for VGA by the range from 0 to 100.

● Clock
Adjust the frequency sampling rate of horizontal pixels for VGA, to equal the video source's value, thus minimizing artifacts of shimmering vertical lines.
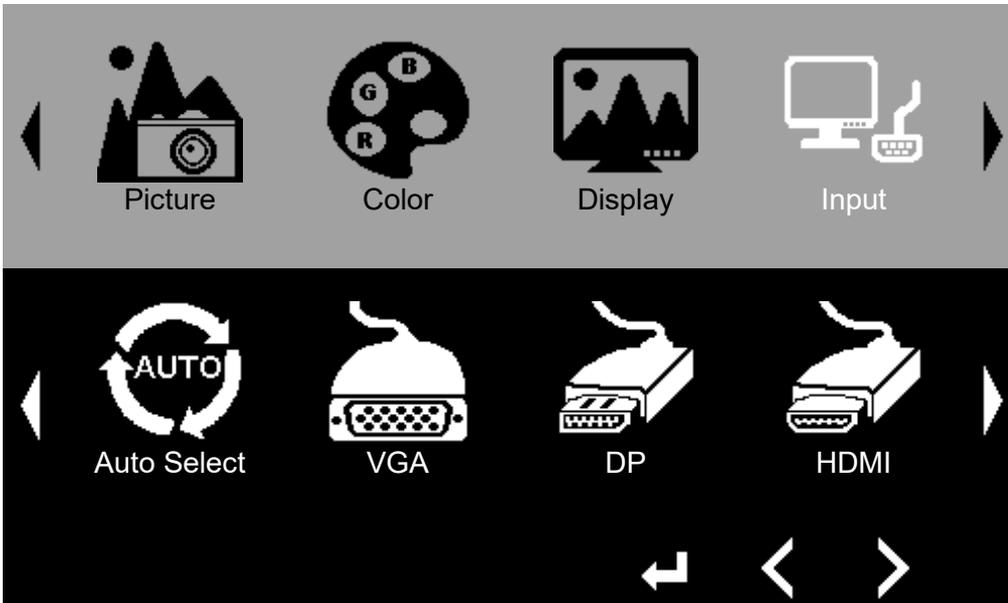
● Phase
Adjust ADC sampling clock phase for VGA, so that the screen image crisp and focused.
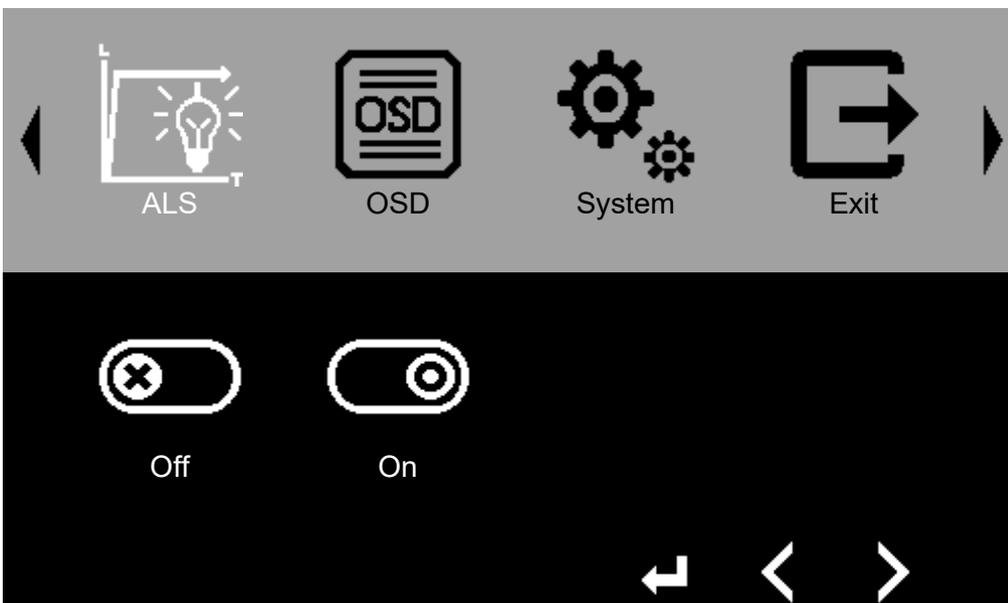* Display settings are not available for Digital sources.

● Input Settings

User can select source from VGA, DVI, HDMI and DisplayPort

*Auto select: If the monitor detects any signal existence, the monitor will show it on the screen.
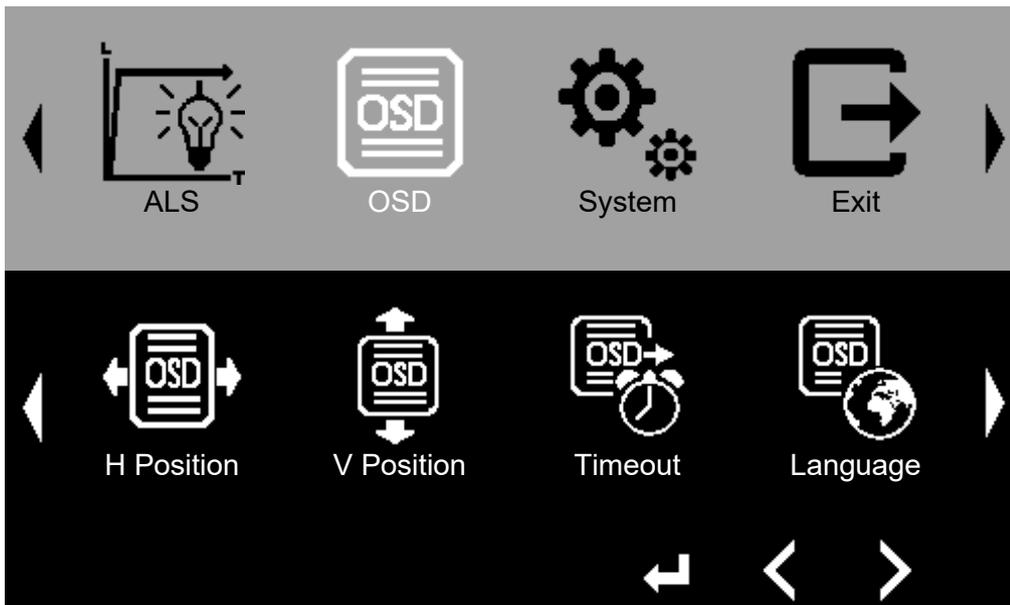

● ALS (Auto Luminance Stabilize) Settings

● Off

Disable ALS function to obtain the maximum backlight adjustment range.

● On

Enable ALS function to maintains constant luminance and assure the highest imaging quality.

● **OSD Settings**

● H.Position

Adjust the H position for OSD by the range from 0 to 100.

● V.Position

Adjust the V position for OSD by the range from 0 to 100.

● Timeout

Adjust OSD display time by the range from 10 to 60.
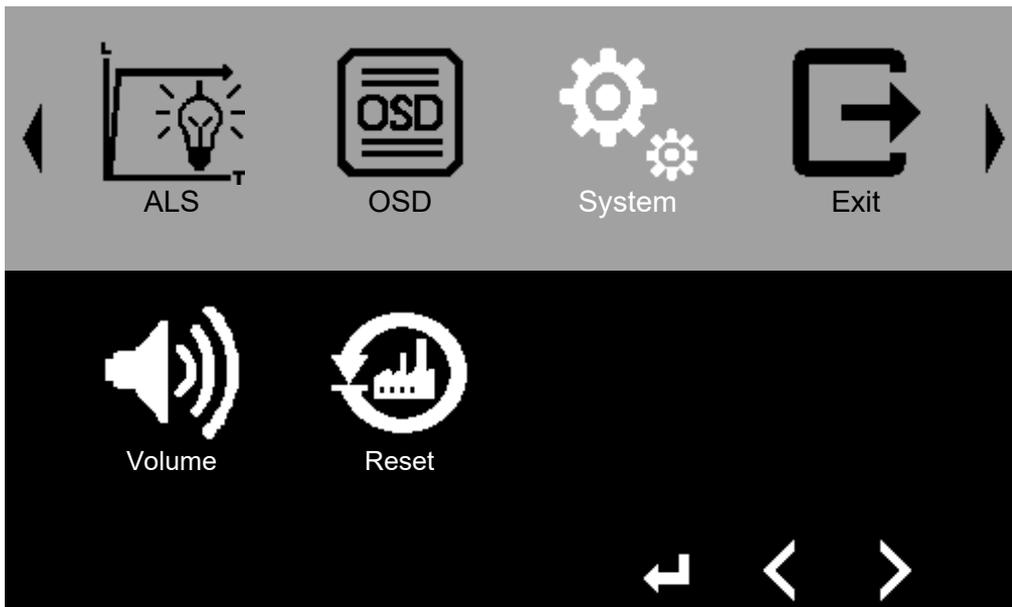

● Language

Selecting languages to display for OSD.
Currently available in 7 languages: English, German, French, Italian, Spanish, Japanese and Simplified Chinese
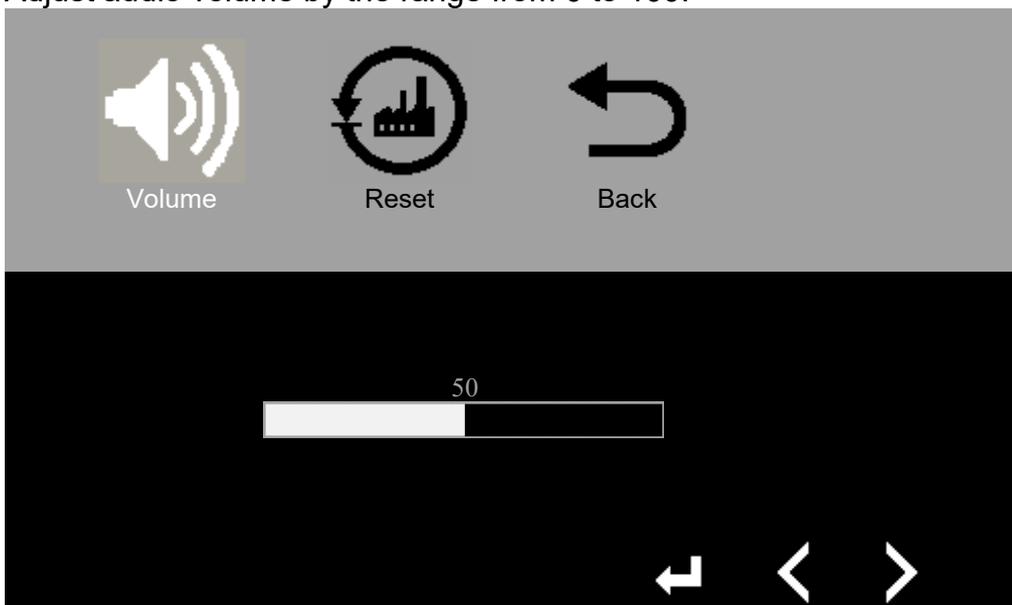

● Transparency

Adjust OSD display transparent by the range from 0 to 5.
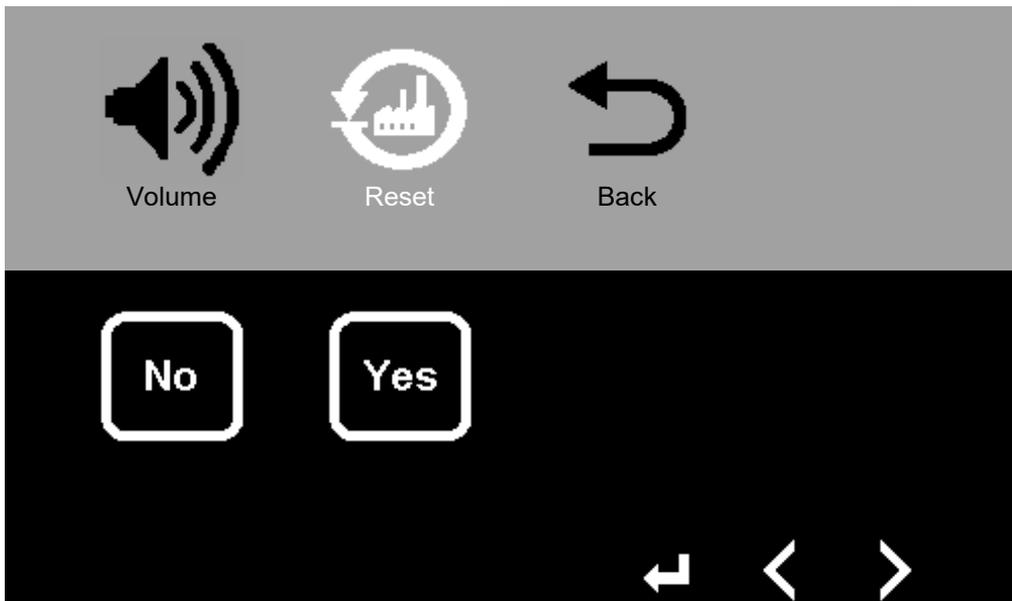
● **System Settings**

● **Volume**

Adjust audio volume by the range from 0 to 100.

● Reset

Select this function to reset all OSD adjustments to the default settings

● Exit

This page will show below messages:
1. Detail information for input timing:
2. Resolution, H V Frequency, Pixel Clock
Press "Menu" close the Main Menu.
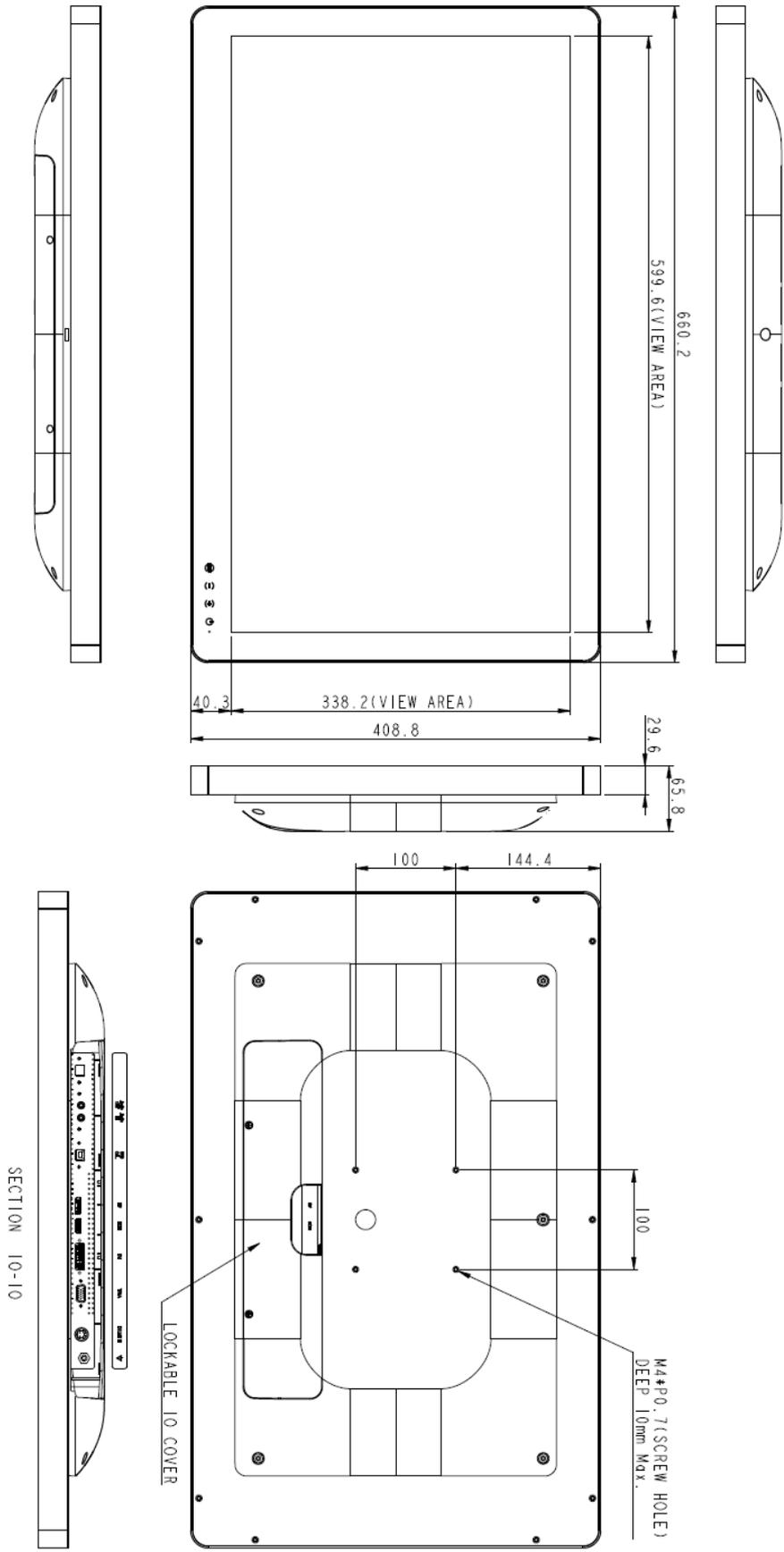
8. Display Timing Modes

Timing Table

Mode Name	Resolution		Frequency		Input Signal			
	H	**V**	**H(kHz)**	**V(Hz)**	**VGA**	**DVI**	**HDMI**	**DP**
VGA	640	480	31.47	59.94	O	O	O	O
SVGA	800	600	35.16	56.25	O	O	O	O
	800	600	37.88	60.32	O	O	O	O
XGA	1024	768	48.36	60.00	O	O	O	O
HD	1280	720	45.00	60.00	O	O	O	O
SXGA	1280	1024	63.98	60.02	O	O	O	O
UXGA	1600	1200	75.00	60.00	O	O	O	O
1080P	1920	1080	67.50	60.00	O	O	O	O

9. Specifications

Product name: RTAP2712AMC

Screen technology:	TFT active matrix type liquid crystal panel
Active screen size:	27" (diagonal)
Active screen size:	597.888(H) x 336.312 (V)
Aspect ratio (H:V):	16:9
Resolution:	1920 x 1080
Pixel pitch:	0.3114 mm
Color support:	16.7million
Viewing angle (H, V):	178°
Maximum luminance:	930 cd/m² (Typ.)
Contrast ratio:	1000:1 (Typ.)
Response time:	14ms (Rising+Falling)
Speaker:	2W *2
Power requirements:	DC24V (Nominal)
Power consumption:	60W
Power save mode:	Yes
Display dimensions w/o stand (W x H x D):	660.2x 408.8 x 65.8 mm
Dimensions packaged (W x H x D):	757 x 565 x 171 mm
Net weight display w/o stand:	8.1 Kg
Net weight packaged w/o stand:	10.1 Kg
Mounting standard VESA:	100*100 mm
Power requirements:	Delta MDS-090AAS 24 F
	I/P: 100-240Vac, 1.5-0.75A, 50-60Hz,
	O/P: 24Vdc---3.75A

External Dimensions 27"

660.2

599.6(VIEW AREA)

338.2(VIEW AREA)

40.3

408.8

29.6

65.8

100

144.4

100

M4*P0.7(SCREW HOLE)
DEEP 10mm Max.

SECTION 10-10

LOCKABLE IO COVER

10. Contact Information

1. Manufacturer

Goomedi Laboratories Ltd

16F.-2, No. 872, Zhongzheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.)

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2. Technical Support

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