plura®

Operating Instructions

UNB-4K Series

UNB-249-4K

UNB-255-4K

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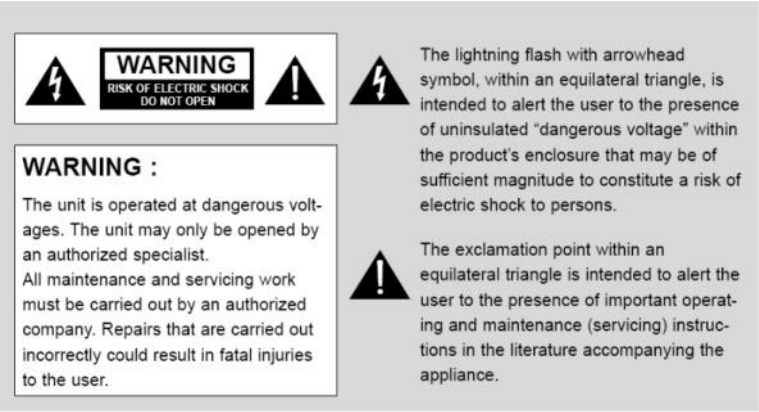
PREACUTION

Before operating this unit, please read this manual carefully.



WARNING:

To reduce the risk of any electric shock, please do not remove the back cover. No user serviceable parts inside. Refer any service matters to qualified service personnel. To prevent fire or shock hazard, do not expose the rear of the set to rain or moisture. Do not rub, clean or hit the Active Matrix LCD with object that may scratch, mark, or damage the Active Matrix LCD permanently.

CAUTION:

Unauthorized tampering with the inside of the monitor invalidates the warranty.

The manufacturer shall not warrant for any damage caused by improper maintenance and/or repair or work by third parties.

Important safeguards for you and your new product:

Your product has been manufactured and tested with your safety in mind. However, improper use can result in potential electrical shock or fire hazards. Please read and observe the following safety points when installing and using your new product and save them for future reference.

1. ***Read Instructions***

2. ***Follow Instructions***
   All operating and use instructions should be followed.

3. ***Retain Instructions***
   The safety and operating instructions should be retained for future reference.

4. ***Notice Warnings***
   All warnings on the product and in the operating instructions should be adhered to.

5. ***Cleaning***
   Disconnect the unit from the mains before cleaning the unit. Do not use abrasive cleaners. Use a damp cloth ONLY for cleaning.

6. ***Water and Moisture***
   Do not use this product near water.

7. ***Transporting Product***

This product should be moved with care. Quick stops, excessive force and uneven surfaces may cause the product damages.

8. *Accessories*

*Do not use accessories not recommended by **PLURA Inc**. as they may cause hazards.*

9. *Ventilation*

Do not block any of the ventilation openings.

Install in accordance with the manufacturer's instructions.

10. *Power Sources*

This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply, consult your power supply company.

11. *Power Lead Polarization*

This product is equipped with a three-wire grounding-type cord. This is a safety feature. Do not use any other type power cord.

12. *Power Cord Protection*

Power-supply cords should be dressed so that they are not likely to be pulled or pinched by items placed upon or against them.

13. *Lightning*

For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent possible damage to the product due to lightning and power-line surges.

14. *Grounding the product*

This product must be grounded properly to comply with the safety regulations in the country of use. If you are unsure of these regulations, please consult a qualified electrician.

15. *Servicing*

Do not attempt to service this product by yourself as opening or removing covers may expose you to dangerous voltages or other hazards. Refer all servicing to qualified service personnel.

16. *Damage Service Required*

Isolate this product from the mains and refer to qualified service personnel under the following conditions:

A. If the power-supply cord or plug is damaged.
B. If the front LCD front has been damaged.
C. If the product does not operate correctly by following the operating instructions. Use only the user control buttons any improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
D. If the product has been dropped.
E. If the product exhibits a distinct change in performance.

17. *Safety Check*

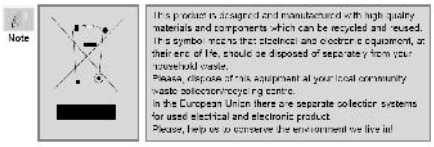
Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition and the warranty seal is provided.

18. *Mounting*

The product should be mounted on a wall as recommended in the instructions.

19. *Power*

This set operates on an AC supply; the voltage is as indicated on the label on the Manual. This appliance must be earthed at all times through the chassis as well as through the power lead.



OVERVIEW

UNB Series is constructed with the latest panel technology S-IPS, the NEW series abbreviation called after its unique panel bezel style and design "Ultra Narrow Bezel", exceptional viewing angles and 10 bit color depth to enhance image quality for all types of installations. In addition, direct LED backlight technology ensures lower power consumption and improves brightness uniformity, dimming capabilities and contrast ratio.

The ultra narrow bezel panels are virtually seamless, have small pixel pitch – just 0.63 mm i.e. images are sharp and clear at any distance. The ultra narrow bezel is only 3.5mm for side by side seamless displays.

This series was introduced and designed for Broadcast, Commercial, digital signage and A/V video wall applications.

The Plura UNB series can be control up to 100 monitors via LAN IP network and/or RS232 daisy chains using exclusive Plura Wall express software. The UNB series supports SDI, HDMI & Display Port inputs capability, up to UHD (3840 x 2160) resolution through the HDMI daisy chain capability to show one image across the entire video wall. Therefore with 4 x 4 UNB-255 setup and one HDMI UHD input looped through the 4 x UNB-255 monitors can accomplish total screen size of 110" diagonal with TRUE UHD resolution and displaying TRUE UHD image. This is significant and noteworthy.

ADVANCED FEATURES

UNB-4K Series has the following advanced features:-

1- SDI, HDMI & Display Port inputs capability, up to UHD (3840 x 2160) resolution.
2- Ultra Narrow Bezel - Minimal bezels width 0.05" (1.2mm) B & R, 0.09" (2.3 mm) T & L.
3- Total bezel width 0.14" (3.5 mm) side by side displays.
4- Direct LED direct backlight source improves brightness uniformity.
5- Broadcast & Professional-Grade quality.
6- Designed for 24/7 operation, featuring reliable power supply.
7- S-IPS panel technology offers wide viewing angles ideal for all applications.
8- Color calibration solution ensures color uniformity across the entire wall setup.
9- Wall Express control system via serial IP connectivity designed to easily manage any number of monitors from a remote computer location.

PLURA S3 PLEDGE

Service • Support • Solutions

Plura takes its reputation very seriously when designing, manufacturing and delivering all our products. We strive to build the best solutions with the flexibility and reliability required for 24/7 operation capability. Our new UNB-4K series allow you to display, monitor and control your digital and other media sources immediately and in real time. UNB-4K solution offers color accuracy and reliable display solution to your management, engineering & monitoring team without any compromise. We take each display monitor and control room project seriously and deliver it uniquely.

SPECIFICATIONS

FUNCTION		UNB-249-4K	UNB-255-4K
INPUT	SDI Input	1EA, Supports 3G	
	Display Port	1EA, DP In, 20pin single Female, DisplayPort v1.2a compliant.	
	DVI / VGA Input	1EA, DP In, 20pin single Female, DisplayPort v1.2a compliant.	
	HDMI	1EA, HDMI In, HDMI 2.0 compliant (w/ HDCP v.2.2)19 pin Female	
OUTPUT	HDMI	1EA, HDMI Out, 19pin Female, HDMI Bypass out.	
	SDI Output	1EA, Supports 3G.	
DIGITAL INPUT FORMAT	SMPTE-292M	1920x1080i (50/59.94/60)	
		1920x1080P (30Psf/25Psf/24Psf/30/25/24)	
	SMPTE 372M	1080P(30/29.97/25/24/23.98)	
		1080i(29.97/25/24/23.98)	
		720P(60/59.94/50)	
	SMPTE 296M	1280x720P (50/59.94/60)	
	SMPTE 259M/C	480i(59.94)	
		576i(50)	
	UHD HDMI	Supports 4K2k@60Hz	
	UHD DP	Supports 4K2k@60Hz	
	FHD HDMI	Up to 1920x1080@60Hz	
	DVI	Up to 1920x1080@60Hz	
	PC-RGB	Up to 1920x1080@60Hz	
I/O PORT	RS232C In	D-sub 9 pin female	
	Ethernet In	RJ45	
	RS232C Out	D-sub 9 pin female, IR bypass	
LCD	Size	LCD 49" Diagonal	LCD 55" Diagonal
	Aspect Ratio	16 : 9	
	Resolution	1920 horiz. x 1080 vert.	
	Refresh Rate	50-60 Hz	
	Color Depth	10 Bit	
	Brightness	700 cd/m2	
	Contrast Ratio	1300:1 (Typical)	1400:1 (Typical)
	Response Time	Tr=8ms / Tf=8ms	
	Viewing Angle (deg)	Horizontal: 178 (Typ.) Vertical 178 (Typ.)	
POWER REQUIREMENTS		AC 100V ~ 240 V (60/50 Hz), 2.5A	
POWER CONSUMPTION		160W, Max 220W	175W, Max 240W
OPERATING TEMPERATURE		0ºC - 40º C (32º ~ 104ºF)	
OPERATING HUMIDITY		20% RH ~ 80%RH (Non Condensed)	
STORAGE TEMPERATURE		-30ºC - 60º C (-22º ~ 140ºF)	
STORAGE HUMIDITY		10% RH ~ 85%RH (Non Condensed)	
WEIGHT (w/o stand & packing)		30Kg / 66.1lbs	38Kg / 83.8lbs
DIMENSION (W*H*D*) w/o Box & Stand		1077.7x 607.9 x 87 (mm) 42.3 x 23.93 x 3.4 (Inch)	1213.5 x 684.3 x 101.3 (mm) 47.77 x 26.94 x 3.9 (Inch)
PACKAGING DIMENSION		1500 x 980 x 300 (mm) 59 x 38.6 x 11.8 (Inch)	1500 x 980 x 300 (mm) 59 x 38.6 x 11.8 (Inch)
VESA DIMENSION		600 x 400 (mm)	
ACCESSORY		Power Cord ,HDMI 2.0 cable, Serial cable	
OPTIONS		Wall Mount	

Please note that the technical details shown here are provisional specifications (as of Jan 2017) The information is subject to change without notice.

REMOTE CONTROL KEY RRNGEMENTS

1. Front panel LED Operations

Status	Color	Operatio
Power Off	Red	On
Normal	Green	On
No	Green	Blink
DPMS	Red	Blink
Download	Green	Fast

2. 7 Key Descriptions

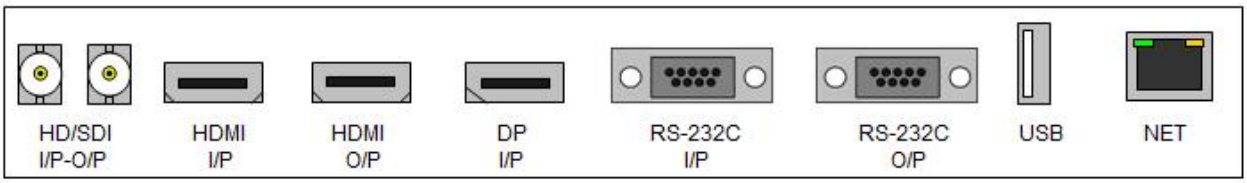
Button Name	Operation
Power	► Power On/Off.
Menu	► Activates main OSD menu. ► Navigates higher menu in main OSD menu. ► Stops auto frequency searching. ► Exits OSD menu.
Select	► Activates OSD menu of input source selecting. ► Changes input source by selecting. ► Executes functions (by OSD help commands) in main OSD menu.

Up	► Increases program number & tune channel. ► Navigates input source. ► Executes function (by OSD help commands) in main OSD menu. ► Navigates previous menu in main OSD menu.
Down	► Decreases program number & tune channel. ► Navigates input source. ► Executes function (by OSD help commands) in main OSD menu. ► Navigates next menu in main OSD menu.
Left	► Decreases sound volume of speaker/headphone. ► Executes function (by OSD help commands) in main OSD menu. ► Decreases values of user menu in main OSD menu.
Right	► Increases sound volume of speaker/headphone. ► Executes function by OSD help commands in main OSD menu. ► Increases values of user menu in main OSD menu.

3. IR-Remote controller Descriptions

Button Name	Description
Power	► Power On/Off
Menu	► Same as “Menu key” on keypad.
Up	► Same as “Up key” on keypad
Down	► Same as “Down key” on keypad
Right	► Same as “Right key” on keypad
Left	► Same as “Left key” on keypad
Enter	► Same as “Select key” on keypad
EXIT	► Exit OSD menu
Info	► Displays input source information
Sleep	► Set or disables sleep timer value
Mute	► Toggles between sound status of speaker/headphone & mute.
Source	► Activates & Deactivates OSD source menu.
ARC	► Activates & Deactivates OSD aspect ratio control.
STILL	► Toggles picture status between motion and still image.
0~9	► Enter digit value to Active SET ID
BLUE	► Set Active SET ID
RED	► Delete Active SET ID

I/O REAR PANEL



1. I/O Rear Panel Description

Interface	Description
HDMI I/P	High Definition Multimedia Input – up to 3840x2160@60Hz (HDMI2.0)
HDMI O/P	High Definition Multimedia Loop Output
DP I/P	DISPLAYPORT Input – up to 3840x2160@60Hz (v1.2a)
RS-232 I/P	Monitor control via RS232
RS-232 O/P	RS-232 Loop Output to control series of monitors
HD-SDI I/P	Serial Digital Interface Input – 1920x1080
HDMI O/P	Serial Digital Interface Loop Output – 1920x1080
USB	Download – Software Update Port
Ethernet	Control Via Ethernet

MENU OVERVIEW

In this menu system, there are several ways to customize the menu settings provided.

Most menus consist of three levels to make any changes, however sometimes settings requires greater depth. If you reach the third level of the MENU system and fourth level is necessary. The fourth level can be accessed by pressing OK button

1) To display & hide the Menu:

Press the MENU button on the Remote Control to display. A second press of the MENU button or a pressing the EXIT button will hide the menu.

2) To go to the next level:

Press OK (or Right arrow button) on the Remote Control.

3) To go back to the previous level:

Press MENU (or Left arrow button) on the Remote Control.

4) To go to the next menu:

Press Down arrow button on the Remote Control.

5) To go to the previous menu:

Press Up arrow button on the Remote Control.

1. Select Video Input

a. How to Select Video Source using OSD

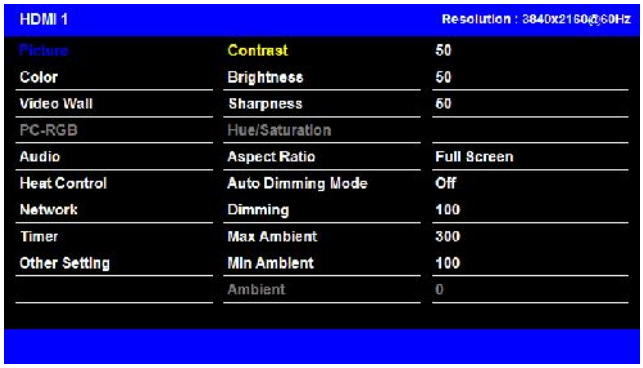
- Default available sources: Display Port, HDMI & HD-SDI

1. Press the SOURCE button and then ▲/▼button to select each video source.

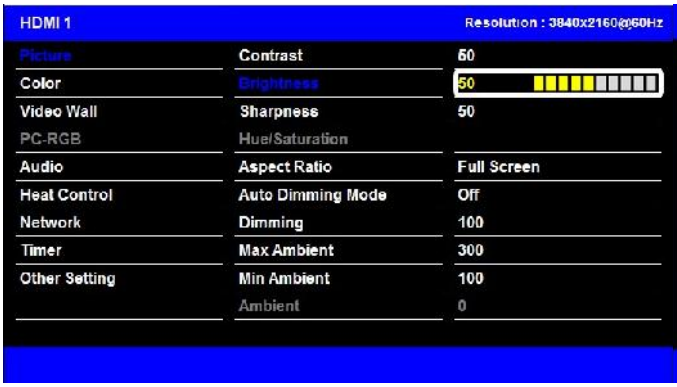
2. Press the OK button to go to desired video source

2. Picture Settings

a. Contrast / Brightness /Sharpness / Hue_Saturation



Contrast



Brightness

Sharpness

Hue

Saturation

- Adjust the picture settings to suit your preference and viewing conditions.

1. Press the MENU button to select the PICTURE mode.

2. Press the OK button or RIGHT button to select Contrast menu.

(Press the UP / DOWN buttons to navigate through the menu.)

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP / DOWN buttons to make appropriate adjustments.

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

- Hue / Saturation: Only available in YCbCr input.

b. Aspect Ratio

- Selects the screen size.

1. Press the MENU button to select the PICTURE mode.

2. Press the OK button (or RIGHT button) and then DOWN button to select Aspect Ratio menu.

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP / DOWN buttons to select desired option:

[Full Screen, Auto, 4:3, 5:4, 16:9, 1:1]

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

c. Auto Dimming

- Automatic dimming controls by light sensor in Dimming menu.

1. Press the MENU button to select the PICTURE mode.

2. Press the OK button (or RIGHT button) and then DOWN button to select Auto Dimming Mode menu.

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP / DOWN buttons to select desired option:

Off : Adjust the dimming level by the manual operation.

On : Adjust the dimming level by the data of light sensor. (Light Ambient Sensor Option only)

ECO : Adjust the dimming level of 50.

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

d. Dimming

- Manually adjust the brightness of the screen. (Auto Dimming Mode – Off)

(The ability to adjust the Backlight of Panel)

1. Press the MENU button to select the PICTURE mode.

2. Press the OK button (or RIGHT button) and then DOWN button to select Dimming menu.

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP or DOWN button to select desired option:

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

e. Max Ambient / Min Ambient

- Dimming Adjustments based on ambient light

1. Press the MENU button to select the PICTURE mode.

2. Press the OK button (or RIGHT button) and then DOWN button to select Max(Min) Dim Ambient menu.

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP or DOWN button to select desired option:

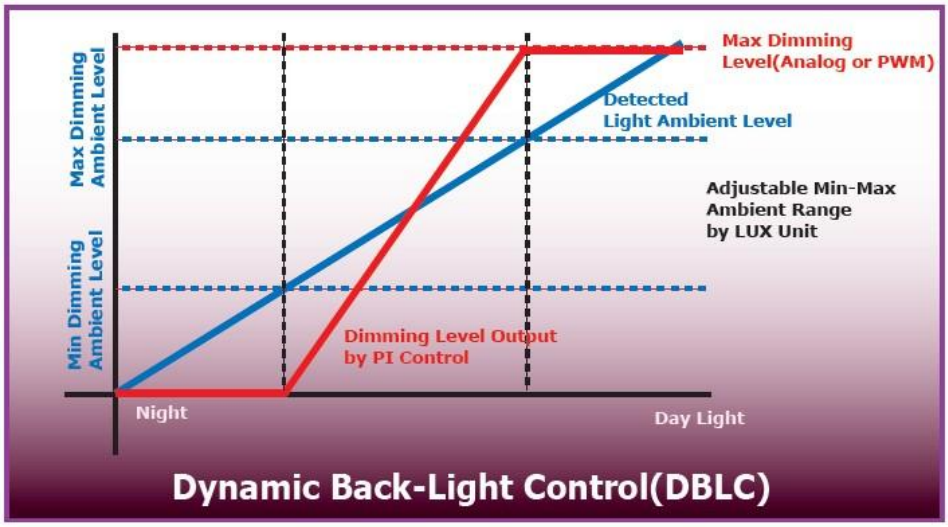
   Max Ambient : The maximum dimming set to 100 units.

   Min Ambient : The minimum dimming set to 10 units.

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

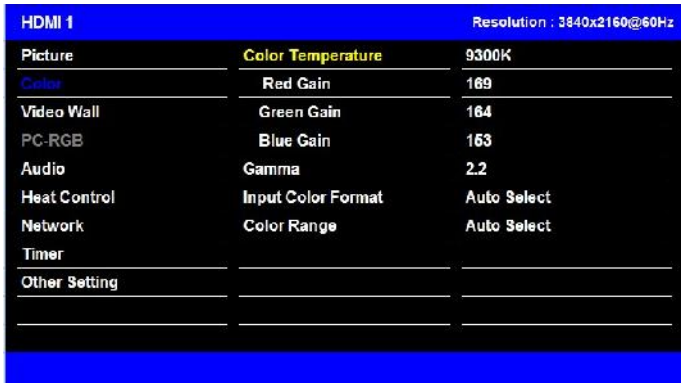
◆ Ambient

- Displays the ambient brightness data. (If the light sensor is connected.)



3. Color Settings

a. Color Temperature



- Choose one of four automatic color adjustments. Set to warm to enhance hotter colors such as red, or set to cool to see less intense colors with more blue.

1. Press the MENU button and then DOWN button to select the Color.

2. Press the OK button (or RIGHT button) and then DOWN button to select Color Temperature menu.

3. Press the OK button or RIGHT button to select Adjustment menu.

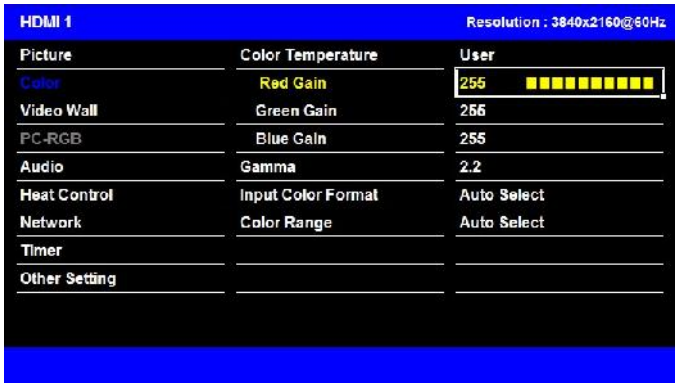
4. Press the UP or DOWN button to select desired option:

[3200K, 5600K, 6500K, 7800K, 9300K, User]

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

- If you change the GAIN value, the user mode will be activated.

b. Red/Green/Blue Gain



- Adjust the color on the screen.

1. Press the MENU button and then DOWN button to select the Color.

2. Press the MENU button and then DOWN button to select the Red/Blue/Green Gain.

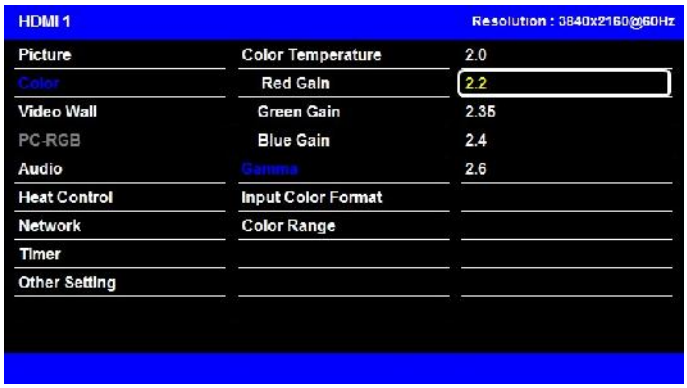
3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP or DOWN button to select desired option.

→ If you change the value of the item, the Color Temperature will automatically switch to User mode.

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

c. Gamma



- Adjust the Gamma values.

1. Press the MENU button and then DOWN button to select the Color.

2. Press the MENU button and then DOWN button to select the Gamma.

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP & DOWN button to select desired option. [2.0, 2.2, 2.35, 2.4, 2.6]

→ We recommend the Plura Calibration process for setting Gamma value

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

d. Input Color Format

- To select the proper color space values. [RGB / YPbPr422 (YPbPr444)]

1. Press the MENU button and then DOWN button to select the Color.

2. Press the OK button (or RIGHT button) and then DOWN button to select Input Color Format menu.

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP or DOWN button to select desired option.

[RGB, YPbPr, Auto Select]

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

e. Color Range

- Check the color space of the input signal, to adjust the screen. [0~255, 16~235]
- The change to this function is not recommended.

1. Press the MENU button and then DOWN button to select the Color.

2. Press the OK button (or RIGHT button) and then DOWN button to select Color Range menu.

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP or DOWN button to select desired option.

[Auto Select, 0-255, 16-235]

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

4. Video Wall Settings

- This menu item is for MULTI WALL Stack Application.

1. Press the MENU button and then DOWN button to select the Video Wall Settings.

2. Press the OK button (or RIGHT button) and then DOWN button to select Second Settings.

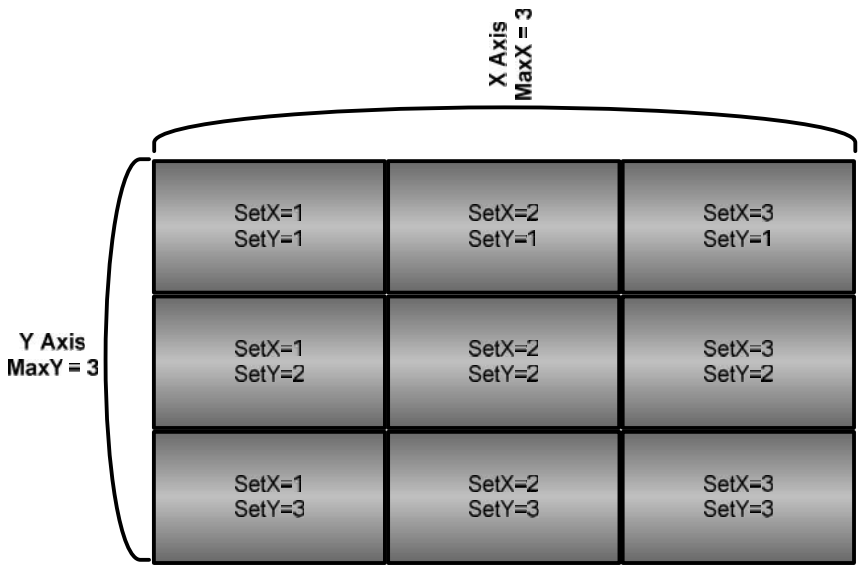
3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP or DOWN button to select desired option.

5. Press MENU button or LEFT button to return to the previous menu.

Or In order to come out at a time, press the EXIT button.

- Video Wall Layout Settings



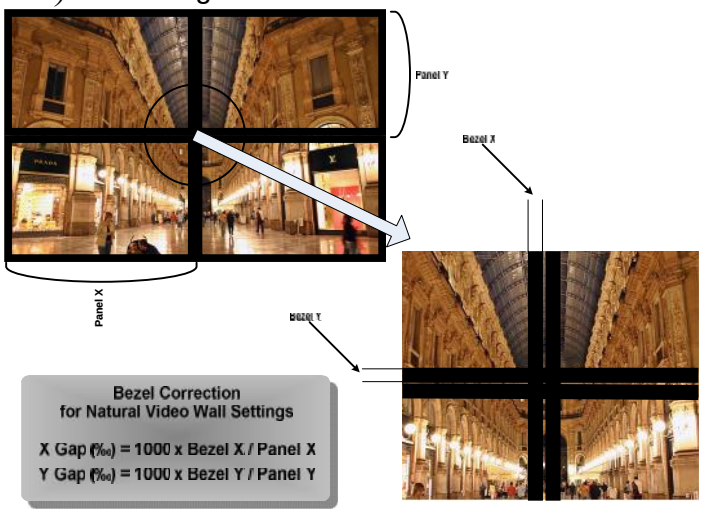
X Max : Maximum number of column tiles to divide video image. (Support up to 11step)

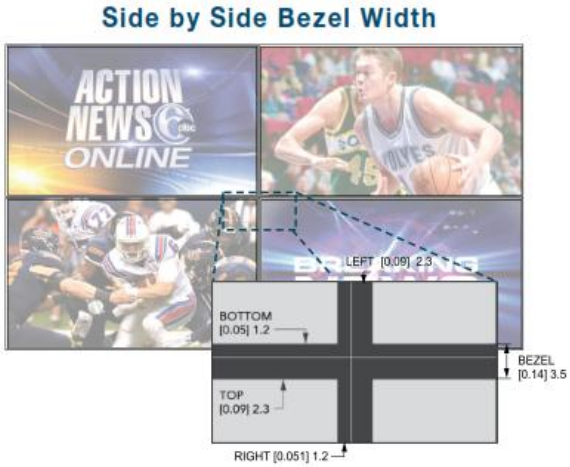
Y Max : Maximum number of row tiles to divide video image. (Support up to 11step)

X position : Coordinate of video image's column position.

Y position : Coordinate of video image's row position.

Setting the Bezel Corrections for Natural Tiled Image





X Gap : Proportional Value of Vertical Bezel to Panel size by Per-mil unit.

Y Gap : Proportional Value of Horizontal Bezel to Panel size by Per-mil unit.

Set ID & Active Set ID

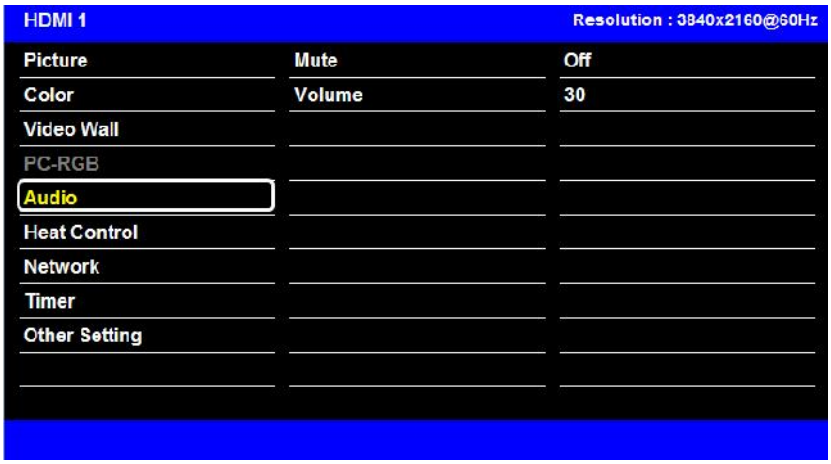
- SET ID number is the number of the Monitor based on the monitor location within the wall layout to be able to control Via RS-232 (TCP/IP)

- If total number of monitor is 15, then the Active SET ID must set to 15.

1. Press the BLUE button and then use 0~9 button to select the Active SET ID.

2. If Press the RED button, delete ID number.

5. Audio



1. Press the MENU button and then DOWN button to select the Audio Settings.

2. Press the OK button (or RIGHT button) and then DOWN button to select Second Settings.

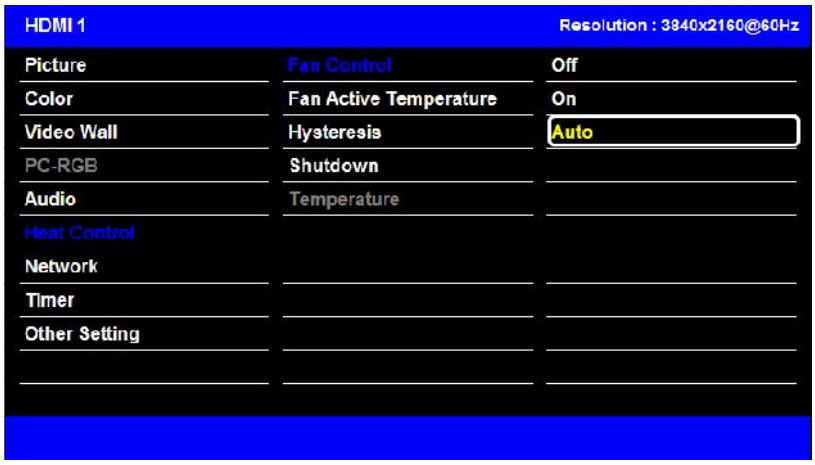
3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP or DOWN button to select desired option.

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

6. Heat Control Settings

a. Fan Control



1. Press the MENU button and then RIGHT button to select the Heat Control Settings.

2. Press the OK button (or RIGHT button) to select Fan Contol menu.

3. Press the OK button or RIGHT button to select Adjustment menu.

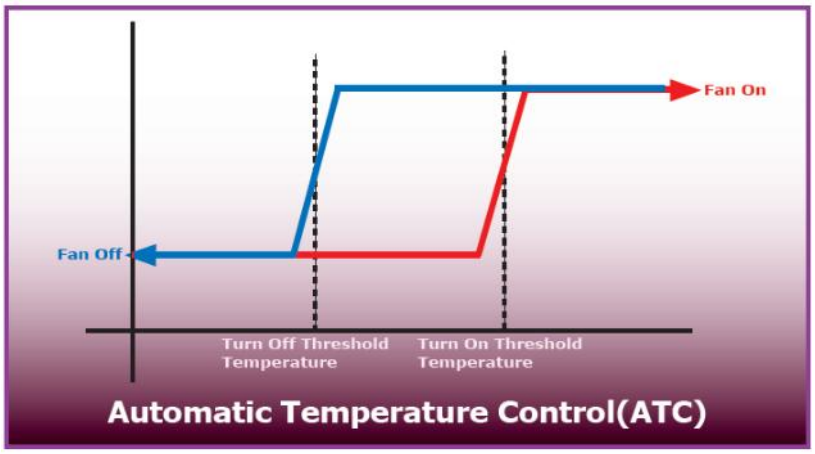
4. Press the UP or DOWN button to select desired option.

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

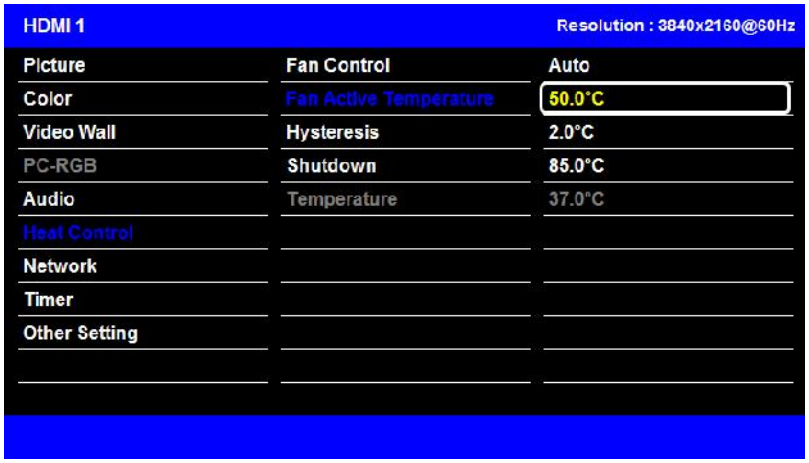
Off : Set the fan is always off, regardless of the value of the temperature sensor.

On : Set the fan is always on, regardless of the value of the temperature sensor.

Auto : Fan is automatically driven according to the temperature setting.



b. Heat Control



1. Press the MENU button and then DOWN button to select the Heat Control Settings.

2. Press the OK button (or RIGHT button) and then DOWN button to select Second Settings.

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP or DOWN button to select desired option.

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

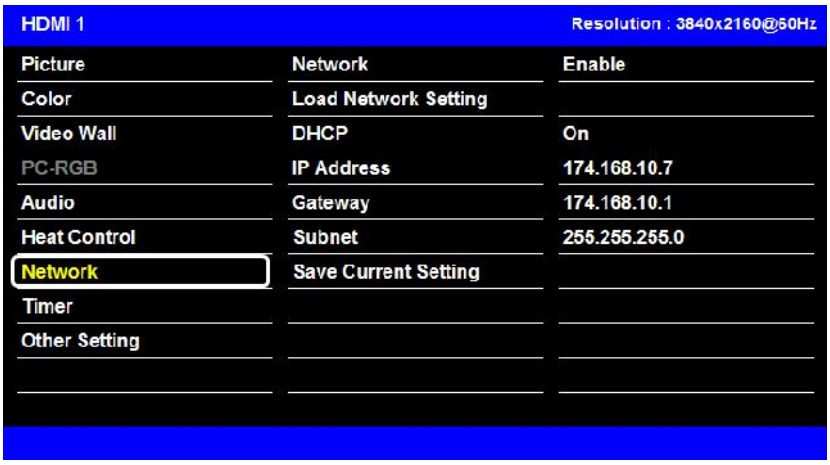
Fan Active Temperature: Adjusts fan temperature in Celsius degree. Available only when the Fan Control setting is set to Auto.

Hysteresis: Variable range of Fan on/off interval.

Shutdown: Adjust shutdown mode temperature by Celsius degree. When and if the current temperature reaches the shutdown temp, the monitor enters power shut down mode.

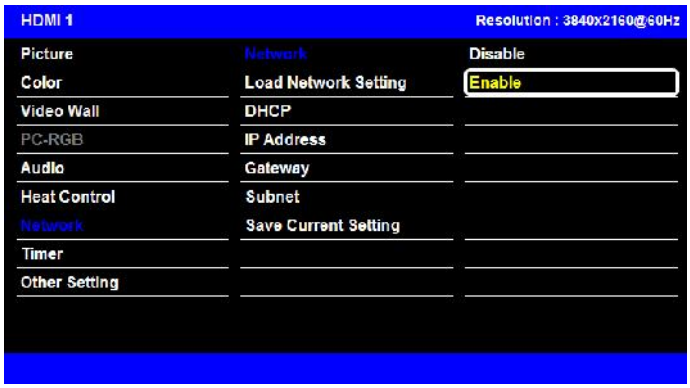
Temperature: The internal temperature of the unit measured by the main board sensor.

7. Network



Network setting to control monitor via Ethernet.

a. Network

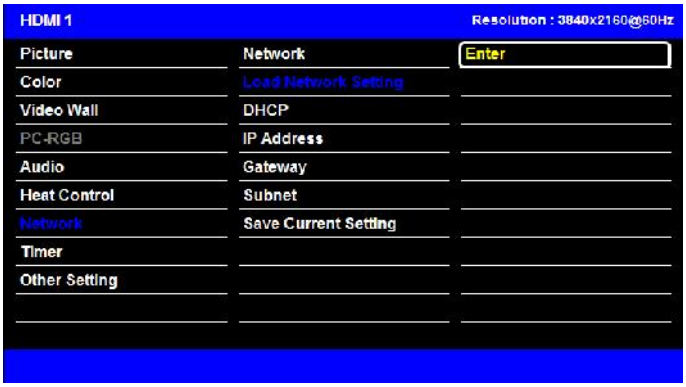


1. Press the MENU button and then DOWN button to select the Network.
2. Press the OK button (or RIGHT button) and then DOWN button to select Network.
3. Press the OK button or RIGHT button to select Adjustment menu.
4. Press the UP or DOWN button to select desired option.
5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

Disable: Communication will ONLY be available VIA RS-232.

Enable: Communication will be available using NETWORK.

b. Load Network Setting



1. Press the MENU button and then DOWN button to select the Network.

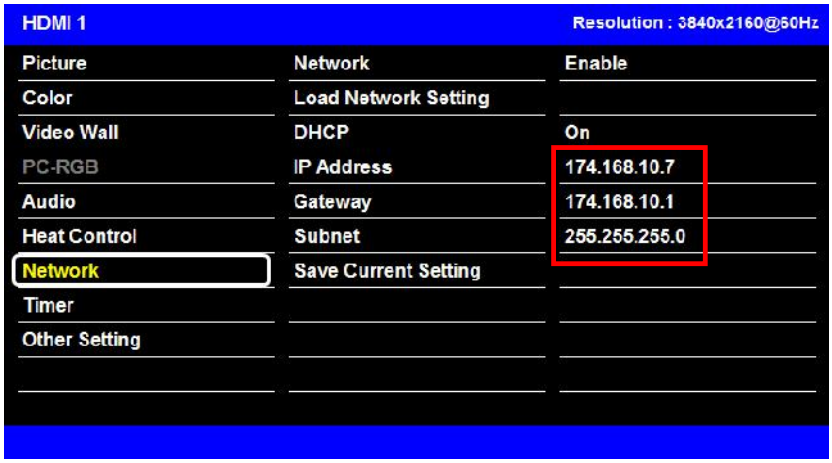
2. Press the OK button (or RIGHT button) and then DOWN button to select Load Network Setting.

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

Enter: Network information which is stored in the LAN sub board.

c. DHCP



1. Press the MENU button and then DOWN button to select the Network.

2. Press the OK button (or RIGHT button) and then DOWN button to select DHCP.

3. Press the OK button or RIGHT button to select Adjustment menu.

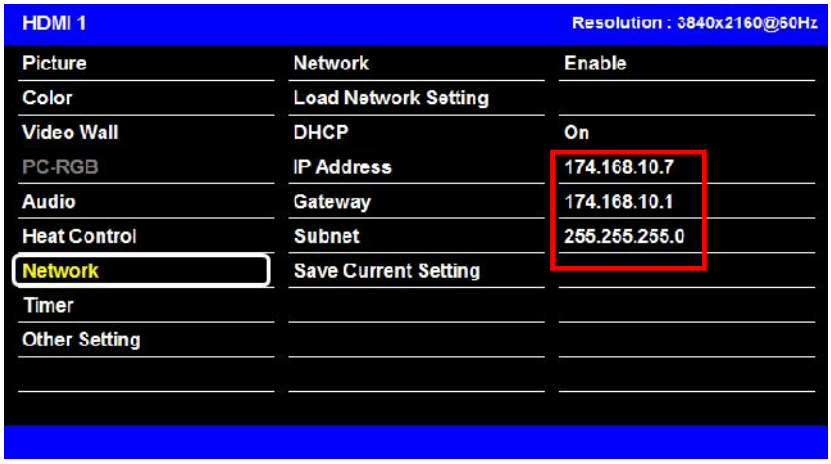
4. Press the UP or DOWN button to select desired option.

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

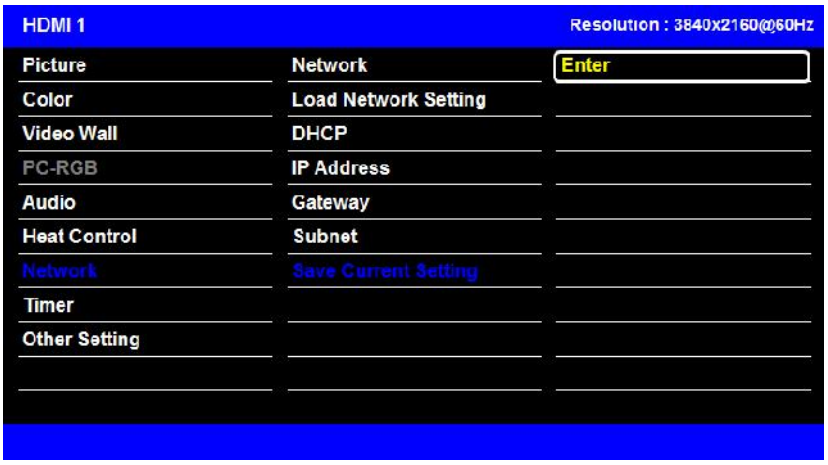
On: Activate DHCP Mode. To avoid IP address conflicts.

Off: Deactivate DHCP Mode.

d. Network Information



e. Save Current Setting



1. Press the MENU button and then DOWN button to select the Network.

2. Press the OK button (or RIGHT button) and then DOWN button to select Save Current Setting.

3. Press the OK button or RIGHT button to select Adjustment menu.

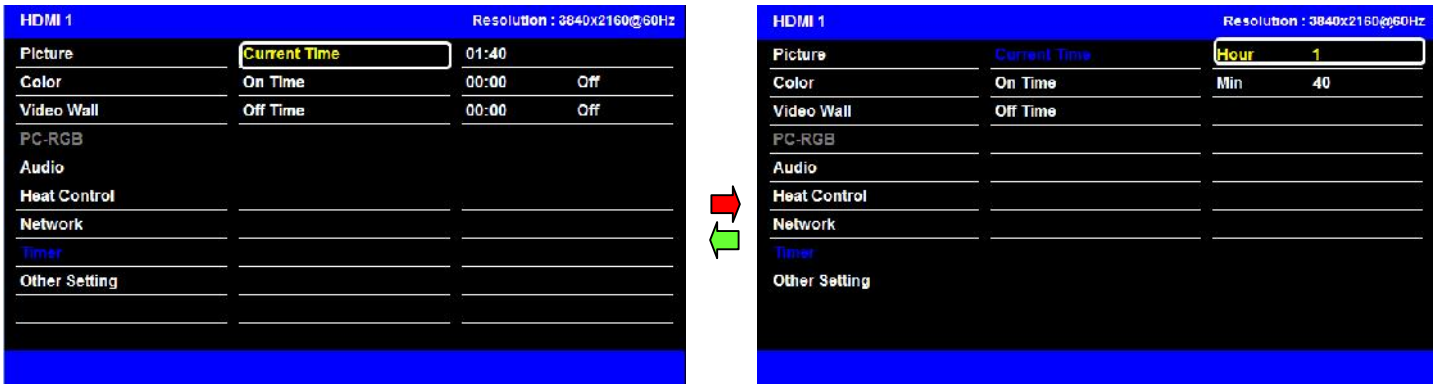
4. Press the UP or DOWN button to select desired option.

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

   – To save the current settings to LAN sub board.

8. Timer Settings

a. Current Time



- If current time setting is incorrect, reset the clock manually.
- When the AC POWER is OFF, the current time will be memorized.

1. Press the MENU button and then DOWN button to select the Timer Settings.
2. Press the OK button (or RIGHT button) and then DOWN button to select Second Settings.
3. Press the OK button or RIGHT button to select Adjustment menu.
4. Press the UP or DOWN button to select desired option.
5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

b. Timer Settings

1. Press the MENU button and then DOWN button to select the Timer Settings.

2. Press the OK button (or RIGHT button) and then DOWN button to select Second Settings.

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP or DOWN button to select desired option.

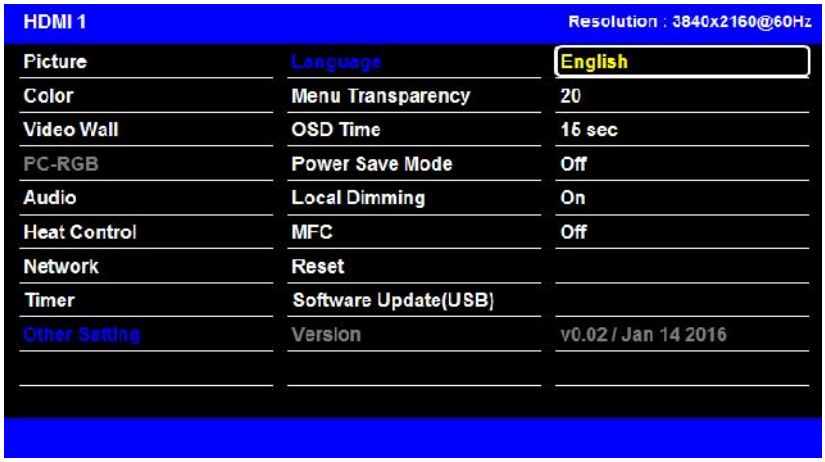
5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

On Time: Set the time for the monitor to start automatically.

Off Time: Set the time for the monitor to power off automatically.

9. Other Settings

a. Language



– Menu Language can be altered or changed based on the user preference.

1. Press the MENU button and then DOWN button to select the Other Settings.

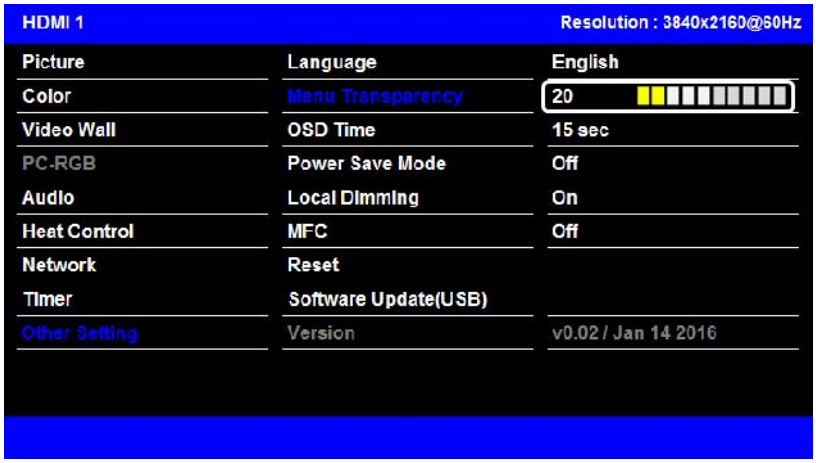
2. Press the OK button (or RIGHT button) to select Language menu.

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP or DOWN button to select desired option.

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

b. Menu Transparency



– Set the OSD transparency.

1. Press the MENU button and then DOWN button to select the Other Settings.

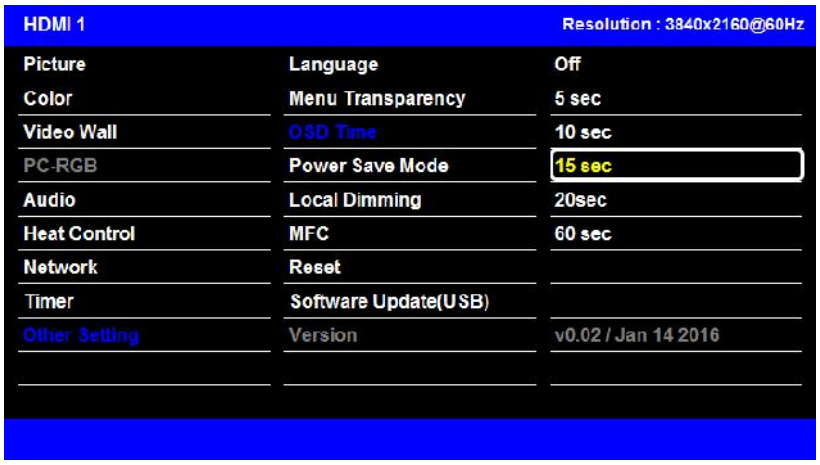
2. Press the OK button (or RIGHT button) and then DOWN button to select Menu Transparency menu.

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP or DOWN button to select desired option.

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

c. OSD Timeout



– Set the OSD duration

1. Press the MENU button and then DOWN button to select the Other Settings.

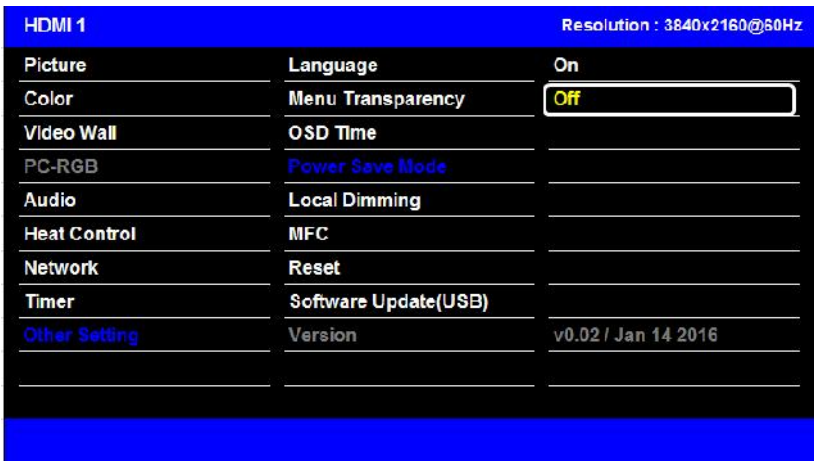
2. Press the OK button (or RIGHT button) and then DOWN button to select OSD Timeout menu.

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP or DOWN button to select desired option.

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

d. Power Save Mode



– Shut down the monitor if the input source is not present at period of time.

1. Press the MENU button and then DOWN button to select the Other Settings.

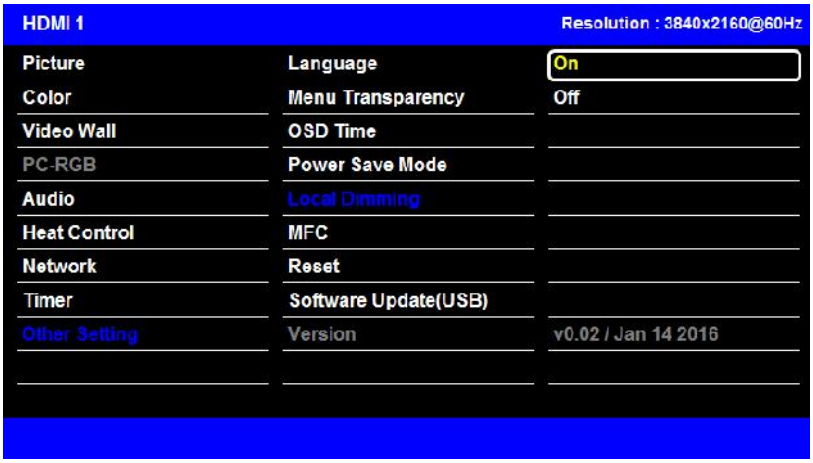
2. Press the OK button (or RIGHT button) and then DOWN button to select Power Save Mode menu.

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP or DOWN button to select desired option.

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

e. Local Dimming



– Set the local dimming for the panel.

1. Press the MENU button and then DOWN button to select the Other Settings.

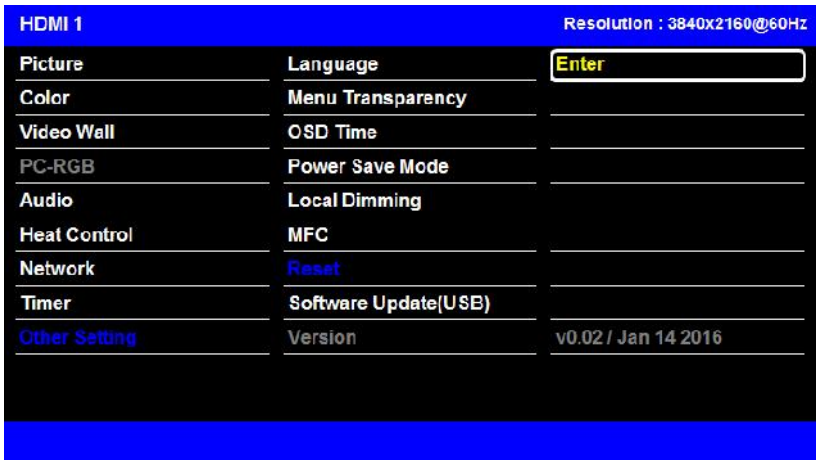
2. Press the OK button (or RIGHT button) and then DOWN button to select Local Dimming menu.

3. Press the OK button or RIGHT button to select Adjustment menu.

4. Press the UP or DOWN button to select desired option.

5. Press MENU button or LEFT button to return to the previous menu. Or press the EXIT button.

f. Reset



– Restore factory Settings

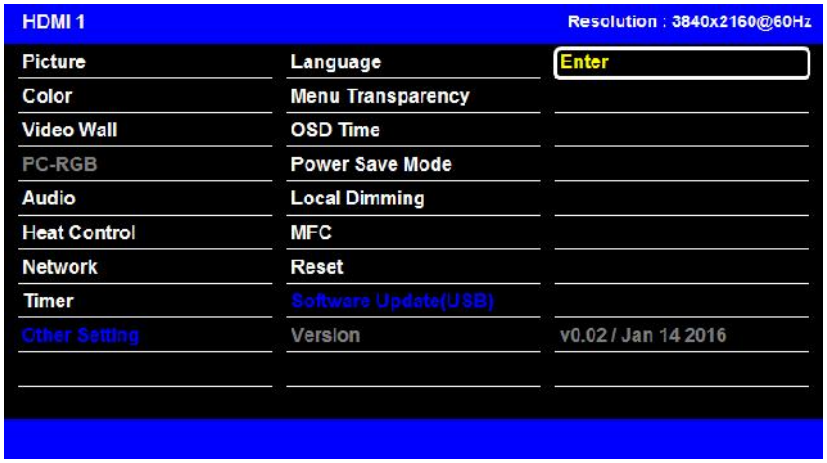
1. Press the MENU button and then DOWN button to select the Other Settings.

2. Press the OK button (or RIGHT button) and then DOWN button to select Reset menu.

3. Press the OK button or RIGHT button to select Enter.

4. Press the OK button to select.

g. Software Update



– Software update function using the USB MEMORY.

1. Save the update file to a USB memory stick. (ex) mergy_151223.bin

2. Insert the USB stick into the socket for download.

1. Press the MENU button and then RIGHT button to select the Other Settings.

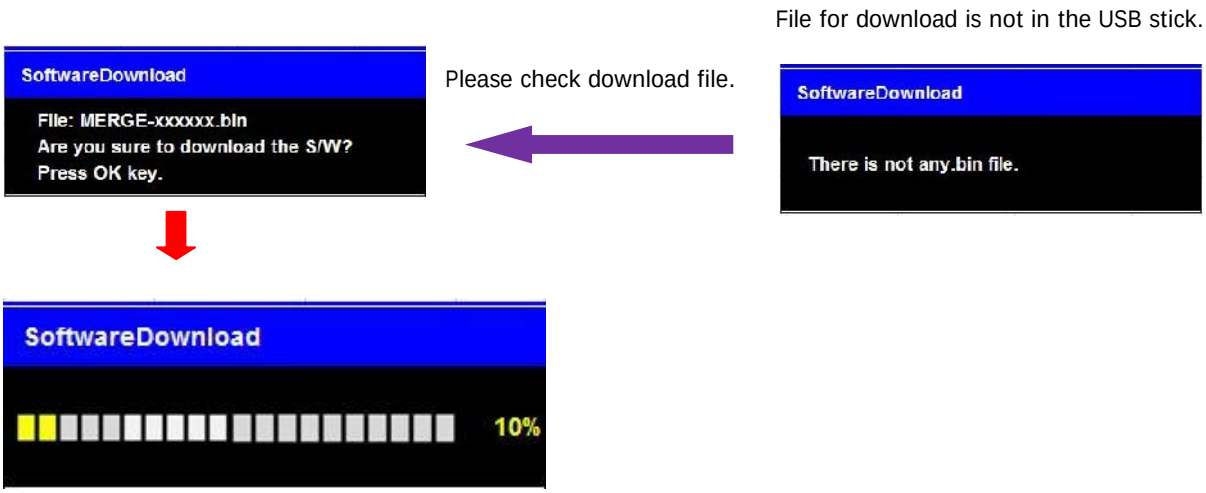
2. Press the OK button or RIGHT button and then DOWN button to select Software Update menu.

3. Press the OK button to select Enter.

4. Normal Progress

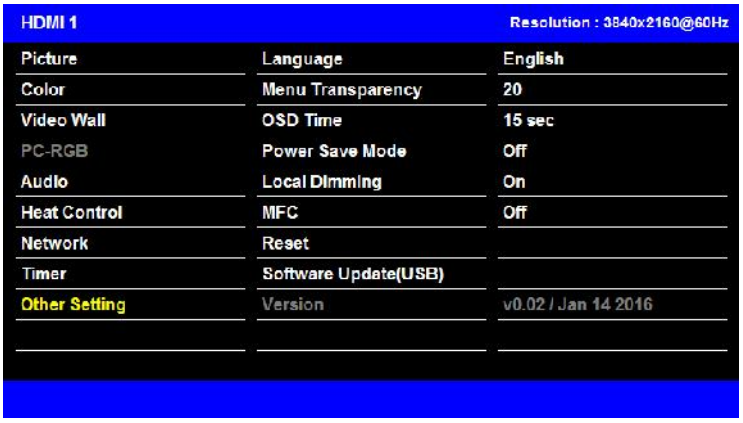
check the USB stick.

USB stick do not plugged in the socket.
(Not be recognized.)



5. When the update is successfully completed, the monitor will restart automatically.

h. Version



- Check the information of the current Firmware.

1. Press the MENU button and then DOWN button to select the Other Settings.

(Version #/ Date)

SERIAL CONTROL PROTOCOL.

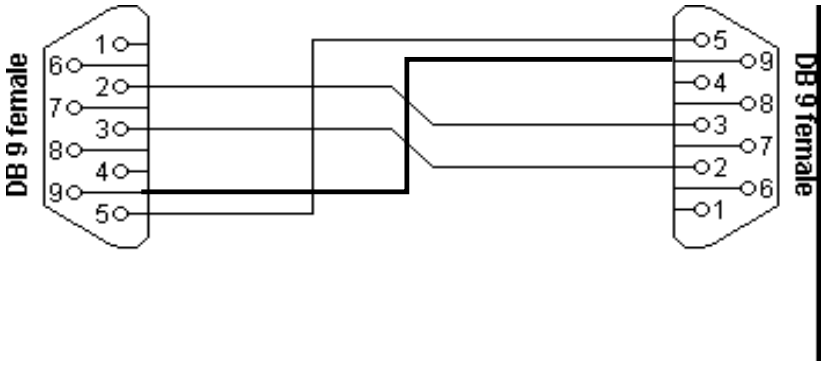
1. Serial Setup

Item	Settings
Baud rate	19200bps
Data Bit	8bit
Stop Bit	1bit
Parity Bit	None
Stream Control	None

a. Serial Cable between PC and AD BOARD (simple null modem cable)

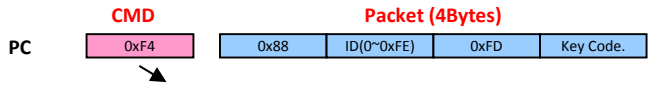
CONNCTOR1	CONNCTOR2	FUNCTION		
2	3	RX		TX
3	2	TX		RX
5	5	SIGNAL GROUND		
9	9	IR BYPASS SIGNAL		

CONNECTOR1 CONNECTOR2



2. Protocols

a. Virtual Remote Control

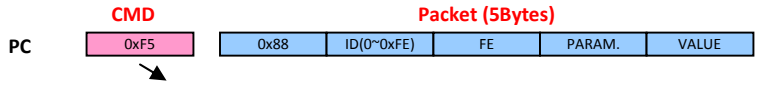


Command Format

0xFX : F = Command Start Sending , X = No of Byte to Send

Current Example (0xF4) : Start Sending 4 Bytes of Packet Data

b. Setting Parameters to AD BOARD

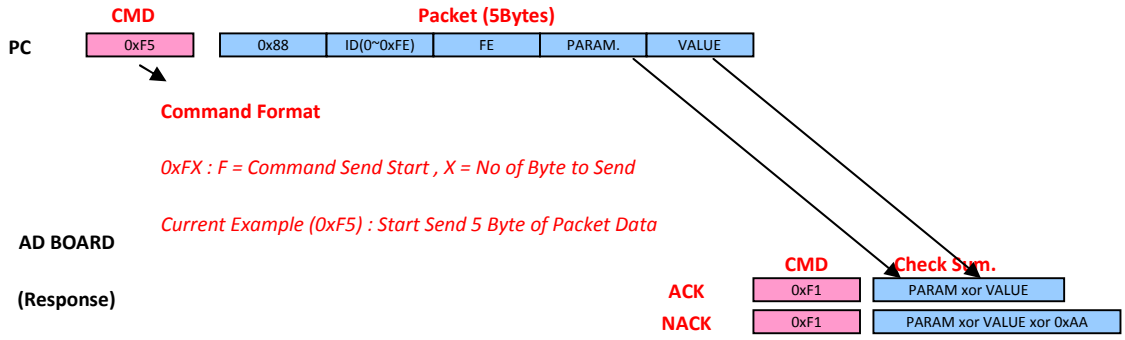


Command Format

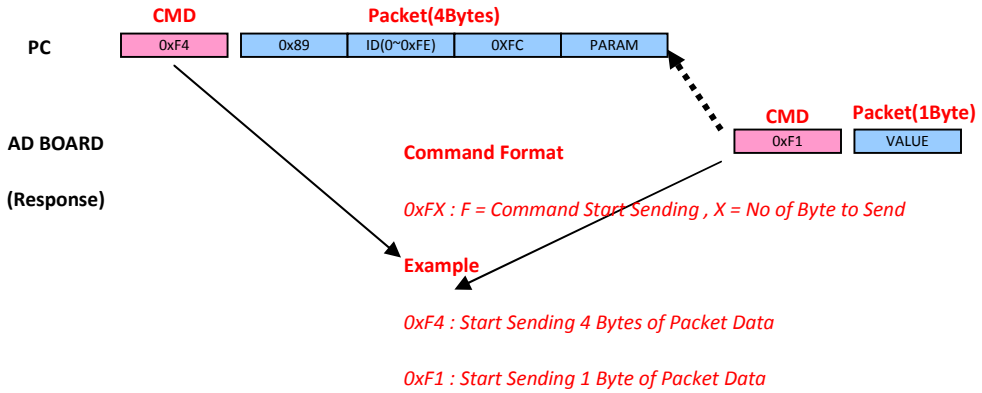
0xFX : F = Command Send Start , X = No of Byte to Send

Current Example (0xF5) : Start Send 5 Byte of Packet Data

c. Data setting only (Not adjust function for speed)



d. Read Parameters from AD BOARD



3. Control Command Packet

a. System Parameter Direct Settings/Read Packet

CMD	Data1	Data2	Data3	Data4	Data5	Description	Range (HEX)	
Command	Target	ID	CMD	Param	Value			
0xF5 (Start Set) 0xF4 (Start Get)	0x88(Set) 0x89(Get)	0xXX (0x00~0xFE)	0xFE /0xFC Set /Get Param.	0x00	0x00~0xFF (By Min-Max) Not Send in Get Mode	LANGUAGE	0	English
							1	TBD
							2	TBD
							3	TBD
							4	TBD
							5	TBD
				0x01		SOURCE *Linker spec → DP HDMI 1	0	VGA
							1	DP
							2	HDMI1
							3	HDMI2
							4	HDMI3
							5	DVI
				0x03		COLORTEMP	0	5700K
							1	6500K
							2	9300K
							3	User

				0x04		CONTRAST	0	0
							64	100
				0x05		BRIGHTNESS	0	0
							64	100
				0x07		SHARPNESS	0	0
							64	100
				0x0F		Aspect Ratio	0	Full Screen
							1	Auto
							2	4:3
							3	5:4
							4	16:9
							5	1:1
				0x10		Red Gain	0	0
							FF	255
				0x11		Green Gain	0	0
							FF	255
				0x12		Blue Gain	0	0
							FF	255
				0x17		Mute	0	MUTE ON
							1	MUTE OFF
				0x1B		VOLUME	0	0
							64	100
				0x23		ON HOUR	0	0
							17	23
				0x24		ONMINUTE	0	0
							3B	59
				0x25		ON TIME ONOFF	0	Off
							1	On
				0x27		OFF HOUR	0	0
							17	23

				0x28		OFFMINUTE	0	0
							3B	59
				0x29		OFF TIME ONOFF	0	Off
							1	On
				0x2A		SETID	0	0
							63	99
				0x32		CURRENT HOUR	0	
							23	
				0x33		CURRENT MINUTE	0	
							59	
				0x36		REMOTE LOCK	0	Off
							1	On
				0x37		ILLUMINANCE(7)(8)		
				0x38		MAX_ILLUMINANCE(2)	2	200
							FF	25000
				0x39		MIN_ILLUMINANCE(3)	1	10
							FF	2550
				0x3A		AUTO_DIM	0	Off
							1	On
				0x3B		DIM_LEVEL(4)	0	0
							64	100
				0x3C		CURTEMP_MAIN(5)(8)		
				0x3E		FAN ACTIVE TEMP(5)	3C	0
							B4	60
				0x40		FAN_CONTROL	0	Off
							1	On
							2	Auto
				0x42		X POSITION	1	1
							0B	11
				0x43		Y POSITION	1	1

							0B	11
				0x44		X MAX	1	1
							0B	11
				0x45		Y MAX	1	1
							0B	11
				0x46		X GAP(9)	0	0
							64	100
				0x47		Y GAP(9)	0	0
							64	100
				0x48		TEMP_SHUTDOWN(5)		TBD
								TBD
				0x6C		Local Dim		TBD
								TBD
				0x69		PC AUTO ADJUST	1	
				0x6A		MFC	0	OFF
							1	LOW
							2	MIDDLE
							3	HIGH
				0x6B		POWER SAVE MODE		TBD
								TBD
				0x68		RESET	1	
				0xFE		POWER	0	Off
							1	On

Notice

(1) CURSOURCE Setting Value

AV1:1, AV2:2, SVIDEO:4, COMP1:7, HDIM:11, DVI12, DSUB:10, MMP:15

(2) MAX_ILLUMINANCE Settings

Setting Value = Ambient Level (by LUX) / 100

Ex) Desired Ambient is 10000 Lux, Setting is 100 (= 10000 / 100)

(3) MIN_ILLUMINACE Settings

Setting Value = Ambient Level (by LUX) / 10

Ex) Desired Ambient is 200 Lux, Setting is 20 (= 200 / 10)

(4) DIM_LEVEL Settings

Dimming is controlled by Brightness Settings.

(5) TEMPERATURE Settings

Setting Value = Desired temperture(by Celsius) x 2 + 60

Ex) Desired temperature is 60℃, Setting is 180 (= 60 x 2 + 60)

(6) TEMP_HYSTERESIS Settings

Setting Value = Desired Hysteresis(by Celsius) x 2

Ex) Desired Hysteresis is 2℃, Setting is 4 (= 2 x 2)

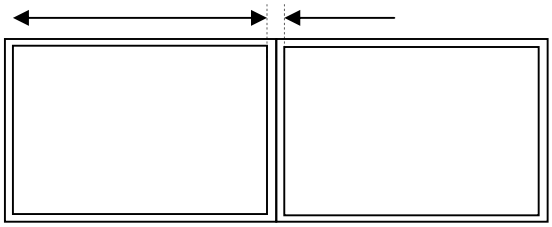
(7) ILLUMINACE

Current lux/10. If Cur_lux>2550 then Value=255

(8) Read only Command

(9) Gap Settings

Setting Value =(int) (1000 * Gap / Active)



Active Gap

4. Control Command Example

a. Set Input Source to RGB Input

CMD	Packet (5Bytes)				
0xF5	0x88	0	0xFE	0x01	0

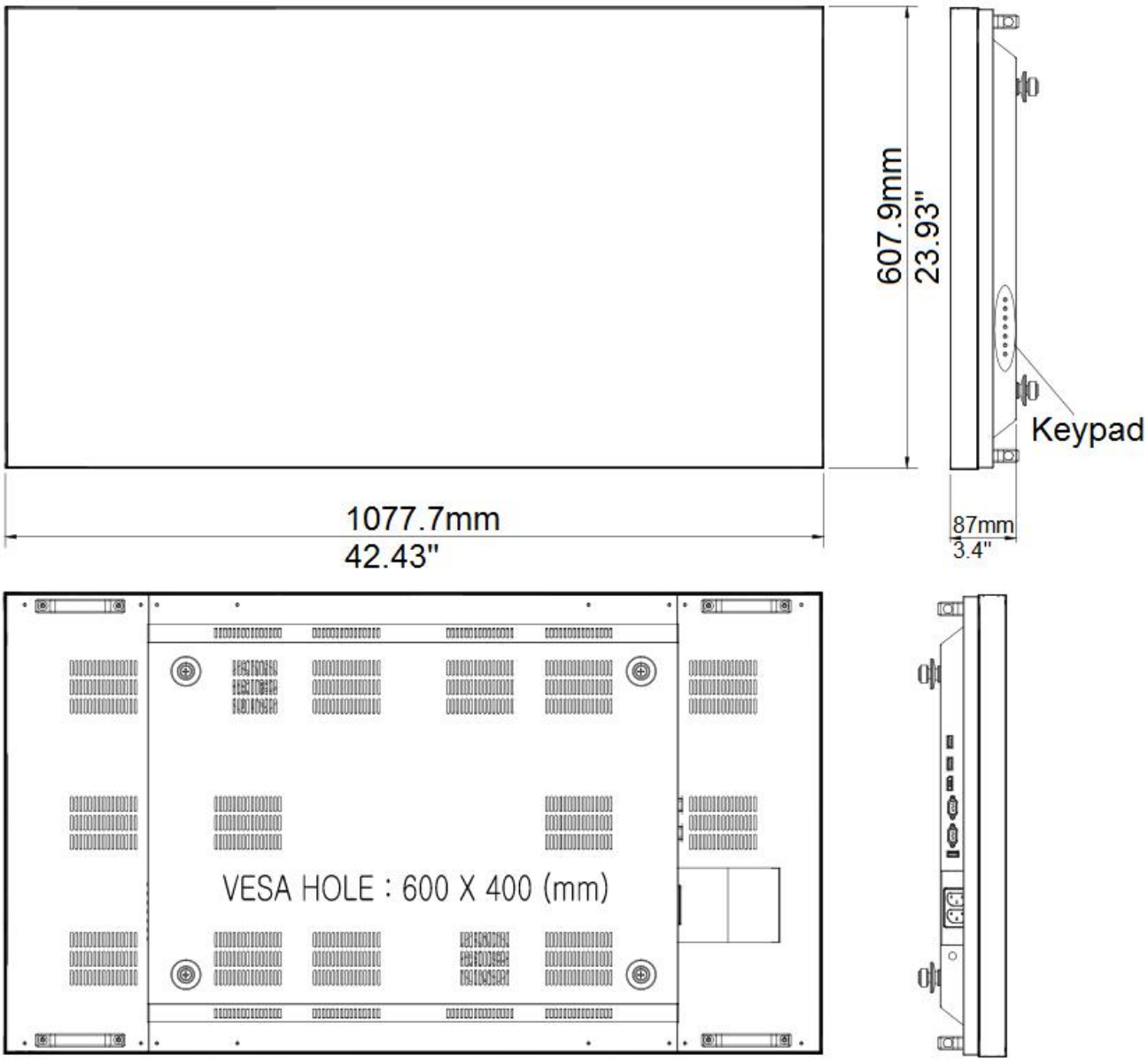
b. Read Power State

	CMD	Packet(4Bytes)			
PC	0xF4	0x89	0	0xFE	0xFE

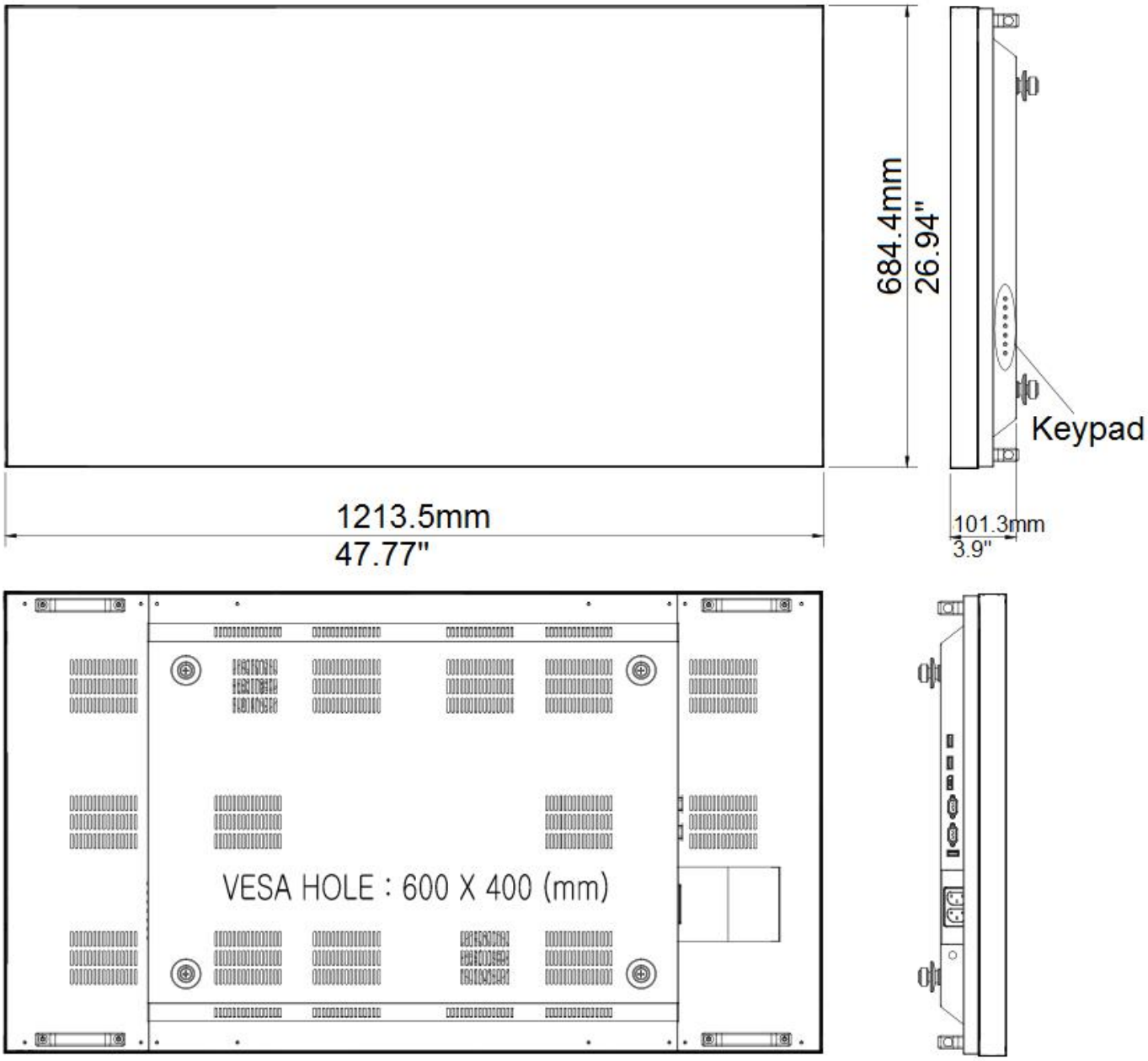
	CMD	Packet(1Byte)
AD (Response)	0xF1	1(on) or 0(0ff)

MECHANICAL DRAWINGS

1. UNB-249-4K



2. UNB-255-4K


684.4mm
26.94"
Keypad
1213.5mm
47.77"
101.3mm
3.9"
VESA HOLE : 600 X 400 (mm)

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