

Multi Format UHD/4K OLED Monitor

Operation Manual_v1.0

LEM-550R

Contents

1. Caution	04
2. Main Features	06
3. Controls & Functions	07
4. Menu Tree & Adjustment	10
5. Menu Operations	12
[1] PICTURE	12
[2] VIDEO	13
[3] COLOR	14
[4] MARKER	15
[5] GPI	16
[6] WAVEFORM	17
[7] NETWORK	18
[8] AUDIO	18
[9] SYSTEM	19
6. Firmware Upgrade	20
7. Video Support Resolution	21
8. Product Specifications	23

1. Caution

- **Always use set voltage.**
- **AC 100 ~ 240V**
- All operating instructions must be read and understood before the product is operated.
- These safety and operating instructions must be kept in safe place for future reference.
- All warnings on the product and in the instructions must be observed closely.
- All operating instructions must be followed.
- Do not use attachments not recommended by the manufacturer. Use of inadequate attachments can result in accidents.
- This product must be operated on a power source specified on the specification label. If you are not sure of the type of power supply used in your home, consult your dealer or local power company. For units designed to operate on batteries or another power source, refer to the operating instructions.
- The power cords must be routed properly to prevent people from stepping on them or objects from resting on them. Check the cords at the plugs and product.
- Do not overload AC outlets or extension cords. Overloading can cause fire or electric shock.
- Never insert an object into the product through vents or openings. High voltage flows in the product, and inserting an object can cause electric shock and/or short internal parts. For the same reason, do not spill water or liquid on the product.
- Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified service person to perform servicing.
- If any of the following conditions occurs, unplug the power cord from the DC outlet, and request a qualified service person to perform repairs.
 - a. When the power cord or plug is damaged.
 - b. When a liquid was spilled on the product or when objects have fallen into the product.
 - c. When the product has been exposed to rain or water.
 - d. When the product does not operate properly as described in the operating instructions. Do not touch the controls other than those described in the operating instructions. Improper adjustment of controls not described in the instructions can cause damage, which often requires extensive adjustment work by a qualified technician.
 - e. When the product has been dropped or damaged.
 - f. When the product displays an abnormal condition. Any noticeable abnormality in the product indicates that the product needs servicing.
- In case the product needs replacement parts, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electric shock and/or other danger.
- Upon completion of service or repair work, request the service technician to perform safety checks to ensure that the product is in proper operating condition.
- The power cord plug shall be connected to a MAINS socket outlet with a protective earthing connection.
- Unplug the power cord from the AC outlet when happening any problem in the product.

1. Caution

- When mounting the product be sure to install the product according to the method recommended by the manufacturer.
- Unplug the power cord from the DC outlet before cleaning the product. Use a damp cloth to clean the product. Do not use liquid cleaners or aerosol cleaners.
- Unplug the power cord from the AC outlet if you do not use the product for considerably long time.
- Do not use the product near water, such as bathtub, washbasin, kitchen sink and laundry tub, swimming pool and in a wet basement.
- Keep the product away from direct rays of the Sun-light.
- Do not place the product on an unstable cart, stand, tripod or table. Placing the product on an unstable base can cause the product to fall, resulting in serious personal injuries as well as damage to the product. Use only a cart, stand, tripod, bracket or table recommended by the manufacturer or sold with the product. When mounting the product on a wall, be sure to follow the manufacturer's instruction. Use only the mounting hardware recommended by the manufacturer.
- When relocating the product placed on a cart, it must be moved with the utmost care.
- Sudden stops, excessive force and uneven floor surface can cause the product to fall from the cart.
- The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a bed, sofa, rug or other similar surface, since they can block ventilation openings. This product is not designed for built-in installation; do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.
- In case of installation the product on the rack, the inside of the product would be overheated due to heat from other devices near by and the decrease of air circulation, which could damage to the monitor. To prevent the damage, please have enough space for the monitors and use fan to avoid heat and maintain the operating temperature. (Refer to the specification of the product).
- The LCD panel used in this product is made of glass. Therefore, it can break when the product is dropped or applied with impact. Be careful not to be injured by broken glass pieces in case the LCD panel breaks.
- Keep the product away from heat sources such as radiators, heaters, stoves and other heat generating products (including amplifiers).

WARNING



<Main Switch>

- | means Power on when pressing
- means Power off when pressing



<Beside critical components in circuit diagram>

To identify any terminal which is intended for connection to an external conductor for protection against electric shock in case of a fault, or the terminal of a protective earth (ground) electrode.



<Near the main terminal block>

This mark indicates the possibility of injury or damage to property.

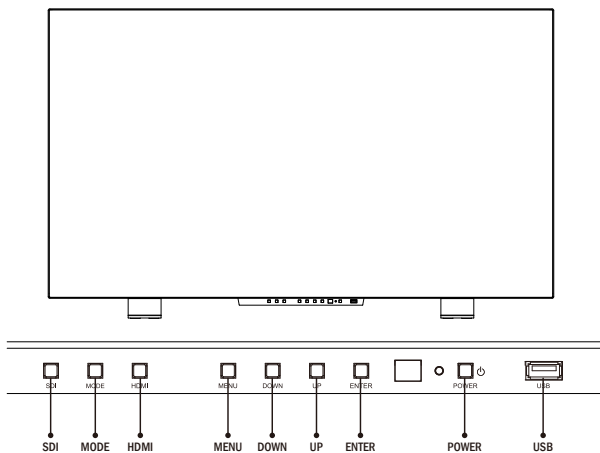
2. Main Features

LEM-550R Monitor contains the following features :

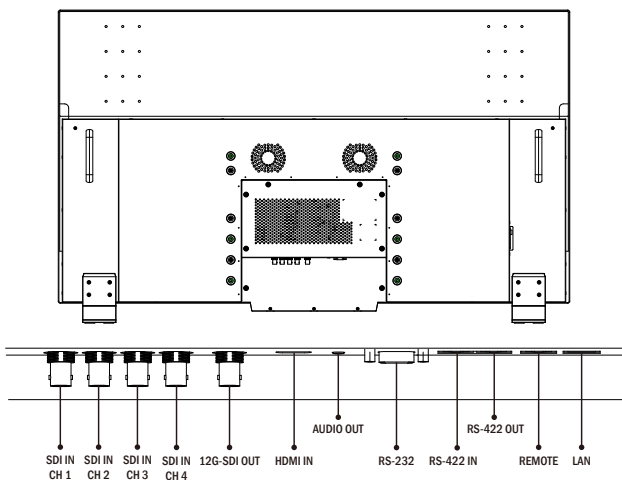
- **Compatible with various SDI signal formats**
 - This product is compatible with various SDI signals - 480i, 576i, 1080i, 1080p, 1080psf.
- **All-in-one type system**
 - Slim and all-in-one type monitor that requires no additional accessories, for optimized space utilization.
 - This product is suitable for installation in the Studio Wall.
- **Wide Screen support**
 - This product supports native 16:9 aspect ratio.
- **Remote control function**
 - This product can simply be Remote-controlled by cable connection without additional peripheral equipment attached to unit.
 - This product supports TVLogic's Remote Control program.
- **Ethernet & USB support**
 - Supports Ethernet and USB connection for easy update of new function and error correction.
- **HDMI input support**
 - Supports HDMI inputs without additional equipment.
- **3G Support**
 - Supports 3G A/B format
- **Additional features**
 - Wide Viewing Angle, OSD user interface.

3. Controls & Functions

LEM-550R : FRONT



LEM-550R : REAR



3. Controls & Functions

FRONT

- **[SDI] Button/Lamp**
 - Used to select SDI A/B input signal.
- **[MODE] Button/Lamp**
 - Used to select the UD MODE.
 - Press the button to move through the modes : 2-SAMPLE -> 4 QUAD -> SINGLE
- **[HDMI] Button/Lamp**
 - Used to select HDMI input.
- **[MENU] Button**
 - Used to activate the OSD menu.
- **[UP] Button**
 - Used to move up through the menus during the OSD menu activation.
 - Also used to increase the value of the selected feature.
- **[DOWN] Button**
 - Used to down through the menus during the OSD menu activation.
 - Also used to decrease the value of the selected feature.
- **[ENTER] Button**
 - Used to confirm a chosen value.
- **[POWER] Button/Lamp**
 - Used to turn the power on and off.
 - Press the button to turn the power on.
 - To turn off the power, press and hold the button for more than 3 seconds.

3. Controls & Functions

REAR

- **[SDI INPUT x 4] (BNC)**
 - Signal input terminal for HD/SD SDI signal.
 - The first and second SDI INPUT terminal supports up to 12G input.
- **[12G-SDI Output] (BNC)**
 - 12G signal or BYPASS output terminal for HD/SD SDI signal that input through the [SDI INPUT] terminal.
 - 12G or 6G signal output terminal for HDMI signal that input through the [HDMI INPUT] terminal.
- **[HDMI] (HDMI)**
 - Signal input terminal for HDMI signal.
- **[AUDIO OUTPUT] (PHONE JACK)**
 - Audio disembedded signal output.
- **[RS-232 PORT] (RJ-45)**
 - Used to update new program to add new functions and correct errors.
- **[RS-422 PORT] (RJ-45)**
 - Used to control the monitor with a protocol provided by TVLogic.
- **[REMOTE] (RJ-45)**
 - Provides connection to control equipment for external monitor control.
 - Features can be changed in the GPI section of the OSD menu.
- **[LAN]**
 - Used to control the monitor with a protocol provided by TVLogic.

- **~ AC IN**
 - 100 ~ 240V AC 50/60Hz

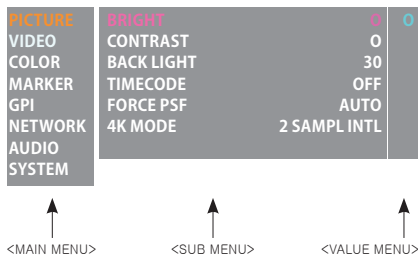
<Warning!!>

When using the product make sure to ground, whenever possible, before connecting the input signal cable in order to prevent any possible damage to the product or connected devices. The damage may include signal noise, malfunction of main board or display panel. And the connected devices such as camera or video source player may also be influenced through signal cable. Please check if the AC power source and the power extender or power distributor is grounded.

4. Menu Tree & Adjustment

[1] Menu Organization

- The product may be controlled and set system-wise through OSD displayed on the screen.
- Below is the layout of the product's menu.



[2] Menu Control

- You may control various functions using MENU, UP, DOWN, ENTER buttons on the bottom front of the monitor and GPI CONTROLLER PC REMOTE CONTROL S/W.

[3] Menu Control Sequence

Menu Control sequence follows the order below:

1. Press the MENU button to activate the OSD menu.
2. Move to a desired menu with the UP/DOWN button.
3. Press the ENTER button to select a menu and move to a sub-menu with the UP/DOWN button.
4. Press the ENTER button to select the desired sub-menu. (The selected sub-menu's font color will be changed to blue.)
5. Press ENTER button to save the new value after adjusting the value with UP/DOWN button. (The changed font color will be returned to default(white).)
6. Press the MENU button to return to the previous menu and if there is no previous menu, the OSD menu will be removed from the screen.

4. Menu Tree & Adjustment

[4] MENU TREE

PICTURE	BRIGHT
	CONTRAST
	BACK LIGHT
	TIMECODE
	FORCE PSF
	4K MODE
COLOR	TEMP
	GAIN R
	GAIN G
	GAIN B
	BIAS R
	BIAS G
	BIAS B
	COLOR COPY
MARKER	MARKER
	CENTER MARKER
	SAFETY AREA
	FIT MARKER
	MARKER MAT
	MARKER COLOR
	THICKNESS
	USER MARKER H1
	USER MARKER H2
	UAER MARKER V1
	USER MARKER V2

GPI	GPI 1 ~ GPI 8
	GROUP ID
	MONITOR ID
	RS-422 BAUD
WAVEFORM	ENABLE
	TYPE
	INTENSITY
	LINE WAVEFORM
NETWORK	LINE SEL POS
	DHCP
	IP ADDR
	SUBNET
	GATEWAY
	PORT
	IP APPLY
AUDIO	MAC ADDR
	VOLUME
	AUD CH
	LVM TYPE
SYSTEM	LVM SIZE
	DEFAULT
	USER CONFIG
	KEY LED
	SDI OUT
	OSD DISPLAY
	SW UPGRADE
	VERSION
INPUT SIGNAL	

5. Menu Operations

[1] PICTURE

BRIGHT	0
CONTRAST	0
BACK LIGHT	35
TIMECODE	OFF
FORCE PSF	AUTO
4K MODE	2 SAMPLE

- **BRIGHT**
- Used to set the brightness(=offset) level from -100 to 100.
- **CONTRAST**
- Used to set the contrast(gain) level from -100 to 100.
- **BACK LIGHT**
- Used to control the brightness of the LCD panel backlight from 0 to 127.
- **TIMECODE**
- Used to set the timecode. Available modes are OFF and ATC.
- **FORCE PSF**
- Force PSF setting. The setting mode is ON, OFF.
- **4K MODE**
- Used to set the 2 SAMPLE INTERLEAVE, 4 INPUT QUAD and SINGLE.

5. Menu Operations

[2] VIDEO

CAMLUT	OFF
HDR ENABLE	OFF
HDR SELECT	PQ
BLACK LEVEL	0.000
PEAK LUM	100
EETF	OFF
GAMUT	BT.709
RANGE SELECT	LIMITED

- **EETF**
 - Used to activate the EETF. Available modes are OFF and ON.
- **GAMUT**
 - Used to select the type of GAMUT. Available options are BT.709, DCI-P3, BT.2020 and NATIVE.
- **RANGE SELECT**
 - Used to select the COLOR RANGE. Available options are LIMITED and FULL.

- **CAM LUT**
 - Used to set the CAMERA LUT.
 - Adjustable modes are OFF, LOG-C, C-LOG, S-LOG1 / 2 / 3 and REDGAMMA 3 / 4.
 - When the CAM LUT is activated, the HDR is automatically inactivated.
- **HDR ENABLE**
 - Used to activate the HDR function. Available modes are OFF and ON.
 - When the HDR ENABLE is activated, the CAM LUT is automatically inactivated.
- **HDR SELECT**
 - Used to select the HDR modes. Available modes are PQ, HLG and S-LOG3.
- **BLACK LEVEL**
 - Used to set the BLACK LEVEL from 0.000 to 0.100.
- **PEAK LUM**
 - Used to adjust the PEAK LUM level from 100 to 10000.

5. Menu Operations

[3] COLOR

TEMP	6500K
GAIN R	0
GAIN G	0
GAIN B	0
BIAS R	0
BIAS G	0
BIAS B	0
COLOR COPY	-

- **TEMP**
 - Controls the color temperature and allows instant access to preset the color temperature settings.
 - Available color temperatures are 9300K, 6500K, 5600K, 5000K, 3200K and USER 1/2/3.
 - In USER 1/2/3 modes, user can define custom RGB GAIN, BIAS and COLOR COPY values.
- **GAIN R**
 - Used to set Red Gain(or Picture, Contrast) level from -128 to 127.
 - Adjusts the red color of bright section.
 - Only available in Custom 1/2/3 mode.
- **GAIN G**
 - Used to set Green Gain(or Picture, Contrast) level from -128 to 127.
 - Adjusts the green color of bright section.
 - Only available in Custom 1/2/3 mode.
- **GAIN B**
 - Used to set Blue Gain(or Picture, Contrast) level from -128 to 127.
 - Adjusts the blue color of bright section.
 - Only available in Custom 1/2/3 mode.
- **BIAS R**
 - Used to set Red Bias(or Offset, mainly affects on Black level) from -128 to 127.
 - Adjusts the red color of dark section.
 - Only available in CUSTOM 1/2/3 mode.
- **BIAS G**
 - Used to set Green Bias(or Offset, mainly affects on Black level) from -128 to 127.
 - Adjusts the green color of dark section.
 - Only available in CUSTOM 1/2/3 mode.
- **BIAS B**
 - Used to set Blue Bias(or Offset, mainly affects on Black level) from -128 to 127.
 - Adjusts the blue color of dark section.
 - Only available in CUSTOM 1/2/3 mode.
- **COLOR COPY**
 - Used to copy the R/G/B Gain value of pre-stored color temperature settings.
 - In User mode, find and select the color temperature to be used with the UP/DOWN button and press the Enter button to copy and apply the Gain value to GAIN RED, GAIN GREEN, GAIN BLUE.
 - Only available in CUSTOM 1/2/3 mode.

5. Menu Operations

[4] MARKER

MARKER	OFF
CENTER MARKER	OFF
SAFETY AREA	OFF
FIT MARKER	OFF
MARKER MAT	OFF
MARKER COLOR	WHITE
THICKNESS	1
USER MARKER H1	0
USER MARKER H2	0
USER MARKER V1	0
USER MARKER V2	0

● MARKER

- Used to select the marker type when the MARKER is displayed on the screen.

MODE	MARKER CLASS
HD	16:9, 4:3, 15:9, 14:9, 13:9, 1.85:1, 2.35:1, USER
SD 16:9	
SD 4:3	16:9, 4:3, 15:9, 14:9, 13:9, 1.85:1, 2.35:1, USER

● CENTER MARKER

- Used to select the availability of the CENTER MARKER on the screen.

● SAFETY MARKER

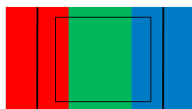
- Used to select and control the size and availability of the SAFETY AREA.
- Available types are 80%, 85%, 88%, 90%, 93%, 100%, EBU ACTION 16:9, EBU GRAPHIC 16:9, EBU ACTION 14:9, EBU GRAPHIC 14:9, EBU ACTION 4:3 and EBU GRAPHIC 4:3.

● FIT MARKER

- Used to activate or inactivate the FIT MARKER function.
- When the Marker type is selected in the Marker menu, a border line of the Safety Area will be displayed inside the Marker.
- FIT MARKER ON/OFF displays as shown below.



- MARKER : 4:3
- SAFETY AREA : 90%
- FIT MARKER : OFF



- MARKER : 4:3
- SAFETY AREA : 90%
- FIT MARKER : ON

● MARKER MAT

- Used to set the darkness level outside of the MARKER area.
- Available values are from OFF(transparent) to 7(Black).

● MARKER COLOR

- Used to control the color of MARKER lines.
- Available colors are White, Yellow, Cyan, Green, Magenta, Red, Blue, Black and Adaptive.

● THICKNESS

- Used to set the thickness of the MARKER lines.
- Thickness level is from 1 to 4 by the pixel unit.

● USER MARKER H1

- Used to set the position of the first horizontal marker line.
- Displayed when MARKER menu is set to USER.

● USER MARKER H2

- Used to set the position of the second horizontal marker line.
- Displayed when MARKER menu is set to USER.

● USER MARKER V1

- Used to set the position of the first vertical marker line.
- Displayed when MARKER menu is set to USER.

● USER MARKER V2

- Used to set the position of the second vertical marker line.
- Displayed when MARKER menu is set to USER.

5. Menu Operations

[5] GPI

PIN 1	NONE
PIN 2	SDI A
PIN 3	SDI B
PIN 4	16:9 MAR
PIN 5	15:9 MAR
PIN 6	14:9 MAR
PIN 7	POW ON/OFF
PIN 8	GND
GROUP ID	0
MONITOR ID	0
RS-422 BAUD	9600

● GPI 1 ~ 8

- This item activates/ deactivates the REMOTE function.
- The user may designate a function for each pin and each pin's default setting is as follows.

PIN 1 : HDMI

PIN 2 : SDI-A

PIN 3 : SDI-B

PIN 4 : 16:9 MAR

PIN 5 : 15:9 MAR

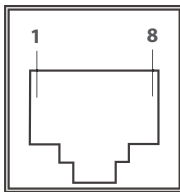
PIN 6 : 14:9 MAR

PIN 7 is Power ON/OFF use only, GPI 8 is GND.

- Each pin's location is as below.

REMOTE (RJ-45)

- 1: Pin1
- 2: Pin2
- 3: Pin3
- 4: Pin4
- 5: Pin5
- 6: Pin6
- 7: Pin7
- 8: GND



- The selectable functions for PIN 1~ PIN 6 are as follows:

Menu Classification	Settable Values
PIN 1~6	NONE, SDI-A, SDI-B, HDMI, 16:9 MARKER, 4:3 MARKER, 15:9 MARKER, 14:9 MARKER, 13:9 MARKER, 1.85:1 MARKER, 2.35:1 MARKER, CENTER MARKER, SAFETY AREA 80%, SAFETY AREA 85%, SAFETY AREA 88%, SAFETY AREA 90%, SAFETY AREA 93%, SAFETY AREA 100%
PIN 7	POWER ON/OFF CONTROL
PIN 8	GND

5. Menu Operations

[6] WAVEFORM

ENABLE	OFF
TYPE	OFF
INTENSITY	1
LINE WAVEFORM	OFF
LINE SEL POS	1

● ENABLE

- Used to enable the WAVEFORM function.
Available modes are OFF and ON.

● TYPE

- Used to select the WAVEFORM type.
- Available modes are OFF, WAVEFORM, VECTORSCOPE and WAVE_VECTOR.

● INTENSITY

- Controls the brightness of the WAVEFORM display.
- Available values are between 1 ~ 63.

● LINE WAVEFORM

- Used to display the entire data or one line data on the WAVEFORM.
- Available modes are OFF and ON.

● LINE SEL POS

- Used to select specific Line for the WAVEFORM.
- Control range varies according to the resolution of the input signal.

5. Menu Operations

[7] NETWORK

DHCP	DHCP
IP (D)	192.168.101.156
SUBNET	255.255.255.000
GATEWAY	192.168.101.001
PORT	10262
IP APPLY	NO
MAC ADDR	XX:XX:XX

- **DHCP**
- Used to activate/deactivate the DHCP function.
- **IP (D)**
- Used to set the IP Address connected to a Monitor.
- **SUBNET**
- Used to set the Subnet Mask connected to a Monitor.
- **GATEWAY**
- Used to set the Gateway number connected to a Monitor.
- **PORT**
- Used to set the port number. Default value is 10262.
- **IP APPLY**
- Use to apply changed value of IP Address, Subnet mask, Gateway and Port no.
- **MAC ADDR**
- Used to display the MAC ADDR.

[8] AUDIO

VOLUME	15
AUD CH	GR1 CH1+CH2
LVM TYPE	OFF
LVM SIZE	MID

- **VOLUME**
- Used to control the audio volume. Control range is from 0 to 30 and the default value is 15.
- **AUD CH**
- Used to set the audio channel.
- Available ranges are GR1 CH1+CH2, GR1 CH3+CH4, GR2 CH1+CH2, GR2 CH3+CH4, GR3 CH1+CH2, R3 CH3+CH4, GR4 CH1+CH2 and GR4 CH3+CH4.
- **LVM TYPE**
- Used to set the audio type.
- Available options are OFF, BOTH H, LEFT H, RIGHT H, BOTH V, LEFT V and RIGHT V.
- **LVM SIZE**
- Used to control the size of the Audio Level Meters.
- Available modes are TINY, MID and TALL.

5. Menu Operations

[9] SYSTEM

DEFAULT	NO
USER CONFIG	USER 1
KEY LED	YES
SDI OUT	BY PASS
OSD DISPLAY	CONTINUE
SW UPGRADE	OFF
VERSION	S04.F04.H05
INPUT	NO INPUT

- **DEFAULT**
 - Used to initialize OSD values to factory default except for the value of the BACK LIGHT.
- **USER CONFIG**
 - Used to save and apply in three kinds of user configurations.
 - Available modes are USER1, USER2 and USER3.
 - All items can be assignable for each USER1, USER2 and USER3 settings.
- **KEY LED**
 - Used to control the Key Lamp on the front of the monitor.
- **SDI OUT**
 - Used to change the Throughout on the rear of the monitor to BY PASS or 12G output.
 - In BY PASS mode, the selected channel's image is output as it is.
 - In 12G signal, output signal is changed to 12G.
- **OSD DISPLAY**
 - Used to set the OSD MENU DISPLAY time.
 - Available modes are CONTINUE, 3 SEC and 20 SEC.
- **SW UPGRADE**
 - Used to upgrade the firmware using the USB (Thumb drive).
 - Available options are CPU, FPGA.
 - When CPU or FPGA is selected, only each program can be upgraded at a time.
- **VERSION**
 - Displays the current program version of the product.
 - S : Firmware / F : FPGA / H : Hardware.
- **INPUT**
 - Displays the current input format.

6. Firmware Upgrade

[1] FIRMWARE UPGRADE

- The USB(Thumb drive) which contains the F/W file is needed for Firmware Upgrade.
- Select the SW UPGRADE in the SYSTEM menu.
 1. Connect the USB to the USB Slot on the front of the monitor.
 2. Select what to update among CPU / FPGA / ALL in [S/W UPGRADE].
 3. When the USB connection is completed, the S/W upgrade starts and the progress displays on the bottom left side of the screen.
 4. If the USB doesn't connect properly or there is no file in the specified location, the error message will be displayed on the bottom left side of the screen and the upgrade won't start.
 5. In that case, check the USB or the file location and try again.
- After USB connection, turn off and then on the monitor. The upgrade will activate automatically.

7. Video Support Resolution

VIDEO SUPPORT RESOLUTION

Input Signal Interfaces	Signal Format (12G SDI)	
12G-SDI single link(4k)	3840x2160 (50/59.94/60p)	YCbCr 4:2:2 10bit

Input Signal Interfaces	Signal Format (6G SDI)	
6G-SDI single link(4k)	3840x2160 (23.98/24/25/29.97/30p)	YCbCr 4:2:2 10bit

Input Signal Interfaces	Signal Format (3G_A SDI)	
3G-SDI single link	1920x1080 (50/59.94/60p)	YCbCr 4:2:2 10bit

Input Signal Interfaces	Signal Format (3G_B SDI)	
3G-SDI single link	1920x1080 (50/59.94/60p) (23.98/24/25/29.97/30p) (50/59.94/60l) (25/29.97/30psf)	YCbCr 4:2:2 10bit YCbCr 4:4:4 10/12bit YCbCr 4:2:2 12bit RGB 4:4:4 10/12bit

Input Signal Interfaces	Signal Format (3G_A SDI)	
3G-SDI Quad link(4k)	3840x2160(50/59.94/60p)	YCbCr 4:2:2 10bit
3G-SDI 2-Sample Interleave Quad link(4k)	3840x2160(50/59.94/60p)	YCbCr 4:2:2 10bit

7. Video Support Resolution

VIDEO SUPPORT RESOLUTION

Input Signal Interfaces	Signal Format (HD SDI)	
HD SDI single link	1920x1080 (23.98/24/25/29.97/30p) (50/59.94/60l) (25/29.97/30psf) 1280x720 (50/59.94/60P)	YCbCr 4:2:2 10bit YCbCr 4:2:2 10bit YCbCr 4:2:2 10bit YCbCr 4:2:2 10bit

Input Signal Interfaces	Signal Format (HD-SDI)	
HD-SDI Quad link(4k)	3840x2160 (23.98/24/25/29.97/30p)	YCbCr 4:2:2 10bit
HD-SDI 2-Sample Interleave Quad link(4k)	3840x2160 (23.98/24/25/29.97/30p)	YCbCr 4:2:2 10bit

Input Signal Interfaces	Signal Format (SD SDI)	
SD SDI single link	720x487 (59.94i) 720x576 (50i)	YCbCr 4:2:2 10bit YCbCr 4:2:2 10bit

Input Signal Interfaces	Signal Format (HDMI)	
HDMI Single link	1920x1080(50/59.94/60p) 1920x1080(23.98/24/25/29.97/30p)	* HDMI RGB 4:4:4 8bit YCbCr 4:4:4 8bit YCbCr 4:2:2 8bit
	3840x2160 (23.98/24/25/29.97/30p)	RGB 4:4:4 8bit YCbCr 4:4:4 8bit YCbCr 4:2:2 8bit RGB 4:4:4 10bit YCbCr 4:4:4 10bit YCbCr 4:2:2 10bit RGB 4:4:4 12bit YCbCr 4:4:4 12bit YCbCr 4:2:2 12bit
	3840x2160 (50/59.94/60p)	RGB 4:4:4 8, 10, 12bit YCbCr 4:2:2 8, 10, 12bit YCbCr 4:2:0 8bit

8. Product Specifications

		LEM-550R
LCD	Size	55"
	Resolution	3840 hor. by 2160 ver. Pixels, RGB stripe arrangement
	Pixel Pitch	0.315 mm x 0.315 mm
	Color Depth	1.07 Billion colors
	Viewing Angle	R/L 120 (min.), U/D 120 (min.)
	Luminance of white	750(HDR)/470(Peak)/140(Normal) cd/m ² (Typ)
	Contrast Ratio	HDR 150,000 : 1
	Display Area	54.6 inches(1387.8mm) diagonal
Input	1 x HDMI	HDMI V2.0 Input 1Ch(with HDCP support)
	4 x BNC	12G/3G/HD/SD SDI Input 2Ch 3G/HD SDI Input 2Ch
Output	1 x BNC	12G/3G/HD/SD SDI Output 1Ch By Pass Mode : SDI A/B Channel (Active Through Out) 12G Mode : 3840x2160 60p/59.94p/50p (All Input Format Converted to 12G-SDI)
SDI Input Signal Formats	SMPTE ST2082-10 Mode1	3840x2160 60p/59.94p/50p (12G-SDI x 1Ch)
	SMPTE ST2081-10 Mode1	3840x2160 30p/29.97p/25p/24p*/23.98p* (6G-SDI x 1Ch)
	SMPTE ST425-5	3840x2160 60p/59.94p/50p (3G-SDI x 4Ch)
	SMPTE ST274	3840x2160 30p/29.97p/25p/24p*/23.98p* (HD-SDI x 4Ch)**
	SMPTE ST425	1920x1080 60p/59.94p/50p (3G-SDI LEVEL A)
		1920x1080 60i/59.94i/50i/30p/29.97p/25p/24p*/23.98p* (3G-SDI LEVEL B) 1280x720 60p/59.94p/50p (3G-SDI LEVEL B)
	SMPTE-274M	1920x1080 60i/59.94i/50i/30p/29.97p/25p/24p*/23.98p*
	SMPTE-296M	1280x720 60p/59.94p/50p
SMPTE-259M	720x487 59.94i	
	720x576 50i	
	* 24P/23.97P : 60p/59.94p Frame-rate Converted Display	
	** Not support 2 Sample Interleaved Input	
HDMI Input Signal Formats	V2.0	3840x2160 60p/59.94p/50p (RGB/YCbCr 4:4:4 8bpp Mode)
	V1.4	3840x2160 30p/29.97p/25p/24p*/23.98p* (RGB/YCbCr 4:4:4 8bpp Mode)
		1920x1080 60i/59.94i/50i/30p/29.97p/25p/24p*/23.98p* (RGB/YCbCr 4:4:4 8bpp Mode) 60p/59.94p/50p
	V1.2	1280x720 60p/59.94p/50p (RGB/YCbCr 4:4:4 8bpp Mode)
* 24P/23.97P : 60p/59.94p Frame-rate Converted Display		
Audio In	SDI Embedded Audio (Group, Ch Selectable)	
Audio Out	External Output Port (3.5m Phone Jack)	
Power	100~240V, 50/60Hz	
Power Consumption (Approx.)	100V : 0.55 A	
	240V : 0.28 A	
Operating Temperature	0°C to 40°C	
Storage Temperature	-20°C to 60°C	
Main Body Dimensions (mm/inch)	1230 x 705.1 x 76.7(mm) / 48.42 x 27.75 x 3.01(inch)	
Main Body Dimensions with stand (mm/inch)	1230 x 751.6 x 309.4(mm) / 48.42 x 29.59 x 12.18(inch)	
Weight	30.0kg / 66.13(lbs)	
Basic Accessories	AC Power Cable	
Optional Accessories	Carrying Case.	

* The specification above may be changed without notice.

TVlogic Always **ON-AIR**

FOR MORE INFORMATION PLEASE VISIT : <http://www.tvlogic.tv>
12F, ACE HIGH-END 8, 84 Gasan-digital 1-ro, Geumcheon-gu, Seoul, 18590, KOREA
TEL : +82-70-8668-6611, FAX : 82-2-6123-3201, E-mail : sales@tvlogic.co.kr