Ikegami

MONITORS

HEM-2570W
25-inch Full HD Pixel Multi-format OLED Master Monitor

RoHS

High-End Broadcast OLED Monitor

The HEM-2570W employs a 25-inch full 1920×1080 pixel Organic Light Emitting Diode (OLED) panel, and achives wide dynamic range, wide viewing angle, superb quick motion response and true color reproduction. It incorporates many useful standard functions like 10 scene files for user markers, embedded audio output, etc. It also achieves a compact size (same as LCD monitors) with its 102.8mm depth.It is a master monitor designed with Ikegami's new concept having both the high performance of a master monitor and the operating functions of an all purpose monitor.

25-inch Full HD	1920×1080 pixel	Viewing Angle 178degree(H/V)	Contrast Ratio 5000:1 ∗1	AC:135W (max) ∗2			
VBS Input	Y,PB,PR/ RGB Input▲	3G/HD/SD(4:2:2) -SDI Input	Embedded Analog Audio Output	Embedded Audio Meter	DVI-D Input	Analog PC Iutput ▲	Analog Audio 2ch Iutput
5.1ch Surround Down-mix	ASP-100 ▲ ∗4						
4:3/16:9	Remote (Parallel)	Remote (Wireless)	Remote (Mouse)	Remote (RS485)	Marker	User Marker (10 scenes)	Shadow
7-Test Signal Generator	10-Color temperature-memory	Stereo Speaker	Stereo Headphone	VITC Display	WFM Monitoring Display	Split Screen/ Full Screen Comparison	Dot-by-Dot Display
Vector Scope Display	Mouse Menu Control	USB Memory (Data/Picture)	Interlace Display	2Times/4Times Zoom	Mix Test Signal	Operation Panel Lighting	Closed Caption

W585×H398×D102.8mm
(W23.1×H15.7×D4.1inches)

Approx**11.4kg** (25.13lbs) ∗

∗1 EIAJ ED-2810 dark place, partial lighting contrast
∗2 Tentative figure
∗3 Supports after MPU(Ver 01.24) and FPGA(Ver 06)
∗4 Supports after Rev2

∗ Excluding Options and Stand

∗3

HEM-1770WR
17-inch Full HD Pixel Multi-format OLED Master Monitor

RoHS

High-End Broadcast OLED Monitor

The HEM-1770WR employs a 17-inch full 1920×1080 pixel Organic Light Emitting Diode (OLED) panel, and achives wide dynamic range, wide viewing angle, superb quick motion response and true color reproduction. It incorporates many useful standard functions like 10 scene files for user markers, embedded audio output, etc.It has a compact space saving size with 98mm depth and is light weight, allowing use in various places. Supports AC or DC powering, battery operation is avaialble using an optional battery bracket. It is Ikegami's new style of master monitor having both the high performance of a master monitor and the operating functions of an all purpose monitor.

17-inch Full HD	1920×1080 pixel	Viewing Angle 178degree(H/V)	Contrast Ratio 5000:1 ∗1	AC:81W (max) DC:76W (max) ∗2			
VBS Input	Y,PB,PR/ RGB Input▲	3G/HD/SD(4:2:2) -SDI Input	Embedded Analog Audio Output	Embedded Audio Meter	DVI-D Input	Analog PC Iutput ▲	Analog Audio 2ch Iutput
5.1ch Surround Down-mix	ASP-100 ▲ ∗4						
4:3/16:9	Remote (Parallel)	Remote (Wireless)	Remote (Mouse)	Remote (RS485)	Marker	User Marker (10 scenes)	Shadow
7-Test Signal Generator	10-Color temperature-memory	Stereo Speaker	Stereo Headphone	VITC Display	WFM Monitoring Display	Split Screen/ Full Screen Comparison	Dot-by-Dot Display
Vector Scope Display	Mouse Menu Control	USB Memory (Data/Picture)	Interlace Display	2Times/4Times Zoom	Mix Test Signal	Operation Panel Lighting	Closed Caption

W428×H301×D98mm
(W16.9×H11.9×D3.9inches)

7RU

Approx**7.5kg** (16.53lbs) ∗

∗1 EIAJ ED-2810 dark place, partial lighting contrast
∗2 Tentative figure
∗3 Supports after MPU(Ver 01.24) and FPGA(Ver 06)
∗4 Supports after Rev2

∗ Excluding Options and Stand

∗3

▲ Option

Evolutionary Features of the HEM-2570W & the HEM-1770WR OLED Master Monitors

● **OLED Features**

◆ High Contrast and Fast Quick Motion Response

OLED is a light emitting device, as well as an LED, but unlike the flat picture image projected from the rear of an LCD panel, it is similar to the picture image produced by reflection of natual light we are always looking at with our eyes, realistically reproducing the brightness of the twinkle of the stars, the black color of a grand piano, etc.
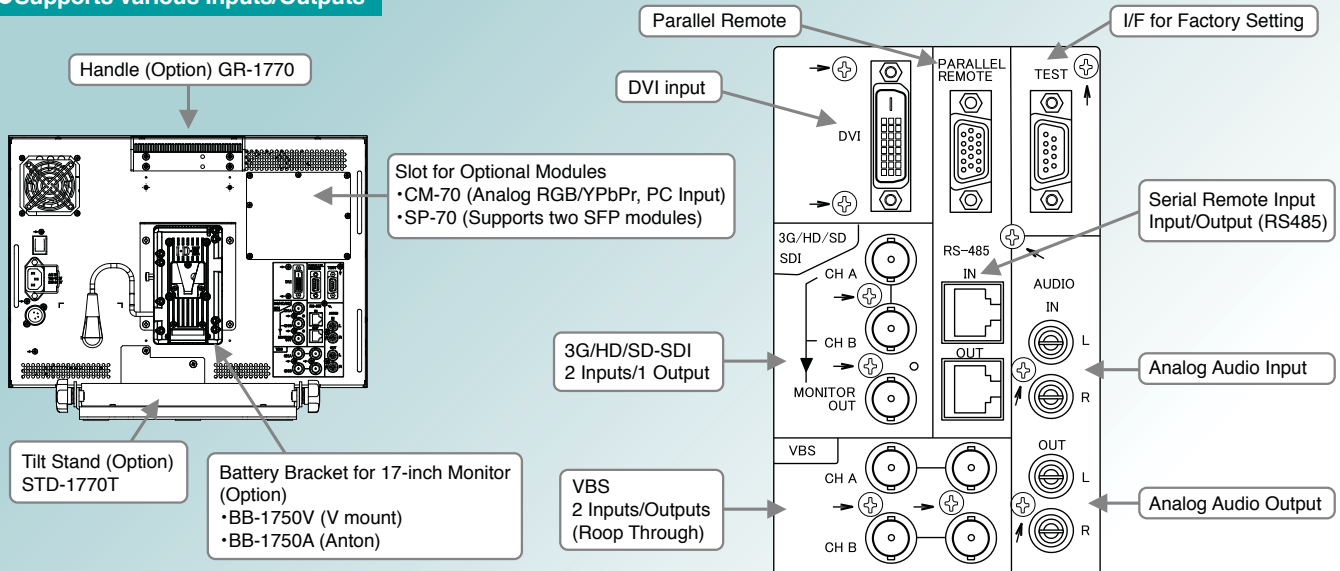
OLED

LCD

Also, its organic emitters instantly react to the change of current when video level is changed, it can achieve the same performance as a CRT in motion response even when shooting objects moving quickly in sports, etc.

◆ Interlace Display Function

In the case of the OLED monitor, there is no I/P conversion displaying "BLACK" between the lines, the same as with a CRT monitor. It is possible to directly display the input signal as it is without passing through an extra interpolation process.
It is also possible to reproduce the microscopic noise and almost invisible flicker which could only be reproduced by a CRT monitor, with the same performance as a CRT.

※1080i only

First Field

Second Field

Insert black in between lines
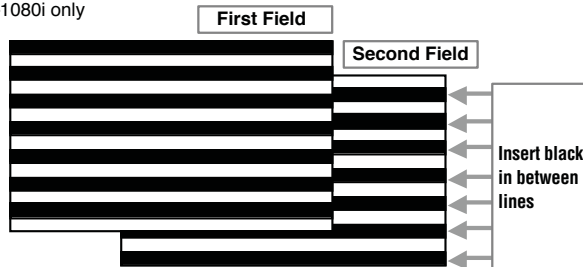
◆ CRT Gamma Function

With an OLED panel, black does not emit, so, it is possible to reproduce exceedingly true black color.
Ikegami's OLED monitors have a CRT Gamma Mode setting approximating the gamma of the CRT monitor, providing images with same feeling as previous CRT monitors.

OLED   CRT   LCD

$[cd/m^2]$

Brightness

INPUT SIGNAL [%]
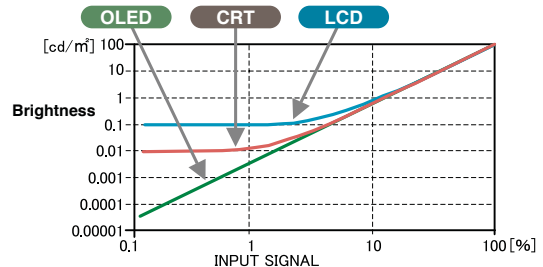
◆ Raster Brightness Correction for CRT Gamma

In the case of a CRT monitor, the raster brightness is slightly different depending on the type of CRT.
Ikegami's OLED monitors allow users to voluntarily correct the setting of CRT gamma according to the raster brightness of the master monitor being used at present.
The Raster Brightness Correction function allows comfortable transition when upgrading from CRT to the new OLED technology.

Raster Brightness Correction

$[cd/m^2]$

Brightness

INPUT SIGNAL [%]
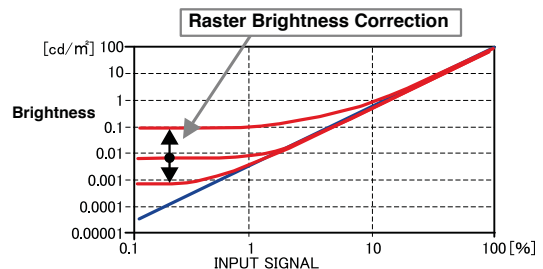
● **Supports various Inputs/Outputs**

HEM-1770WR
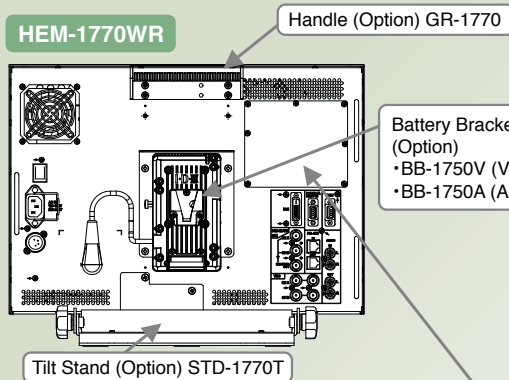
Handle (Option) GR-1770
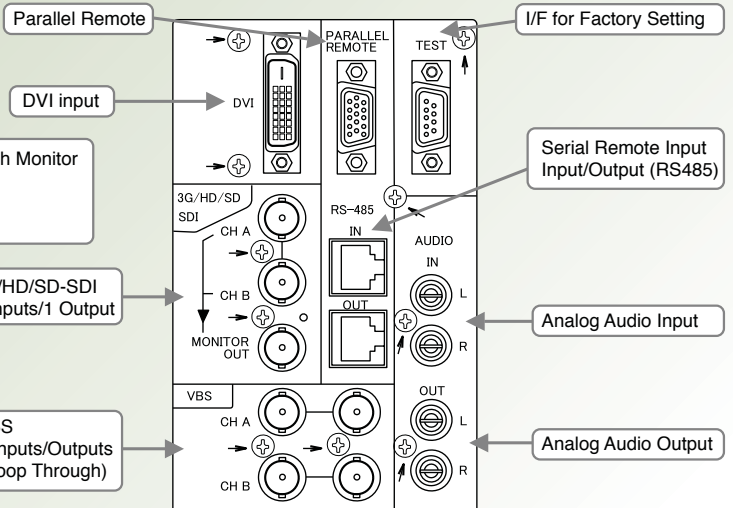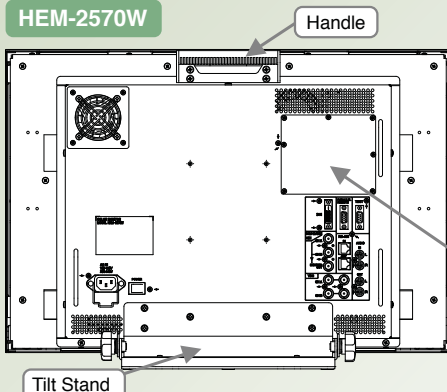
Battery Bracket for 17-inch Monitor (Option)
・BB-1750V (V mount)
・BB-1750A (Anton)

3G/HD/SD-SDI
2 Inputs/1 Output

Tilt Stand (Option) STD-1770T

HEM-2570W

Handle

Tilt Stand

Parallel Remote

DVI input

VBS
2 Inputs/Outputs
(Roop Through)

PARALLEL REMOTE   TEST

DVI

3G/HD/SD SDI   CH A   CH B   MONITOR OUT

VBS   CH A   CH B

RS-485   IN   OUT

AUDIO   IN   L   R   OUT   L   R

I/F for Factory Setting

Serial Remote Input
Input/Output (RS485)

Analog Audio Input

Analog Audio Output

Slot for Optional Modules
・CM-70 (Analog RGB/YPbPr, PC Input)
・SP-70 (Supports two SFP modules)

CM-70   SP-70
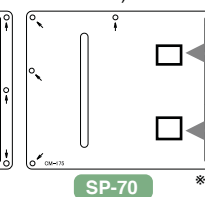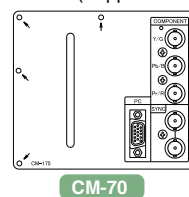
<Available SFP Modules>
Made by Embrionix
・EB34TD1R-SN
HDMI Module
1 input
・EB30HD2R-LN
3G-SDI Module
2 Inputs
・EB30HDRT-LN
3G-SDI Module
1 Input/ 1 Output

※ HDCP is not available.
Other type of modules are under consideration.

HLM-1751WR
17-inch HDTV/SDTV Full HD Pixel Multi-format LCD Color Monitor

RoHS

High-End Broadcast LCD Monitor

The HLM-1751WR employs a 17-inch full 1920×1080 pixel 10-bit resolution LCD panel, and achieves compact size, light weight, and low power consumption. It supports 3G/HD/SD-SDI inputs, also DVI-D and VBS inputs as standard. By employing a full 1920x1080 pixel 10-bit LCD panel which has wide viewing angle, high brightness, high contrast, quick motion response, and superb color reproduction, the HLM-1751WR achieves one-by-one pixel allocation without resizing and superb gradation characteristics for a wide range of broadcast applications. Also, the monitor supports DC power input, allowing for outdoor operation.

17-inch Full HD	1920×1080 pixel	Viewing Angle 178degree(H/V)	Contrast Ratio 1000:1	AC:45W (max) DC:39W (max)		
VBS Input	Y,P$_B$,P$_R$/ RGB Input ▲	3G/HD/SD(4:2:2) -SDI Input	Embedded Analog Audio Output	Embedded Audio Meter	DVI-D Input	Analog PC Iutput ▲ / Analog Audio 2ch Iutput
5.1ch Surround Down-mix	ASP-100 ▲ ※2					
4:3/16:9	Remote (Parallel)	Remote (Wireless)	Remote (Mouse)	Remote (RS485)	Marker	User Marker (10 scenes) / Shadow
7-Test Signal Generator	10-Color temperature-memory	Stereo Speaker	Stereo Headphone	VITC Display	WFM Monitoring Display	Split Screen/ Full Screen Comparison / Dot-by-Dot Display
Vector Scope Display	Mouse Menu Control	USB Memory (Data/Picture)	IMD Display	2Times/4Times Zoom	Mix Test Signal	Closed Caption ※1
W428×H301×D96mm (W16.9×H11.9×D3.8inches)	7RU	Approx6.5kg (14.33lbs) ※				

※1 Supports after MPU(Ver 01.22) and FPGA(Ver 05)
※2 Supports after Rev1

※ Excluding Options and Stand

▲ Option

Evolutionary Features for HLM-1751WR Full-HD LCD Monitor

● **Supports various Inputs/Outputs**

Handle (Option) GR-1770

Slot for Optional Modules
・CM-70 (Analog RGB/YPbPr, PC Input)
・SP-70 (Supports two SFP modules)

Tilt Stand (Option) STD-1770T

Battery Bracket for 17-inch Monitor (Option)
・BB-1750V (V mount)
・BB-1750A (Anton)

VBS 2 Inputs/Outputs (Roop Through)

3G/HD/SD-SDI 2 Inputs/1 Output

Parallel Remote

DVI input

I/F for Factory Setting

PARALLEL REMOTE

TEST

DVI

3G/HD/SD SDI
CH A
CH B
MONITOR OUT

RS-485
IN
OUT

AUDIO
IN
L
R

VBS
CH A
CH B

OUT
L
R

Serial Remote Input Input/Output (RS485)

Analog Audio Input

Analog Audio Output

Common features for HEM-1770WR, HEM-2570W, HLM-1751WR, HLM-1705WR OLED/LCD Monitors

White balance adjustment Assist Function

The monitors are equipped with various ways to adjust the white balance easier.

● Adjustment by wireless Mouse

A GUI Display with pointer for white balance setting will appear on the screen, and the color temperature can be adjusted by using a wireless mouse.

Wireless mouse

Monitor A

Monitor B

GUI display

(WHITE BALANCE)
FILE : D65

BRT	R. B	G. B	B. B
CNT	R. G	G. G	B. G
EXIT		R. GAIN	
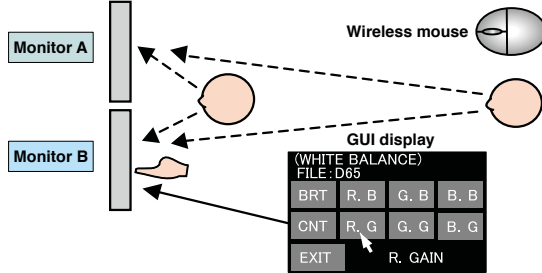
● Adjustment by assignment of the front panel controls

By assigning the color temperature adjustment functions to each of 8 controls on the front panel, white balance can be done easily.

GAIN
BKG
R G B

F1 F2 F3 F4
MONO APT SCREEN MARK

The drawing shows R.GAIN is decreasing.

High performance 12-BIT VIDEO PROCESSING Engine

In order to reproduce true 10-bit smooth gradation, a cutting-edge 12-bit video processor is incorporated. It greatly increases gradation levels, resulting in much smoother and more natural images, for example in the skin tone or the reproduction of clouds.

※ Except HLM-1705WR

MIX TEST SIGNAL Function

It is possible to mix the live picture with a reference TEST signal generated by the monitor. This provides a good reference for black and white levels which could otherwise be difficult to confirm with certainty due to the front panel adjustment of Contrast and Brightness.
Regarding the peak level of the input signal, users can confirm an overload with the Alarm LED (OVER RANGE) on the Front panel.
※HDTV only

-2%, 0%, +2% of pluge signals are embedded.
0%
-2% +2%

100 to 109% of brightness signal is embedded.
100% 109%
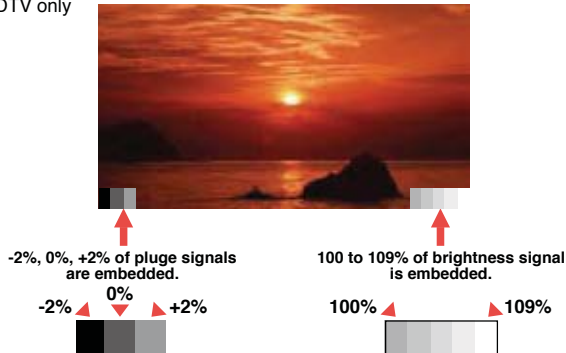
Zoom Display Function

This function is to enable 2X/4X magnification without scaling of the image. It is useful to confirm errors in the signal, such as dead pixels of a CCD camera and to check in the detailed sections of the picture.

Use Maker Function (Patent Pending)

● 10 different Scene files for User Markers

It is possible to create User Marker displays, up to 10 scenes. Each scene can be set in real time by users with the "FUNCTION"switch on the front panel.

Scene10

Scene3
Scene2

Scene1

● Easy Drawing with USB Mouse

Marker drawing with a USB mouse is possible. For precise adjustment, it is possible to adjust down to 1 pixel out of 1920x1080 pixels. Also, numerical management is provided with XY coordinate data. In addition, by saving the files to USB memory, the marker data can be copied to another HEM series monitor.

Draging a mouse

Full Screen Capture Function

※ Except HLM-1705WR

By capturing a full screen (1920x1080), it is possible to compare a live image with a captured still image. Switching between live and still can be done manually or automatically. By copying a captured image to USB memory, users can set the same viewing angle as in the prior shot referring to the captured still image.

● Manual Switching

By capturing the image of one of two cameras, it allows users to switch and compare a captured still image with the live image of the other camera. Even if the two video images are not synchronized, switching of images can be done smoothly without any shock. It is useful for luminance or color tone adjustment.

Input signal for Camera1

Captured image for Camera2
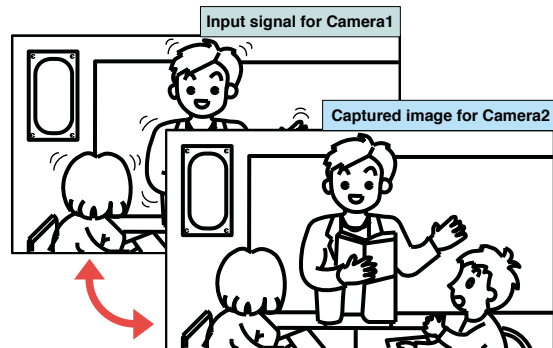
● Auto Switching

The time interval of auto switching can be changed per frame (1/2/3/5/10/30 frame). By storing the captured still images in USB memory, and then downloading the image, users can set the same viewing angle and same color as in the prior shot. It can be helpful for "frame-by-frame" shooting.
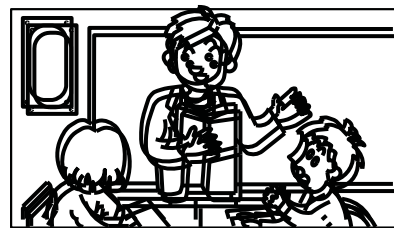
HLM-3250WA
32-inch HDTV/SDTV Full HD Pixel Multi-format LCD Color Monitor

RoHS | High-End Broadcast LCD Monitor

The HLM-3250WA employs a 32-inch Full 1920×1080 Pixel 10-bit resolution LCD panel, and achieves thin size, light weight, and low power consumption. It supports 3G/HD/SD-SDI inputs, also DVI-D and VBS inputs as standard.
By employing a Full 1920×1080 pixel 10-bit LCD panel which has wide viewing angle, high brightness, high contrast, quick motion response, and superb color reproduction, the HLM-3250WA achieves real pixel allocation without resizing and superb gradation characteristics for a wide range of broadcast applications, including use in monitor walls.

32-inch Full HD	1920×1080 pixel	145W	Viewing Angle 178degree(H/V)	Contrast Ratio 1500:1	
VBS Input	3G/HD/SD(4:2:2)-SDI Input	Embedded Audio Meter	DVI-D Input	Analog Audio 2ch lutput	ASP-100 ▲
4:3/16:9	Remote (Parallel)	Remote (Serial)	Remote (Infrared rays)	Remote (RS485)	Marker
User Marker	Shadow	Test Signal Generator	10-Color temperature-memory	Stereo Speaker	Stereo Headphone
VITC Display	WFM Monitoring Display	Split Screen	Dot-by-Dot Display	Vector Scope Display	Mouse Menu Control
USB Memory Port					

^{W}776×^{H}498×^{D}110mm (^{W}30.6×^{H}19.6×^{D}4.3inches) ＊16.3 kg (35.94lbs) ＊Excluding Stand

HLM-2450WB
24-inch HDTV/SDTV Full HD Pixel Multi-format LCD Color Monitor

RoHS | High-End Broadcast LCD Monitor

The HLM-2450WB employs a 24-inch wide LCD panel and achieves thin size, light weight, and low power consumption. It supports 3G/HD/SD-SDI inputs, also DVI-D and VBS inputs as standard.
By employing a WUXGA(1920×1200) LCD panel which has wide viewing angle, high brightness, high contrast, quick motion response and superb color reproduction, the HLM-2450WB achieves real pixel allocation without resizing and superb gradation characteristics for various applications, including use in non-linear editing.
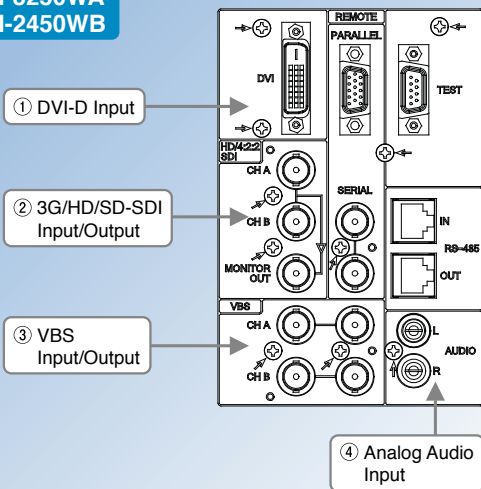
(Optional CM-240 built-in)

24-inch Full HD	WUXGA (1920×1200 pixel)	107W	Viewing Angle 178degree(H/V)	Contrast Ratio 1000:1	
VBS Input	Y,P$_B$,P$_R$/RGB Input ▲	3G/HD/SD(4:2:2)-SDI Input	Embedded AES/EBU Output	Embedded Analog Audio Output ▲	Embedded Audio Meter	DVI-D Input
Analog PC lutput ▲	Analog Audio 2ch lutput	ASP-100 ▲	5.1ch Surround Down-mix		
4:3/16:9	Remote (Parallel)	Remote (Serial)	Remote (Infrared rays)	Remote (RS485) ▲	Marker	User Marker
Shadow	Test Signal Generator	10-Color temperature-memory	Stereo Speaker	Stereo Headphone	VITC Display	WFM Monitoring Display
Split Screen	Dot-by-Dot Display	Vector Scope Display	Mouse Menu Control	USB Memory Port	

^{W}562×^{H}398×^{D}101.3mm (^{W}22.1×^{H}15.7×^{D}4.0inches) ＊9.3kg (20.5lbs) ＊Excluding Stand

▲ Option

HLM-1705WR 17-inch Full HD Pixel Multi-format LCD Color Monitor

RoHS High-End Broadcast LCD Monitor

The HLM-1705WR employs a 17-inch full 1920×1080 pixel resolution LCD panel, and achieves compact size, light weight, and low power consumption, providing practical use in a wide range of broadcast applications such as sub-control room, editing / monitor rack, ON-AIR console, OB Van etc.
It supports 3G/HD/SD-SDI inputs, also VBS inputs as standard.
By employing a full 1920×1080 pixel LCD panel which has wide viewing angle, high brightness, high contrast, quick motion response and superb color reproduction, the HLM-1705WR achieves one-by-one pixel allocation without resizing and superb gradation characteristics.

17-inch Full HD	1920×1080 pixel	Viewing Angle 178degree(H/V)	Contrast Ratio 1000:1	AC:40W (max)		※2
VBS Input	3G/HD/SD(4:2:2) -SDI Input	Embedded Audio Meter	Analog Audio 2ch Output	5.1ch Surround Down-mix	ASP-100 ▲	
4:3/16:9	Remote (Parallel)	Remote (Mouse)	Remote (RS485)	Marker	User Marker (10 scenes)	Shadow
7-Test Signal Generator	10-Color temperature-memory	Speaker	VITC Display	WFM Monitoring Display	Split Screen/ Full Screen Comparison	Dot-by-Dot Display
Vector Scope Display	Mouse Menu Control	USB Memory (Data/Picture)	IMD Display	4 Times Zoom	Mix Test Signal	Closed Caption
W428×H301×D80mm (W16.9×H11.9×D3.2inches)		7RU	Approx6.0kg (13.22lbs) ✽		※1 Supports after MPU(Ver 01.04) and FPGA(Ver 02) ※2 Supports after Rev1	※1

✽ Excluding Options and Stand

▲ Option

HLM-3250WA·HLM-2450WB·HLM-1705WR Varaety of Input/Output

HLM-3250WA HLM-2450WB

① DVI-D Input
② 3G/HD/SD-SDI Input/Output
③ VBS Input/Output
④ Analog Audio Input

HLM-1705WR

① 3G/HD/SD-SDI Input/Output
② VBS Input/Output
③ Analog Audio Input
④ Serial Remote Input/Output(RS485)
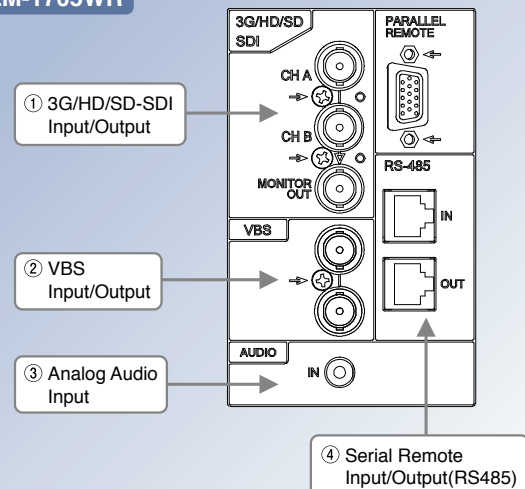
HLM-905WR

9-inch HDTV/SDTV Multi-format LCD Color Monitor

RoHS

High-End Broadcast LCD Monitor

The HLM-905WR is a compact light weight 9-inch LCD monitor, supporting 3G/HDTV/SDTV multi-format SDI and VBS inputs as standard. For its LCD panel, it employs a high resolution WXGA(1280×768) panel incorporating the latest IPS technology with LED back-light, and wide viewing angle. It can be rack mounted in dual monitor configuration, ideal for use in a full range of applications.

The HLM-905WR is low in power consumption, supporting either AC or DC powering. Battery operation is available using an optional battery bracket. The monitor has a USB connector on the operation panel, allowing setup file store & recall, as well as, remote operation from a mouse for menu navigation, including user maker operation, etc.

9-inch Wide	WXGA (1280×768 pixel)	AC:23W DC:20W	Viewing Angle 176degree(H/V)	Contrast Ratio 1000:1	AC Input	DC Input	Battery ▲
VBS Input	3G/HD/SD(4:2:2) -SDI Input	Embedded Analog Audio Output	Embedded Audio Meter	Analog Audio 2ch Iutput	5.1ch Surround Down-mix	ASP-100 ▲	※1
4:3/16:9	Remote (Parallel)	Remote (Serial)	Remote (Mouse)	Remote (RS485) ▲	Marker	User Marker	Shadow
Test Signal Generator	10-Color temperature-memory	Speaker	Stereo Headphone Jack	VITC Display	WFM Display	Split Screen/ Full Screen Comparison	Dot-by-Dot Display
Vector Scope Display	Mouse Menu Control	USB Memory (Data/Picture)	IMD Display				

※1 Supports after Rev1

| W222.4×H173×D69.5mm (W8.8×H6.8×D2.8inches) | 4RU | Approx.2.0kg※ (4.41lbs) |

※ Excluding Stand

▲ Option

Evolutionary Features for HLM Series Multi-format LCD Monitors

●Variety of Input/Output for HLM-905WR

(1) Multi-format 3G/HD/SD-SDI, 2ch Inputs and 1ch Monitor Output
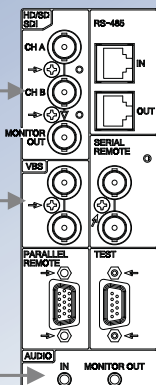
(2) VBS 1ch Input and 1ch Output

(3) Analog Audio Input/Output
* Audio Output: menu selectable from analog audio input, embedded audio input, or down-mix audio.

(1) GR-904 Handle (Option)
* Comes with BB-904V/A Battery Bracket as standard

(2) DC Input (DV12V)

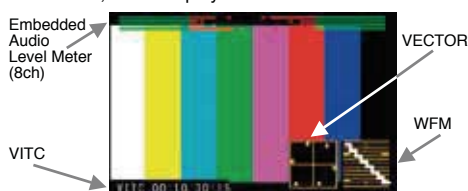(3) AC Input (AC100 to AC120V/ AC200 to AC240V)
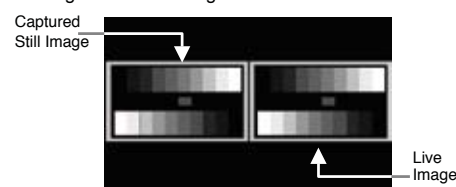
(4) BB-904V/A Battery Bracket (Option)
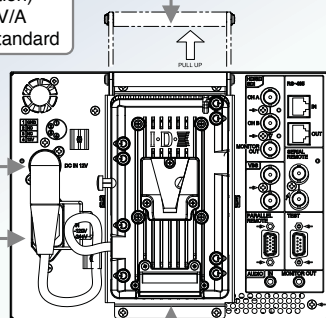
●Versatile Functions

※ Except HLM-5013WR/HLM-7012WR

(1) Embedded Audio Level Meter, WFM, VECTOR SCOPE, VITC Display

Embedded Audio Level Meter (8ch)

VECTOR

WFM

VITC

VITC 00:10:30:15

(2) Split Screen Mode, allows comparing a captured still image and a live image
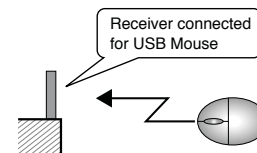
Captured Still Image

Live Image

(3) User Marker Display, up to 10 lines or Box Markers with up to 6 colors can be freely set to help plan the layout of information (Patent Pending)

Drag to set
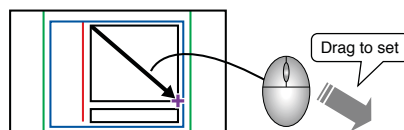
※HLM-905WR supports 10 different Scene Files display

(4) Monitor Menu can be controlled by USB Mouse from remote position

Receiver connected for USB Mouse

(5) Internal Test Signal Generator

(6) USB Memory Port

(7) Dot-by-Dot Display

(8) Marker Display, within 80% thru 99% by 1% steps

(9) Embedded Audio can be monitored by built-in Speaker or Headphone

(10) 5.1ch Down-Mix, 5.1ch Surround Audio can be down-mixed to 2ch output

(11) IMD Display (HLM-905WR only)

HLM-5013WR
5-inch Triple Multi-Format LCD Monitor

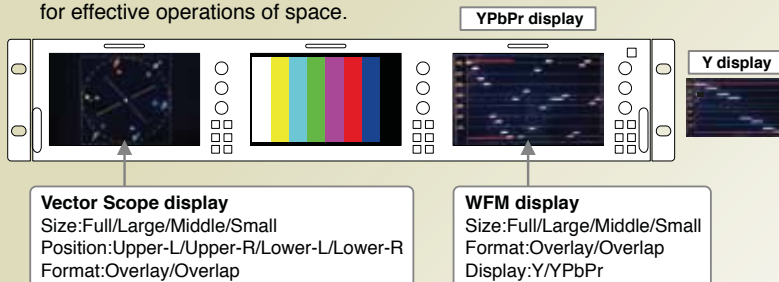RoHS — High-End Broadcast LCD Monitor

Ikegami introduces a triple 5 inch high performance, rack mount ready, professional broadcast monitor that features 2 channels of SD-SDI/HD-SDI/3G-SDI Multi-Format Signal Inputs, 800×480 with LED Back Light panel resolution, Title Generator, Embedded Audio Level Indicators up to 16ch Waveform Display, Vector Scope and many of the other advantages as higher level broadcast display offerings.

Triple 5-inch Wide	800×480 pixel	AC:34W DC:28.8W/2.4A	Viewing Angle 170degree(H/V)
Contrast Ratio 500:1			
3G/HD/SD(4:2:2) -SDI Input	Embedded Audio Meter		
4:3/16:9	Remote (Parallel)	Marker	3-Color temperature-memory
VITC/LTC Display	WFM Monitoring Display	Vector Scope Display	User Display
W481×H88.1×D56.2mm (W18.88×H3.5×D2.22inches)	2RU	Approx.1.7kg (3.75lbs)	

HLM-7012WR
7-inch Dual Multi-Format LCD Monitor

RoHS — High-End Broadcast LCD Monitor

Ikegami introduces a dual 7 inch high performance, rack mount ready, broadcast monitor that features 2 channels of SD SDI/ HD-SDI/3G-SDI Multi-Format Signal Inputs, 800×480 with LED Back Light panel resolution, Title Generator, Embedded Audio Level Indicators up to 16ch Waveform Display, Vector Scope and many of the other advantages as higher level broadcast display offerings.

Dual 7-inch Wide	800×480 pixel	AC:30W DC:26.4W/2.2A	Viewing Angle 160degree(H/V)
Contrast Ratio 1000:1			
3G/HD/SD(4:2:2) -SDI Input	Embedded Audio Meter		
4:3/16:9	Remote (Parallel)	Marker	3-Color temperature-memory
VITC/LTC Display	WFM Monitoring Display	Vector Scope Display	User Display
W481×H132.6×D56.2mm (W18.88×H5.25×D2.22inches)	3RU	Approx.2.1kg (4.63lbs)	

Feature for HLM-5013WR/HLM-7012WR

●WFM & Vector Scope display

※ Below Images are for HLM-5013WR, HLM-7012WR contains similar features.

(1) Full screen WFM & Vector Scope for effective operations of space.

YPbPr display

Y display

Vector Scope display
Size:Full/Large/Middle/Small
Position:Upper-L/Upper-R/Lower-L/Lower-R
Format:Overlay/Overlap

WFM display
Size:Full/Large/Middle/Small
Format:Overlay/Overlap
Display:Y/YPbPr

(2) 4-type of display size. (Full/Large/Middle/Small) Overlapping on video also available.

Size:Small

Size:Middle

Size:Large

Vector Scope display

WFM(YPbPr)display

●Audio level meter feature/Character display

Audio meter 2-split diplay

Audio level meter display
Channel:1-16
Display:2-split/4-split
Format:Overlay/Overlap

Audio meter 4-split diplay

Character display
Color:Yellow/Red/Black
Position:Top/Bottom
Size:Small/Large
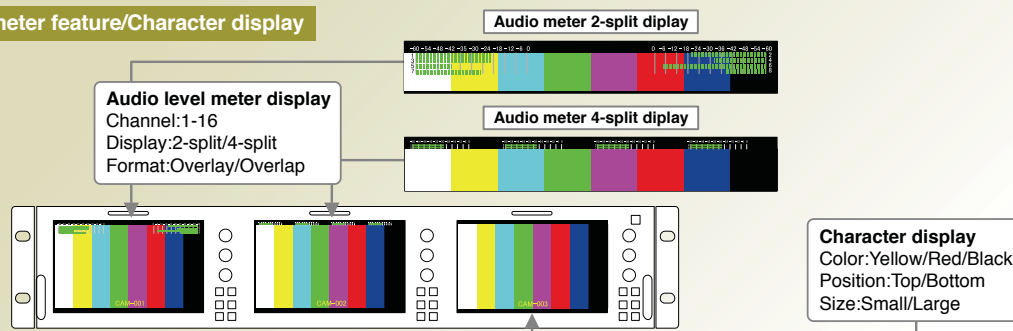
ASP-100 — Auto Setup Probe

For HLM/HEM Series Monitors

The ASP-100 is an auto setup probe that allows automatic white balance adjustment for a selected color temperature and measurements of color temperature and luminance on the HLM/HEM Series of LCD/OLED Monitors.
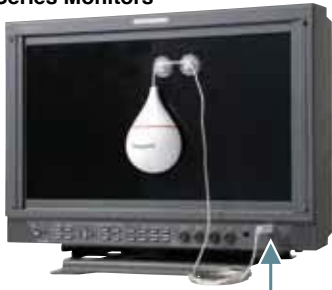
Simply connect the ASP cableto USB interface

Monitor	Integrated software		Integrated Rev# of ASP-100
	MPU	FPGA	
HLM-904WR/WCS	V1.20〜		
HLM-1704WR/WS	V0.94〜		
HLM-1750WR	V1.02〜		
HLM-2450W	V2.02〜	V20〜	
HLM-2450WA	V0.94〜		
HLM-2450WB	V0.76〜		
HLM-3250W	V2.02〜	V20〜	
HLM-3250WA			
HLM-1504WR			
HLM-905WR/WCS			after Rev1
HLM-907WR			after Rev1
HLM-1751WR			after Rev1
HEM-1770WR			Rev2
HEM-2570W			Rev2
HEM-1770WR	V1.30〜		after Rev3
HEM-2570W	V1.30〜		after Rev3

Features

(1) Automatic white balance adjustments by color temperature file
The probe automatically adjusts white balance at multiple luminance levels to one of 4 user selectable color temperature files (6500K, 9300K, and 2 user files).
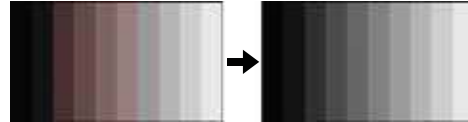
(2) Measurement Mode
This Mode allows measurement of color temperature on the monitor, storing the measured data and making adjustments on multiple monitors for same color temperature.

(3) PC-free operation
Automatic adjustment software is programmed in a monitor. Simply connect the ASP cable to the monitor USB connector. No personal computer is required.

Specifications

ASP-100	Auto setup	: 6500K, 9300K, User files (2 files)
	Measurement	: Luminance and chromaticity (x, y)
	Size	: 71(W)×111(H)×35(D)mm
	Weight	: 100g
	Interface	: USB2.0

Remote Controller

SRC-400
Serial Remote Controller

RCT-30A
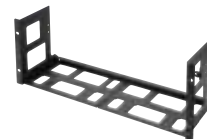Infrared Remote Controller

Auto Setup Probe

ASP-100
Auto Setup Probe Unit

Rackmount Adaptor

RS-1710T/1770T
19-inch Rack-mount Adaptor

DR-904
9-inch Rack-mount Adaptor

BP-920
Blank Panel for DR-904

Stand

STD-1770
Stand

STD-1770T
Tilt Stand

STD-1722M
VESA Arm Stand

STD-1517
Stand

STD-1517T
Tilt Stand

STD-904
Stand

STD-900
Stand

STD-920T
Tilt Stand

Battery Bracket

BB-1750A
Battery Bracket
(Anton Bauer Type)

BB-1750V
Battery Bracket
(V-Mount Type)

BB-904A
Battery Bracket
(Anton Bauer Type)

BB-904V
Battery Bracket
(V-Mount Type)

Handle

GR-1770
Handle

Carrying Case/Hood

CC-1751
Hard Carrying Case

CC-5013/7012
Hard Carrying Case

SO-016
Soft Carrying Case

MH-1750
Collapsible Hood

MH-904
Collapsible Hood

PP-1751
LCD Protection Cover

PP-904
LCD Protection Cover

Model	Description	HEM-2570W	HEM-1770WR	HLM-1751WR	HLM-3250WA	HLM-2450WB	HLM-1705WR	HLM-905WR	HLM-5013WR	HLM-7012WR	Remarks
Remote Controller											
RCT-30A	Infrared Remote Controller	●	●	●	●	●					
SRC-400	Serial Remote Controller	●	●	●	●	●	●	●			Controls up to 96 motnitors with loop through connection
Video/Audio Module											
SP-70	SFP I/F Module	●	●	●							Expansion module to equip the SFP I/F module. Two SFP modules can be equipped. *can not co-reside with CM-70
CM-70	Analog RGB/YPbPr/PC Input Module	●	●	●							1ch Y, P_B, P_R or RGB Input, 1ch loop through EXT SYNC, 1ch Analog PC Input. *can not co-reside with SP-70
CM-175	Analog Component and PC Input Module					●					1ch Y, P_B, P_R or RGB Input, 1ch loop through EXT SYNC[1]
D3G-240A	3G-SDI Support Multi-format HD-SDI Input Module (incl. Analog Audio Output)					●					2ch Input and 1ch Loop-through, 2ch (ch: Menu Select) Embedded Analog Output (XLR 5pin)[1]
D3G-240D	3G-SDI Support Multi-format HD-SDI Input Module (incl. AES/EBU Audio Output)					●					2ch Input and 1ch Loop-through, 8ch Embedded AES/EBU Output [1]
EA-240A	Embedded Analog Audio Output Module					●					2ch (ch: Menu Select) Embedded Analog Output(XLR 5pin)[1]
EA-240D	Embedded AEX/EBU Audio Output Module					●					8ch Embedded AES/EBU Output [1]
Auto Setup Probe											
ASP-100	Auto Setup Probe Unit	●	●	●	●	●	●	●			[3]
Rackmount Adaptor											
DR-904	Dual Rack Mount Adaptor							●			4RU Height
BP-920	Blank Panel for DR-904/920							●			
RS-1770	19-inch Rack Mount Adaptor		●	●			●				Fixed type, 7RU height
RS-1770T	19-inch Rack Mount Adaptor with Tilt Mechanism		●	●			●				4-Step Angle, 7RU height
RS-1710	19-inch Rack Mount Adaptor							●			Fixed type, 7RU height
RS-1710T	19-inch Rack Mount Adaptor with Tilt Mechanism							●			4-Step Angle, 7RU height
RS-2450T	Rackmount Adaptor					●					Fixed Tilt Angle Type
Stand											
STD-1770	Stand		●	●							
STD-1770T	Stand with Tilt Mechanism		●	●							Tilt (Axis:Center of Monitor):Up 90 degree/Down 10 degree
STD-1517	Stand						●				
STD-1517T	Stand with Tilt Mechanism						●				Tilt:Up 15 degree/Down 15 degree
STD-1722M	VESA Arm Stand		●	●			●				
STD-240T	Stand with Tilt Mechansm					●					Tilt (Axis:Center of Monitor):Up 45 degree/Down 8 degree[2]
STD-900	Stand							●			Tilt Anlge:Up 14 degree
STD-904	Stand							●			
STD-920T	Stand with Tilt Mechanism							●			Tilt Angle:Up 10 degree/Down 10 degree
Tripod Mount Plate											
AT-900	Tripod Mount Plate							●			1/4 & 3/8 inch hole plate
Handle											
GR-1770	Handle		●	●			●				
GR-904	Handle							●			
LCD Protection Cover											
PP-1751	Protection Cover for HLM-1751WR			●							Anti-Refelection Coating
PP-1750	Protection Cover for HLM-1705WR						●				Anti-Refelection Coating
PP-904	Protection Cover for HLM-904WR							●			Anti-Refelection Coating
PP-1770	Protection Cover for HEM-1770WR		●								Anti-Refelection Coating
Battery Bracket											
BB-1750A	Battery Bracket (Anton Bauer Type)		●	●							
BB-1750V	Battery Bracket (V-Mount Type)		●	●							
BB-904A	Battery Bracket (Anton Bauer Type)							●			
BB-904V	Battery Bracket (V-Mount Type)							●			
Hood											
MH-2570	Folding Hood	●									
MH-1750	Folding Hood		●	●			●				
MH-904	Folding Hood							●			
Carrying Case											
CC-E25	Hard Carrying Case	●									
CC-E17	Hard Carrying Case		●								
CC-3250	Hard Carrying Case				●						
CC-2450B	Hard Carrying Case					●					
CC-1751	Hard Carrying Case			●							
CC-1705	Hard Carrying Case						●				
CC-905	Hard Carrying Case							●			
SO-016	Soft Carrying Case							●			
CC-5013	Hard Carrying Case								●		
CC-7012	Hard Carrying Case									●	

Note

*1: Either one optional module can be installed. Up to 4ch SDI input is available if D3G-240A or D3G-240G is installed.
*2: Standard Tilt Stand has a tilt mechanism with axis at bottom of monitor (up 15 degree and down 8 degree).
*3: Please refer page9 regarding integrated software for each monitors and Rev# for ASP-100.

			HEM-2570W	HEM-1770WR	HLM-1751WR	HLM-3250WA	HLM-2450WB
Display Panel	Type of Panel		OLED		LCD / LED Backlight	LCD	
	Number of Pixel	Effective Number of Pixel	Full HD (16:9) 1920×1080				WUXGA (16:10) 1920×1200
		Number of Pixel in 16:9	1920×1080				
	Display Size (Diagonal)	Display Size (Viewing Area)	24.5"	16.5"		31.5"	24.0"
		in 16 : 9	24.5"	16.5"		31.5"	23.4"
	Brightness	(Specification of Panel)	250cd/m² (Max Brightness)		450cd/m²	500cd/m²	400cd/m²
	Contrast Ratio (typical)		5000:1 *1		1000:1	1500:1	1000:1
	Display Color		1.07 billion colors / 10bit				
	View Angle (up & down, left & right typical)		178°				
Rating & Performance	Power Requirement	AC	AC100-120V / AC200-240V				
		DC	—	DC12V (10.5-18V)		—	
	Power Consumption (max)	AC (Standard Spec)	135W	81W	45W	145W	107W
		DC (Standard Spec)	—	76W / 6.3A	39W / 3.3A	—	—
	Dimensions W×H×D mm (inch)		585×398×102.8 (23.1×15.7×4.1)	428×301×98 (16.9×11.9×3.9)	428×301×96 (16.9×11.9×3.8)	776×498×110 (30.6×19.6×4.3)	562×398×101.3 (22.1×15.7×4.0)
	Rack-mountable Space		9U	7U	7U		10U
	Weight kg(lbs) *Excluding stand		Approx 11.4kg (25.13 lbs)	Approx 7.5kg (16.53 lbs)	Approx 6.5kg (14.33 lbs)	Approx 16.3kg (35.94 lbs)	Approx 9.3kg (20.50 lbs)
	Supporting Formats	SDTV	480i / 59.94, 575i / 50, 480p / 59.94				
		HDTV	1035i/59.94/60, 1080i/50/59.94/60 1080p/23.98/24/25/29.97/30/50/59.94/60 1080psF/23.98/24/29.97/30 720p/23.98/24/25/29.97/30/50/59.94/60				
Video	Input/Output	HD/SD-SDI	● 2 Inputs, 1 Output				
		3G-SDI *2	●				
		VBS	● 2 Inputs/Outputs (TH)				
		RGB/YPbPr	▲ 1 Input (CM-70)			—	▲ 1 Input (CM-175)
		Analog PC	▲ 1 Input (CM-70)			—	▲ 1 Input (CM-175)
		DVI-D	● 1 Input				
		HDMI	▲ 1 input (SP-70+SPF HDMI Module)			—	
		External Sync	▲ 1 Input (CM-70)			—	▲ 1 Input (CM-175)
Audio	Input	Analog Audio Input	● (RCA×2)				
	Output	Embedded Analog 2ch Output	● (RCA×2)			—	▲ EA-240A
		Embedded AES/EBU 8ch Output	—			—	▲ EA-240D
	Display	Embedded Audio Level Meter Display	● (8ch)				
	Speaker	Rating Output	1W+1W				
		Analog Audio Output	● (Stereo)				
		Embedded Digital Audio Output	● (Stereo)				
	5.1ch Surround Down-mix Output		●			—	●
	Headphone Output		●				
Command Control	Parallel Remote		●				
	Serial Remote (Controlled by SRC-301Z)		—			●	
	Serial Remote (RS-485)		●			▲ (To be customized)	
	USB Mouse		●				
	Infrared rays Remote (Controlled by RCT-30A)		●				
Function	Display	Built-in Test Signal	● (7 types)			● (3 types)	
		Marker	Safety Marker: 100% + 80~99% (Every 1% step) Area Marker:4:3 (at 16:9), 13:9, 14:9, 15:9, 16:9 (at 4:3), 1.85:1, 2.35:1 Cross Marker:Cross, 5×5, 10×10				
		User Marker	● (10 Markers)				
		User Marker (Number of Scene)	10			1	
		Shadow	Area Marker:4:3 (at 16:9), 13:9, 14:9, 15:9, 16:9 (at 4:3) Shadow Level:0%, 20%, 40%, 60%				
		WFM Display	●				
		Time Code	● (VITC, HD-SDI)				
		Vector	●				
		2 Screen Display (Left:Still Image Right:Moving Picture)	●				
		Full Screen Capture Display	● (1920×1080)			—	
		IMD (In Monitor Display)	—		●	—	
		Video & TEST Signal Mix	●			—	
		Zoom Function	●			—	
		Dot by Dot Display	●				
	Others	Operating Time Display	●				
		Color Temp Memory	● 6500K / 9300K / 8 User Settings				
		Color/Mono Switching	●				
		VBS COMB Filter	● (TRAP/2D/3D)				
		APT	● (ON/OFF, Frequency)				
		Backlight Dimmer	—			●	
		R/G/B Screen Display ON/OFF	●				
		Scan Selection	NORMAL / UNDER				
		Aspect Selection	4:3/16:9 (SDTV)				
		I/P Conversion Mode	FIELD / FRAME / INTERLACE			FIELD / FRAME	
		External Memory	● (USB)				
		Saving Still Image (in USB)	● (Maximum 100 Frames)			—	
		Function Key	●4			●2	
		LED Alarm Display	● (ABL/OVER RANGE)		● (OVER RANGE)	● (SDI ERROR)	
		SDI Channel Lock Setting	●				
		USB Memory Version-up	●			—	
		Closed Caption	●*3		●*4	—	

● : Standard, ▲ : Option
*1 EIAJ ED-2810 dark place, partial lighting contrast *2 SMPTE425M-A/B, YPBPR, 4:2:2 *3 Supports after MPU(Ver 01.24) and FPGA(Ver 06) *4 Supports after MPU(Ver 01.22) and FPGA(Ver 05)
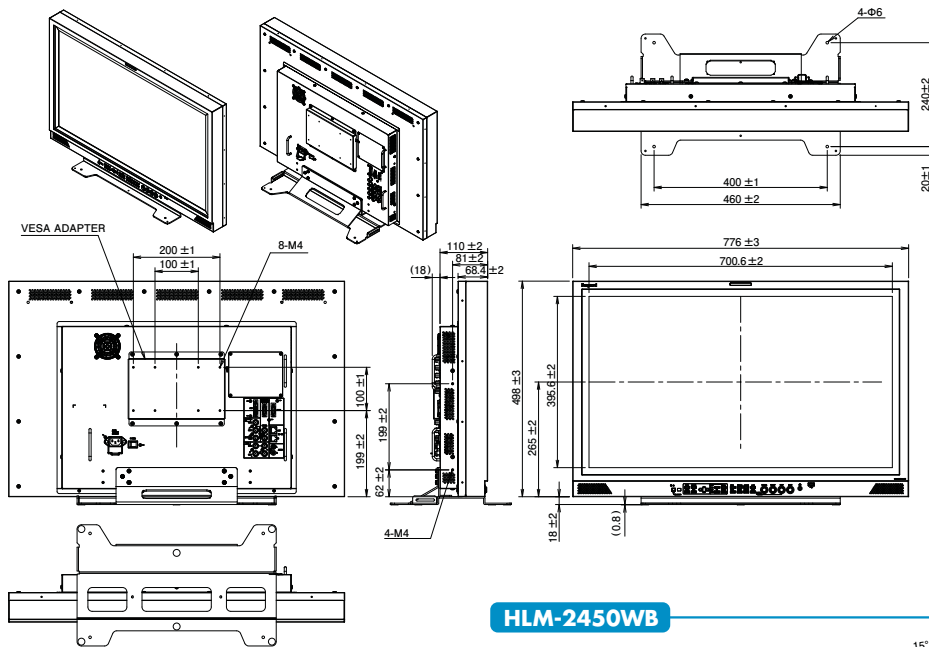
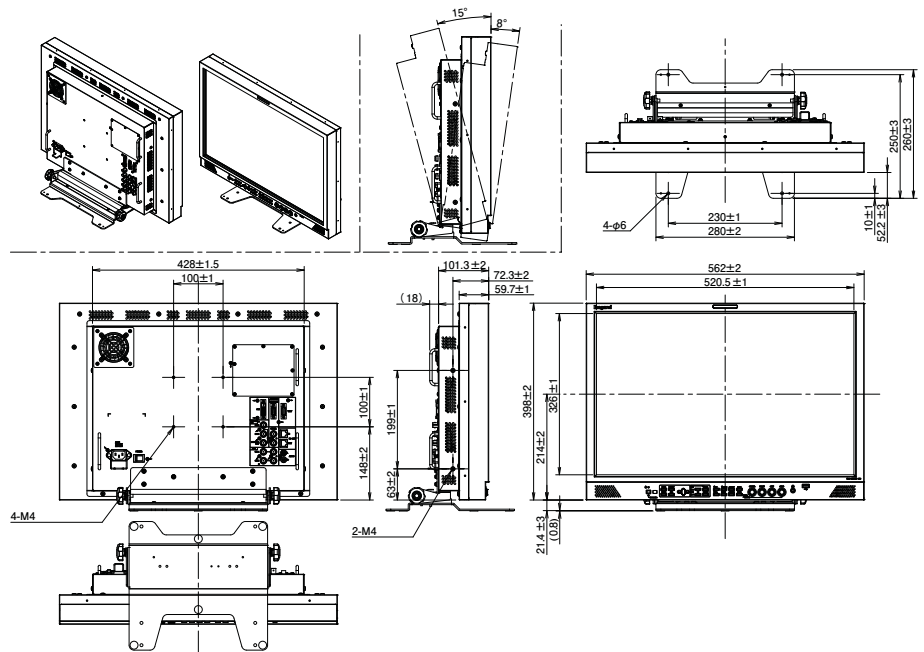|			HLM-1705WR	HLM-905WR	HLM-5013WR	HLM-7012WR
Display Panel	Type of Panel		LCD / LED Backlight			
	Number of Pixel	Effective Number of Pixel	Full HD (16:9) 1920×1080	WXGA (15:9) 1280×768	WVGA (15:9) 800×480	
		Number of Pixel in 16:9	1920×1080	1280×720	800×450	
	Display Size (Diagonal)	Display Size(Viewing Area)	16.5"	8.9"	5.0"	7.0"
		in 16:9	16.5"	8.8"	4.9"	6.9"
	Brightness (Specification of Panel)		450cd/m²	350cd/m²	180cd/m²	290cd/m²
	Contrast Ratio (typical)		1000:1		500:1	1000:1
	Display Color		1.07 billion color / 10bit	16.77 million colors / 8bit		
	View Angle (up & down, left & right typical)		178°	176°		
Rating & Performance	Power Requirement	AC	AC100-120V / AC200-240V		AC100-240V (When using AC Adaptor)	
		DC	—	DC12V (10.5-18V)	DC12V (10-19V)	
	Power Consumption (max)	AC (Standard Spec)	40W	23W	1.7A	
		DC (Standard Spec)	—	20W / 1.6A	34W	30W
	Dimensions W×H×D mm (inch)		428×301×80 (16.9×11.9×3.2)	222.4×173×69.5 (8.8×6.8×2.8)	481×88.1×56.2 (18.88×3.5×2.22)	481×132.6×56.2 (18.88×5.25×2.22)
	Rack-mountable Space		7U	4U	2U	3U
	Weight kg(lbs) *Excluding stand		Approx 6.0kg (13.22 lbs)	Approx 2.0kg (4.41 lbs)	Approx 1.7kg (3.74 lbs)	Approx 2.1kg (4.63 lbs)
	Supporting Formats	SDTV	480i / 59.94, 575i / 50			
		HDTV	1035i/59.94/60, 1080i/50/59.94/60 1080p/23.98/24/25/29.97/30/50/59.94/60 1080psF/23.98/24/29.97/30 720p/23.98/24/25/29.97/30/50/59.94/60		1080i/50/59.94/60 1080p/23.98/24/25/29.97/30/50/59.94/60 1080psF/23.98/24/29.97/30 720p/23.98/24/25/29.97/30/50/59.94/60	
Video	Input/Output	3G/HD/SD-SDI	● 2 Inputs, 1 Output			
		VBS	● 1 Input/Output (TH)		—	
		RGB/YPbPr	—			
		Analog PC	—			
		HDMI	—			
		External Sync	—			
Audio	Input	Analog Audio Input	● (st min jack)		—	
	Output	Embedded Analog 2ch Output	—	● (st min jack)	—	
		Embedded AES/EBU 8ch Output	—			
	Display	Embedded Audio Level Meter Display	● (8ch)		● (16ch)	
	Speaker	Rating Output	1W		—	
		Analog Audio Output	● (Monaural)		—	
		Embedded Digital Audio Output	● (Monaural)		—	
	5.1ch Surround Down-mix Output		●		—	
	Headphone Output		—	●	—	
Command Control	Parallel Remote		●			
	Serial Remote (Controlled by SRC-301Z)		—	●	—	
	Serial Remote (RS-485)		●	▲ (To be customized)	—	
	USB Mouse		●		—	
	Infrared rays Remote (Controlled by RCT-30A)		—			
Function	Display	Built-in Test Signal	● (7 types)	● (3 types)	—	
		Marker	Safety Marker: 100% + 80~99% (Every 1% step) Area Marker:4:3 (at 16:9), 13:9, 14:9, 15:9, 16:9 (at 4:3), 1.85:1, 2.35:1 Cross Marker:Cross, 5×5, 10×10		Safety Marker:100%+80~99%(Every 1% step) Area Marker:4:3 (at 16:9), 13:9, 14:9, 15:9, 16:9 (at 4:3), 1.85:1, 2.35:1	
		User Marker	● (10 Markers)			
		User Marker (Number of Scene)	10	10 (After Ver2.0)	—	
		Shadow	Area Marker:4:3 (at 16:9), 13:9, 14:9, 15:9, 16:9 (at 4:3) Shadow Level:0%, 20%, 40%, 60%		—	
		WFM Display	●			
		Time Code	● (VITC, HD-SDI)		● (LTC / VITC1 / VITC2)	
		Vector	●			
		2 Screen Display (Left:Still Image Right:Moving Picture)	●			
		Full Screen Capture Display	—	● (1280×720)	—	
		IMD (In Monitor Display)	●	●	—	
		Video & TEST Signal Mix	●	—		
		Zoom Function	●	—		
		Dot by Dot Display	●		—	
	Others	Operating Time Display	●			
		Color Temp Memory	● 6500K / 9300K / 8 User Settings		● 6500K / 9300K / 1 User Setting	
		Color/Mono Switching	●			
		VBS COMB Filter	●		—	
		APT	●(ON/OFF, Frequency)		●	
		Backlight Dimmer	●			
		R/G/B Screen Display ON/OFF	● (MENU)		—	
		Scan Selection	NORMAL / UNDER		NORMAL / OVER / 4:3ZOOM	
		Aspect Selection	4:3/16:9 (SDTV)		AUTO / 4:3 / 16:9	
		I/P Conversion Mode	FIELD / FRAME		FRAME	
		External Memory	● (USB)		—	
		Saving Still Image (in USB)	—	● (Maximum 32 Frames)	—	
		Function Key	● 4	● 2	—	
		LED Alarm Display	—			
		SDI Channel Lock Setting	●		—	
		USB Memory Version-up	●		—	
		Closed Caption	●*3	—		

● : Standard, ▲ : Option
*1 EIAJ ED-2810 dark place, partial lighting contrast *2 SMPTE425M-A/B, YPBPR, 4:2:2 *3 Supports after MPU(Ver 01.04) and FPGA(Ver 02)
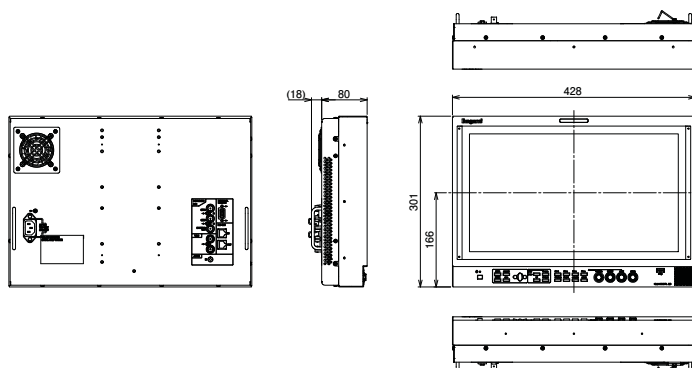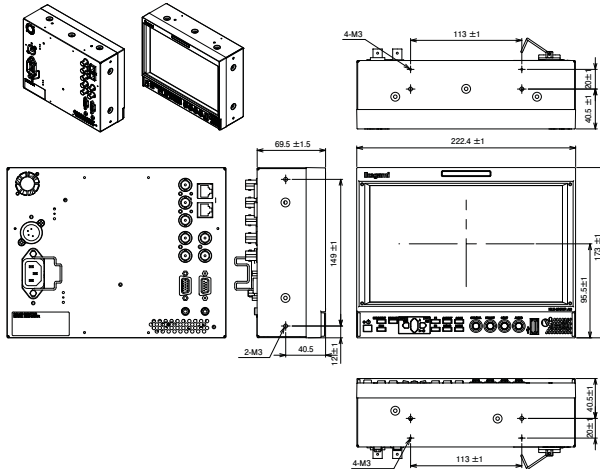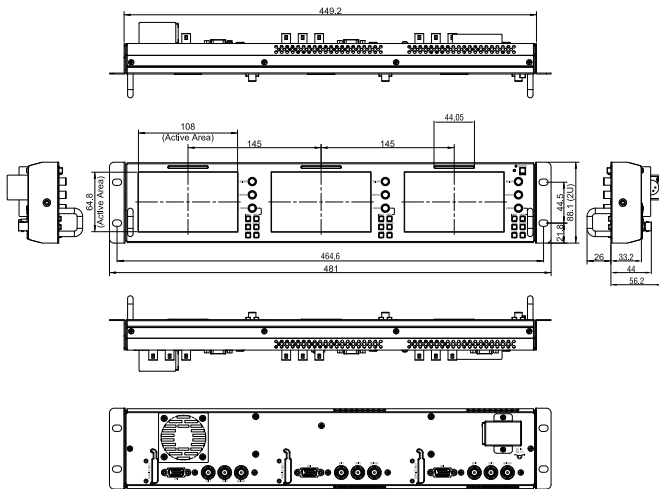
HEM-2570W

HEM-1770WR

HLM-1751WR

Unit:mm

HLM-3250WA

VESA ADAPTER

4-Φ6
240±2
20±1
400 ±1
460 ±2

200 ±1
100 ±1
8-M4
110 ±2
81±2
68.4±2
(18)
776 ±3
700.6±2
498 ±3
395.6±2
265 ±2
100 ±1
199 ±2
199 ±2
62 ±2
4-M4
18 ±2
(0.8)

HLM-2450WB

15°
8°
250±3
260±3
4-φ6
230±1
280±2
10±1
52.2 ±3

428±1.5
100±1
101.3±2
72.3±2
59.7±1
(18)
562±2
520.5 ±1
100±1
199±1
398±2
326±1
214±2
148±2
63±2
4-M4
2-M4
21.4 ±3
(0.8)

HLM-1705WR

(18)
80
428
301
166

Unit:mm

14

Dimensions
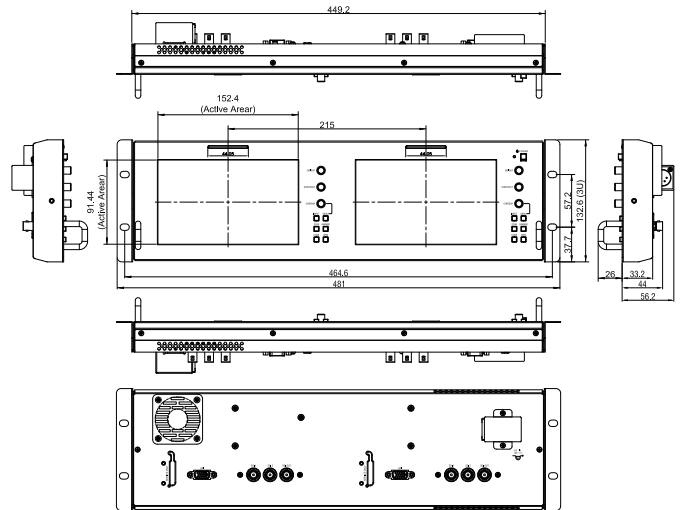
HLM-905WR

HLM-5013WR

HLM-7012WR

Unit:mm

Design and specifications are subject to change without notice.