



## HLM-3250W 32-inch HDTV/SDTV Full HD Pixel Multi-format LCD Color Monitor

RoHS

High-End Broadcast LCD Monitor



( Optional CM-240 built-in )



The HLM-3250W employs a 32-inch Full 1920X1080 Pixel 10-bit resolution LCD panel, and achieves thin size, light weight, and low power consumption. Supporting Multi-format SDI input, also DVI-D and VBS inputs as standard, and 3G-SDI input as an option. 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-3250W achieves real pixel allocation without resizing and superb gradation characteristics for a wide range of broadcast applications, including use in monitor walls.

<b>32-inch Full HD</b>	<b>1920x1080 pixel</b>	<b>145W</b>	Viewing Angle 178degree(H/V)	Contrast Ratio <b>1300:1</b>			
VBS Input	Y, P <sub>s</sub> , P <sub>r</sub> /RGB Input ▲	HD/SD(4:2:2)-SDI Input	3G-SDI Input ▲	Embedded AES/EBU Output	Embedded Analog Audio Output ▲	Embedded Audio Meter	
DVI-D Input	Analog PC Input ▲	Analog Audio 2ch Input	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			
W776.4x498.0x110.0mm (W30.6x19.6x4.3inches)		* 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. Supporting Multi-format SDI input, also DVI-D and VBS inputs as standard and 3G-SDI input as an option. By employing a WUXGA(1920X1200) 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 )

<b>24-inch Full HD</b>	<b>WUXGA (1920x1200 pixel)</b>	<b>107W</b>	Viewing Angle 178degree(H/V)	Contrast Ratio <b>1000:1</b>			
VBS Input	Y, P <sub>s</sub> , P <sub>r</sub> /RGB Input ▲	HD/SD(4:2:2)-SDI Input	3G-SDI Input ▲	Embedded AES/EBU Output	Embedded Analog Audio Output ▲		
Embedded Audio Meter	DVI-D Input	Analog PC Input ▲	Analog Audio 2ch Input	ASP-100 ▲	5.1ch Sound 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							
W562.3x398.0x101.3mm (W22.1x15.7x4.0inches)		* 9.3kg (20.5lbs)		* Excluding Stand			

## ASP-100

### Auto Setup Probe

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 and the HTM-1990R CRT monitor.

For HLM Series Monitors



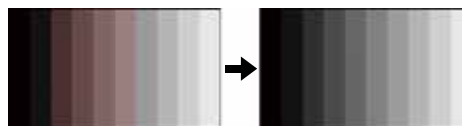
Simply connect the ASP cable to USB interface

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-1504WR			
HLM-905WR/WCS			after Rev1
HLM-907WR			after Rev1
HLM-1751WR			after Rev1
HEM-1770WR			after Rev2
HEM-2570W			after Rev2

### 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

<b>ASP-100</b>	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
<b>ASP-CONV</b>	Size	: 82(W)×64(H)×32.3(D)mm
	Weight	: 130g
	Interface	: USB2.0, RS-232C

### Remote Controller



**SRC-400**  
Serial Remote Controller



**RCT-30A**  
Infrared Remote Controller

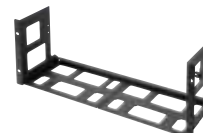


**ASP-100**  
Auto Setup Probe Unit

### 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-5003/7002**  
Hard Carrying Case



**SO-016**  
Soft Carrying Case



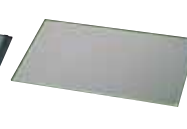
**MH-1750**  
Collapsible Hood



**MH-904**  
Collapsible Hood



**PP-1751**  
LCD Protection Cover



**PP-904**  
LCD Protection Cover

Model	Description	HLM-2570W	HLM-1770WR	HLM-1751WR	HLM-3250WB	HLM-2450WB	HLM-1705WR	HLM-905WR	HLM-5013WR	HLM-7012WR	Remarks
<b>Remote Controller</b>											
RCT-30A	Infrared Remote Controller	●	●	●	●	●					
SRC-400	Serial Remote Controller	●	●	●	●	●	●	●			Controls up to 96 monitors with loop through connection
<b>Video/Audio Module</b>											
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 <sub>b</sub> , P <sub>r</sub> 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 <sub>b</sub> , P <sub>r</sub> or RGB Input, 1ch loop through EXT SYNC*1
CM-240	Analog Component and PC Input Module				●						1ch Y, P <sub>b</sub> , P <sub>r</sub> /RGB, 1ch Analog PC Input, 1ch 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
<b>Auto Setup Probe</b>											
ASP-100	Auto Setup Probe Unit	●	●	●	●	●	●	●			*3
<b>Rackmount Adaptor</b>											
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
<b>Stand</b>											
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 Mechanism					●					Tilt (Axis:Center of Monitor):Up 45 degree/Down 8 degree*2
STD-900	Stand							●			Tilt Angle:Up 14 degree
STD-904	Stand							●			
STD-920T	Stand with Tilt Mechanism							●			Tilt Angle:Up 10 degree/Down 10 degree
<b>Tripod Mount Plate</b>											
AT-900	Tripod Mount Plate							●			1/4 & 3/8 inch hole plate
<b>Handle</b>											
GR-1770	Handle	●	●					●			
GR-904	Handle							●			
<b>LCD Protection Cover</b>											
PP-1751	Protection Cover for HLM-1751WR			●							Anti-Reflection Coating
PP-1750	Protection Cover for HLM-1705WR						●				Anti-Reflection Coating
PP-904	Protection Cover for HLM-904WR							●			Anti-Reflection Coating
<b>Battery Bracket</b>											
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)							●			
<b>Hood</b>											
MH-2570	Folding Hood	●									
MH-1750	Folding Hood	●	●					●			
MH-904	Folding Hood							●			
<b>Carrying Case</b>											
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.

# Specifications



		HEM-2570W	HEM-1770WR	HLM-1751WR	HLM-3250W	HLM-2450WB	
Display Panel	Type of Panel	OLED		LCD / LED Backlight	LCD		
	Number of Pixel	Effective Number of Pixel	Full HD (16:9) 1920x1080			WUXGA(16:10)1920x1200	
		Number of Pixel in 16:9	1920x1080				
	Display Size (Diagonal) in 16:9	Display Size (Viewing Area)	24.5"	16.5"		31.5"	24.0"
			24.5"	16.5"		31.5"	23.4"
	Brightness (Specification of Panel)	250cd/m <sup>2</sup> (Max Brightness)		450cd/m <sup>2</sup>	500cd/m <sup>2</sup>	400cd/m <sup>2</sup>	
	Contrast Ratio (typical)	5000:1 *1		1000:1	1300:1	1000:1	
Display Color	1.07 billion colors / 10bit						
View Angle (up & down, left & right typical)	178°		176°	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 WxHxD mm (inch)	585x398x102.8 (23.1x15.7x4.1)	428x301x98 (16.9x11.9x3.9)	428x301x96 (16.9x11.9x3.8)	776x498x110 (30.6x19.6x4.3)	562x398x101.3 (22.1x15.7x4.0)	
	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					
	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	●	▲ 2 Inputs, 1 Output (D3G-240A/D)			
		VBS	● 2 Inputs/Outputs (TH)				
		RGB/YPbPr	▲ 1 Input (CM-70)		▲ 1 Input (CM-240)		▲ 1 Input (CM-175)
		Analog PC	▲ 1 Input (CM-70)		▲ 1 Input (CM-240)		▲ 1 Input (CM-175)
		DVI-D	● 1 Input				
		HDMI	▲ 1 input (SP-70+SPF HDMI Module) (HDCP Support)			x	
External Sync	▲ 1 Input (CM-70)		▲ 1 Input (CM-240)		▲ 1 Input (CM-175)		
Audio	Input	Analog Audio Input		● (RCAx2)			
	Output	Embedded Analog 2ch Output	● (RCAx2)		▲ 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, 5x5, 10x10				
		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	● (1920x1080)		—		
		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	●						

● : Standard, ▲ : Option

\*1 EIAJ ED-2810 dark place, partial lighting contrast

\*2 SMPTE425M-A/B, YPBPR, 4:2:2



		HLM-1705WR	HLM-905WR	HLM-5013WR	HLM-7012WR	
Display Panel	Type of Panel	LCD		LCD / LED Backlight		
	Number of Pixel	Effective Number of Pixel	WXGA (15:9) 1280x768		WVGA (15:9) 800x480	
		Number of Pixel in 16:9	1280x720		800x450	
	Display Size (Diagonal)	Display Size (Viewing Area)	17.0"	8.9"	5.0"	7.0"
		in 16 : 9	16.7"	8.8"	4.9"	6.9"
	Brightness	(Specification of Panel)	370cd/m <sup>2</sup>	350cd/m <sup>2</sup>	180cd/m <sup>2</sup>	290cd/m <sup>2</sup>
	Contrast Ratio (typical)		800:1	1000:1	500:1	1000:1
Display Color		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)	
	Power Consumption (max)	AC (Standard Spec)	40W	23W	1.7A	
		DC (Standard Spec)	-	20W / 1.6A	34W	30W
	Dimensions WxHxD mm (inch)	428x301x80 (16.9x11.9x3.2)	222.4x173x69.5 (8.8x6.8x2.8)	481x88.1x56.2 (18.88x3.5x2.22)	481x132.6x56.2 (18.88x5.25x2.22)	
	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)	
		Rating Output	1W			
	Speaker	Analog Audio Output	● (Monaural)		-	
		Embedded Digital Audio Output	●			
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	● (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, 5x5, 10x10		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)	1	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	-	● (1280x720)		-
		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	● 2		-	
		LED Alarm Display	● (SDI ERROR)		-	
SDI Channel Lock Setting		●		-		
USB Memory Version-up		●		-		

● : Standard, ▲ : Option  
 \*1 EIAJ ED-2810 dark place, partial lighting contrast  
 \*2 SMPTE425M-A/B, YPBPR, 4:2:2



