# **plura**



# PBM-3G-V2 Series





PBM-224-3G-10-V2



## PBM-3G-V2 Series - Product Highlights:

PBM-3G-V2, Portable & Rack-mountable enhanced V2 series version consists of high quality portable LCD panel, specifically designed for multiple video server inputs program & preview monitoring, camera output & return feed side by side and multiple camera preview wall monitoring. PBM-3G-V2 series designed for every possible broadcast mobile environment ensuring accurate color reproduction in accordance with SMPTE, EBU, REC 709 Broadcast Standards.

The standard calibration feature enables gamma, color temperature and white luminance level adjustments to meet all Broadcast standards. The PBM-3G-V2 is compatible with Plura (ICAC) calibration tool and provides 10 bit look up table (LUT) (1024 steps of grayscale).

- 3Gb/s 1080/60P
- 2 x Auto-detect HD-SDI, SDI with active loops (3Gb/s / 1.485Gb/s / 270Mb/s)
- Dual HD SDI YPbPr 4:2:2 Dual HD SDI YPbPr/RGB 4:4:4 & 2K
- HDMI 1.4 HDCP 1.2, DVI, RGB, YUV, Y/C, Composite, UXGA
- Complies with EBU-3320 TECH, SMPTE-C and ITU-R BT.709 Standards
- LKFS Audio Measurement Digital Loudness Audio metering in LKFS scale
- (ICAC) Plura Intelligent Connection for Alignment & Calibration
- 3D LUT & Wide range of Gamma selection (0.8 3.0)
- ColourSpace PRO integration for advanced and accurate display profiling and calibration functionalities T
- HDR (High Dynamic Range) capabilities
- PQ (SMPTE ST 2084) & HLG (Hybrid Log Gamma)
- Closed Caption (608/708) North American Market
- Teletext 801 & Subtitle OP-47 Australia & NZ Market
- Cutting edge De-interlacing and Scaling Technology
- Ethernet & RS232 Remote Control
- TSL 5.0 UMD Support
- Internal Monitor Display (IMD)
- PLURA GUI control & Ember+ support T User Interface Control CONTROL LAN EMBER **Ŧ** Optional license

- Ember+ compliant control system capabilities T
- Fast Response Time for high motion video
- RGB 12 Bit Digital Signal Processing
- Underscan/ Overscan/ Normal / Zoom
- Pixel to Pixel Mode, Tally, DC Operation .
- False Color and Peaking Filter / Focus Assist
- Video Range Test with adjustable Y & C values
- Display LTC & DVITC time code with line select
- Internal Pattern Generator and Wall Control System
- Built In Stereo Speaker , 16 CH Audio Metering Display .
- Analog & Embedded Audio Input, Digital Audio Decoding
- Color Temperature User, VAR, Adjustable (9300K TO 3200K)
- Various and User defined Markers Display, Safe Area in HD & SD
- Picture and Picture (PaP), Picture in Picture (PiP) display / Blend .
- Dual display modes with dual Wfrm & Vect
- Display Advanced Waveform & Vector Scope simultaneously with line select
- Programmable Front Pushbutton Controls & GPI
- Intuitive OSD Display and Graphic based system
- OPTIONS: Rackmount, Battery Mount, Carry Case

#### Powerful Audio Measurement Package



LKES Audio Loudness Measurement - Digital Loudness Audio Metering with selected channel measurement in LKES scale

### PBM-3G-V2 PROMINENT FEATURES

Plura PBM-3G-V2 series brings the exceptional built in feature set Plura monitors are known for, maintaining quality and performance to give broadcast & production facilities an edge in Full HD monitoring.

# Monitoring Advanced Features

- 10 bit panel color depth, PBM-317-3G-10-V2 & PBM-224-3G-10-V2
- Supports up to 4096 x 2160 resolutions
- HDR (High Dynamic Range) capabilities
- PQ (SMPTE ST 2084) & HLG (Hybrid Log Gamma)
- RGB 12 Bit Digital Signal Processing
- Gamma Selectable (0.8 3.0)
- Color Temperature User, VAR, Adjustable (11000K TO 3200K)
- (ICAC) Plura Intelligent Connection for Alignment & Calibration 3D LUT (Native, BT.709 & D-Cinema)
- ColourSpace PRO integration for advanced and accurate display profiling and calibration functionalities\*
- Display Advanced Waveform & Vector Scope simultaneously with line select
- Programmable 3 User Front Pushbutton Controls & GPI
- Various and User defined Markers Display Safe Area in HD and SD
  False Color and Peaking Filter / Focus Assist Video Range with adjustable Y & C values.
- Display LTC & DVITC time code with line select
- Embedded Audio Input, Digital Audio Decoding

# Waveform / Vector

PBM-3G-V2 is equipped with powerful video processor to display concurrently two video inputs with the related Waveform & Vector, 16CH Audio Level Metering, and Timecode.

Dual Waveforms and Vectors supported for SDI1/SDI2.

Histogram/Vertical waveform/RGB conversion.

RGB Parade, Waveform have an option to display Luminance & chrominance.

Display Advanced Waveform & Vector Scope simultaneously with line select.

# Closed Caption (708/608)

PBM-3G-V2 monitor supports & decodes closed caption streams with

- 708 Service 1, Service 2
- 608 Transcoded CC1,2,3&4
- 608 line 21
- 608 ANC

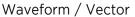
# OP-47 Support

PBM-3G-V2 monitor can support Teletext 801 & Subtitle OP-47 for Australia & New Zealand regions.

# Wide Color Gamut & Color Spaces support

PBM-3G-V2 is built with intelligent connections for calibration alignment, adjustable colorimetry and gamma correction capabilities. The PBM-3G-V2 series can reproduce many color spaces (Native, ITU-R BT.709 & D-Cinema). The Plura PBM-3G-V2 Series will feature the traditional software-redefine feature set built into most Plura monitors, including intelligent connections for calibration alignment, adjustable colorimetry, gamma correction and audio monitoring - all accessible from an intuitive menu offering smooth navigation. While using Plura's unique ICAC or ColourSpace Pro tool\*, allows production staff to quickly and

automatically calibrate multiple color-related elements across the entire monitor network over IP. This ensures that the PBM-3G-V2 Series is quickly re-calibrated to its reference standard, returning optimal brightness and color consistency for demanding 4K workflows. \*License is required



#### Gamma Adjustment



PBM-3G-V2 series provides different Gamma adjustment settings. The monitor is capable to select Gamma setting between (0.8 - 3.0)

#### Markers



A focus-assist feature is important for focusing cameras.



Various and User defined Markers Display, Safe area in HD and SD.

#### False Color

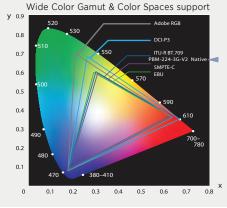


False color function refers to a group of color rendering methods used to display images in color which were recorded in the visible or non-visible parts of the electro-magnetic spectrum. A falsecolor image is an image that illustrates an object in colors that differ from those a photograph ( a true color image ) would show.

#### Video Range



This function displays Luma (Y) & Chroma (C) out of range levels outside the user defined range.





Dual Display with Advanced Waveform & PBN

Vector Scope simultaneously with line select

#### Focus Assist

#### PBM-3G-V2 Series Specifications: 17", 21", 24" Monitors

	FUNCTION	PBM-317-3G -V2	PBM-317-3G-10-V2	PBM-221-3G -V2	PBM-224-3G -V2	PBM-224-3G-10-V2
	SDI Input		2EA, HD/SD Ser	ial Digital, 3Gb/s, 1.485Gb/s, 2	270Mb/s, BNC Jack	
INPUT	Analog Input	2EA, HD/SD Serial Digital, 3Gb/s, 1.485Gb/s, 270Mb/s, BNC Jack				
	S-VIDEO Input	3EA, Composite, Component (YPbPr/RGB), BNC Jack 1EA,YC (S-Video)				
	DVI / VGA Input	1EA, YC (S-Video) 1EA, DVI-I, 24 pin, Female				
	HDMI					
OUTPUT	SDI Output	1EA, HDMI, 19 pin Female 2EA_BNC_Active Through Output				
OUTPUT		2EA, BNC, Active Through Output				
ANALOG	Composite	1.0Vpp (with sync)				
INPUT FORMAT	YC (S-Video)	1.0Vpp ( Y with Sync) 0.286Vpp (C)				
	Component	1.0Vpp (Y with Sync) 0.7Vpp (Pb/Pr)				
	RGB	1.0Vpp (G with Sync), 0.7Vpp (R/B)				
	DVI - (Analog PC)	H Frequency Range : 22-82KHz, V Frequency Range : 55-90Hz,				
		Maximum Resolution : UXGA at 60Hz,				
		Maximum Pixel Rate : 162MHz - Separate Sync Support				
DIGITAL INPUT FORMAT	SMPTE 428.1M	2048 x 1080p ( 24/25)				
	SMPTE-425M (3G)	1920x1080P (60/59.94/50/30/29.97/25/24/23.98/30sf/29.97sF/25sF/24sF/23.98sF) / 1080i (60/59.94/50)				
	SMPTE-260M	1920 x 1035i (60/59.94)				
	SMPTE-292M	1920 x 1080i (50/59.94/60)				
		1920 x1080p (30Psf/25Psf/24Psf/30/25/24)				
	SMPTE 372M	Dual Link HD-SDI YPbPr (4:2:2) : 1080p (50/59.94/60)				
		Dual Link HD-SDI YpbPr/RGB (4:4:4)				
		1080p (30/29.97/25/24/23.98)				
		1080i (29.97/25/24/23.98)				
		720p (60/59.94/50)				
	SMPTE 296M	1280 x 720p (50/59.94/60)				
	SMPTE 259M/C	480i (59.94)				
		576i (50)				
	Component	640 X 480 up to 1920 X 1080p				
		640 X 480 up to 1920 X 1080p 480P/720P/1080P/2160P-30HZ - H Frequency Range : 22-82KHz, V Frequency Range : 55-90Hz				
	HDMI UHD 1.4					
	DVI Digital	Maximum Resolution : UXGA at 60Hz, Maximum Pixel Rate : 162MHz				
AUDIO	Input Line	1EA, L/R Stereo, 3.5mm pin jack				
INPUT	SDI Audio Input	Embedded HD/SD-SDI Audio				
AUDIO OUTPUT	Speaker Output	Internal Speaker (Stereo) 2W+2W				
	Output Line	IEA, L/R Stereo 3.5mm pin jack				
	Ear-phone Output	1EA, L/R Stereo, 3.5mm pin jack				
	Output Signal	Input Line & De-embedded Audio, 1-16CH				
I/O PORT	GPI	1EA, Remote, RJ-45 Jack, GPI-7 Port				
	Control Lan	RJ-45 8 pin Ethernet port, RJ-45 8 pin Ethernet port, 100Mbps, supported for Plura PSC 500 control, TSL5.0 Tallyman & OPTIONAL Ember+				
	USB	FPGA & Firmware Upgrade				
	RS232	D-sub 9 pin female for software upgrade				
	HTTP			HTTP Web Interface		
LCD	Size	LCD 17"	LCD 17" (10bit)	LCD 21"	LCD 24"	LCD 24" (10bit)
	Aspect Ratio	16 : 9	16 : 9	16 : 9	16 : 10	16 : 10
	Resolution	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1200	1920 x 1200
	Display Area H x V	372.9 x 209.7 (mm)	372.9 x 209.7 (mm)	495.6 x 305.2 (mm)	518.4 x 324.0 (mm)	518.4 x 324.0 (mm)
	Display Color	16.7M colors	1.073B colors	16.7M colors	16.7M colors	1.073B colors
	Brightness	Max 450 cd/m2	Max 450 cd/m2	Max 350 cd/m2	Max 400 cd/m2	Max 400 cd/m2
	Contrast Ratio	900:1 (Typical)	900:1 (Typical)	1000:1 (Typical)	1000:1 (Typical)	1000:1 (Typical)
	Response Time	Tr=8ms / Tf=8ms	Tr=8ms / Tf=8ms	Tr=6ms / Tf=6ms	Tr=7.5ms / Tf=7.5ms	Tr=7.5ms / Tf=7.5ms
	Viewing Angle (deg)	Horizontal: 178 (Typ.), Vertical 178 (Typ.)				
POWER REQUIREMENT		AC 100 V - 240 V (60/50 Hz)				
POWER CONS		(30W)	(30W)	(40W)	(40W)	(40W)
WORKING TEMPERATURE		-30° C - 40° C (-22° - 104° F)				
WORKING HUMIDITY		10% RH - 85% RH (Non Condensed)				
STORAGE TEN				-30° C ~ 60° C (-22° ~ 140° F)		
		10011 1101	10011 11011	10% RH ~ 85% RH (Non Condensed)		0.011/ 10.01
WEIGHT (w/o Stand & Packaging)		4.99 Kg - 11.0 lbs	4.99 Kg - 11.0 lbs	7.71 Kg - 17.0 lbs	8.61 Kg - 19.0 lbs	8.61 Kg - 19.0 lbs
DIMENSION (WxHxD)		442 x 310 x 86 mm	442 x 310 x 86 mm	503 x 349 x 65 mm	553.8 x 406 x 65 mm	553.8 x 406 x 65 mm
	5(0X)	17.4 x 12.2 x 2.6 Inch	17.4 x 12.2 x 2.6 Inch	19.8 x 13.7 x 2.5 Inch	21.8 x 16.0 x 2.5 Inch	21.8 x 16.0 x 2.5 Inch
(w/o Stand & I						
(w/o Stand & I PACKAGING D		550 x 435 x 220 mm	550 x 435 x 220 mm	660 x 523 x 220 mm	660 x 523 x 220 mm	660 x 523 x 220 mm
(w/o Stand & I		550 x 435 x 220 mm 21.7 x 17.2 x 8.7 Inch	550 x 435 x 220 mm 21.7 x 17.2 x 8.7 Inch	660 x 523 x 220 mm 26 x 20.6 x 8.7 Inch	660 x 523 x 220 mm 26 x 20.6 x 8.7 Inch	660 x 523 x 220 mm 26 x 20.6 x 8.7 Inch
(w/o Stand & I PACKAGING D					26 x 20.6 x 8.7 Inch	

Please note that the technical details shown here are provisional specifications (as of JULY 2023). The Information is subject to change without notice.

