

31.5" OLED Reference Monitor for Color Grading

LEM-321P



True Black. Accurate Color. Professional Connectivity.

The **LEM-321P** is a 31.5-inch **4K/UHD OLED** reference monitor designed for HDR monitoring, color-critical production, post-production, and broadcast applications.

AVLogic Always ON-AIR

OLED Reference Monitor for Professional Production



The **LEM-321P** features a **31.5-inch UHD OLED** panel that delivers true black, ultra-high contrast, and exceptional color accuracy.

Combined with professional broadcast interfaces including 12G-SDI, HDMI, and Reference input, the LEM-321P is designed for HDR monitoring, color grading, studio production, and post-production environments.

With advanced monitoring tools such as Image Capture&Overlay, Waveform, Vectorscope, Histogram, Audio Level Meters, Closed Caption in Multi-languages, and custom 3D LUT support, the LEM-321P provides a complete monitoring solution for modern video workflows.



OLED
Self-Emissive Pixels for True Black and Perfect Contrast



INFINITE CONTRAST
1,500,000 : 1



1000nits PEAK LUMINANCE
High Brightness
1000nits (Peak)



WIDE COLOR GAMUT
DCI-P3 Coverage 99%



IDEAL FOR HDR
Monitoring and Color Grading



UHD RESOLUTION
Ultra High Definition
3840×2160



12G-SDI INPUT
Up to 12G-SDI Single Link



HDMI 2.0 INPUT
HDMI 2.0 Input
Up to 4K 60p



HDR vs SDR COMPARISON
Side-by-Side Comparison for Accurate Monitoring



3840×2160 & 4096×2160 SIGNAL SUPPORT
Supports 4K DCI and UHD Signals



12G-SDI QUAD-VIEW
View 4 Channels Simultaneously



IMAGE CAPTURE & OVERLAY
Capture and Overlay Images on Screen



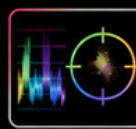
CLOSED CAPTION IN MULTI LANGUAGES
Multi-Language Closed Caption Support



AC 100~240V & DUAL BATTERY
AC 100~240V Power & Dual Battery Support



PROCESSED OUTPUT
Clean, Processed Signal Output



WAVEFORM & VECTORSCOPE
Accurate Monitoring for Exposure and Color Accuracy

Cutting-edge OLED Display

The OLED panel delivers true black, infinite contrast, and precise color reproduction through self-emissive pixels, offering superior image quality and viewing performance over conventional LCD monitors.

- True Black with self-emissive pixels
- Infinite contrast ratio
- Accurate color reproduction even in low luminance areas
- Wide color gamut for HDR production
- Ultra wide viewing angle with minimal color shift
- Fast response time with no motion blur
- No backlight blooming or halo effect
- Excellent panel uniformity
- Ideal for HDR monitoring and color grading

LCD BLACK

LCD Monitor

vs

OLED BLACK

LEM-321P OLED Monitor



LCD with Backlight

Backlight leakage creates a grayish black with reduced contrast.



OLED with Self-Emissive Pixels

Each pixel emits its own light for perfect black and infinite contrast.

HDR Monitoring & Accurate Color Reproduction

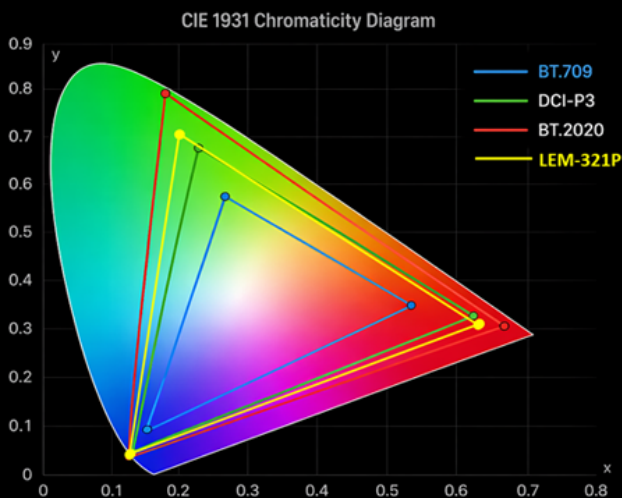
The LEM-321P supports multiple HDR EOTFs including PQ and HLG, allowing accurate monitoring of HDR content.

The OLED panel provides wide color gamut coverage and precise color reproduction, making the monitor suitable for color-critical applications such as color grading, shading, and post-production.

- HDR EOTFs: PQ, HLG
- Wide Color Gamut: DCI-P3 Coverage 99%
- Accurate Color Reproduction
- 10-bit Color Processing
- Custom 3D LUT Import
- HDR / SDR Monitoring
- Consistent Color Across Viewing Angles

Wide Color Gamut with DCI-P3 Coverage 99%

Accurate Color Reproduction for Professional Workflows



HDR vs SDR Comparison in Real Time

Display the same signal in Picture-by-Picture mode with independent HDR and SDR settings for precise side-by-side evaluation.



Consistent Color Across Viewing Angles

Experience consistent color and image quality from any angle, with minimal color shift and stable contrast across the entire viewing range.

Professional Monitoring Tools

The LEM-321P includes a wide range of professional monitoring tools for accurate video and audio analysis.

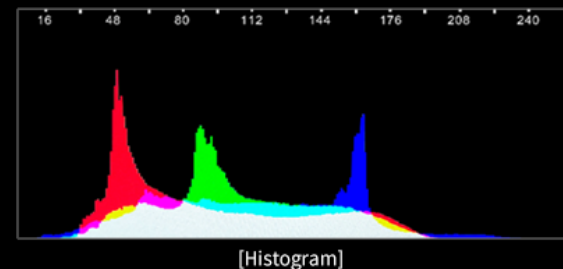
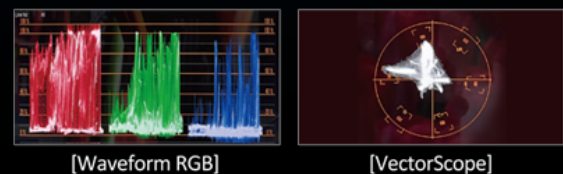
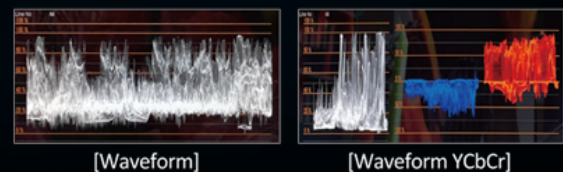
• Quad-View Display

The LEM-321P monitor support quad view display, allowing up to four different video inputs to be shown on a single screen simultaneously. This monitor can display a variety of input combinations, 4 x SDI and 1 x HDMI, providing maximum flexibility and versatility.



• Various Scope - Waveform, VectorScope, Histogram

The LEM-321P can display the input signal's Waveform, VectorScope. Both Waveform and VectorScope offer multiple modes and can be shown simultaneously. Additionally, users can opt to display the Waveform of a specific selected line.



• Image Capture & Overlay

Experience unparalleled monitoring with the LEM-321P **Image Capture & Overlay**. Instantly capture reference frames and overlay them onto your live feed, allowing you to compare shots, maintain accurate color, and ensure perfect framing every time. Whether on a bright outdoor set or in a controlled studio, this feature empowers filmmakers and colorists to work faster, smarter, and with complete confidence in every take.

[Captured Image]



[Matched Images]



• Various Audio Monitoring Functions

The LEM-321P offers the various audio monitoring tools such as Audio Level Meter, Audio Phase Meter.

The Audio Level Meter allows users to monitor the audio level up to 16 channels by pairing and grouping the audio channels. The level meter decay time, size, and position are adjustable. The Audio Phase Meter shows how much the signal extends into the stereo field, and where the signal's energy is distributed in the stereo field by drawing a Lissajous pattern.



- Waveform (Luma, Y/Cb/Cr, RGB)
- VectorScope
- Histogram
- Audio Level Meter (16Ch)
- Audio Phase Meter
- Timecode Display
- Marker

- 12G-SDI Quad-View Display
- Picture-by-Picture Display
- Image Capture & Overlay
- Custom 3D LUT Import
- Closed Caption in multi languages (CC-608, CC-708, OP47)
- Dynamic UMD

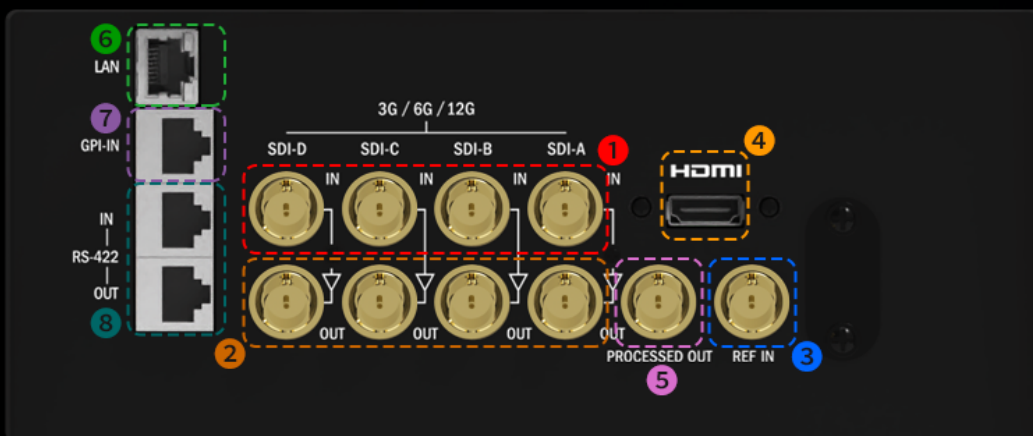
- Focus Assist
- Range Error
- Blue / Mono Only
- H- Flip, V-Flip
- Fast Mode
- Video Range
- Luma(Y') Zone Setting

Professional Connectivity

The LEM-321P supports a wide range of professional video interfaces, making it suitable for broadcast, production, and post-production environments. The monitor also supports various signal conversion and processed output functions, enabling flexible workflow integration.

[A Wide Range of Professional Interfaces]

- 4 x 12G-SDI Input
- 4 x 12G-SDI Loop Output
- 1 x HDMI 2.0 Input
- Reference Input for Genlock
- Ethernet In / RS-422 In&Out / GPI In for Remote Control
- Processed Output
 - Down-Scaling Output
 - Conversion Output
 - 3D LUT Applied Output
 - Camera LUT Applied Output



- SDI Input** ①
4 x 12G/6G/3G-SDI Input
- SDI Output** ②
4 x 12G/6G/3G-SDI Input
- Reference Input** ③
1 x BNC Input
- HDMI Input** ④
1 x HDMI 2.0 Input

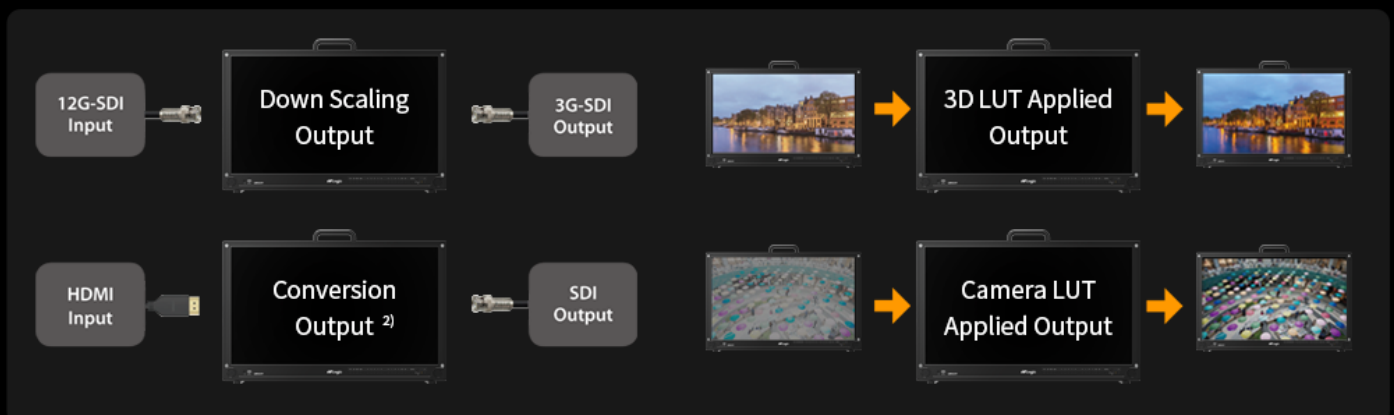
LAN
1 x Ethernet Input
(Remote Control)

REMOTE
1 x RJ-45
(External monitor control)

RS-422
2 x RJ-45 Input & Output
(Monitor control by TVLogic or TSL protocol)

Processed Output ⑤
1 x SDI Processed Output

[PROCESSED OUTPUT]



Studio Performance. Field Flexibility.

The LEM-321P supports both AC power and dual V-Mount or Gold-Mount batteries, providing maximum flexibility for studio, on-location, and outdoor production environments.

FLEXIBLE POWER OPTIONS

Power the LEM-321P the way your production needs.



When using dual batteries, the monitor can operate continuously without interruption. Battery hot-swap is supported.



AC POWER INPUT

100-240V~
50/60Hz



DUAL V-MOUNT BATTERY SUPPORT

14.4V Battery
(Hot-swappable)



DUAL GOLD-MOUNT BATTERY SUPPORT

14.4V Battery
(Hot-swappable)



CONTINUOUS OPERATION WITH DUAL BATTERIES

Extended runtime for uninterrupted monitoring



IDEAL FOR STUDIO AND FIELD PRODUCTION

From studio to outdoor, always reliable



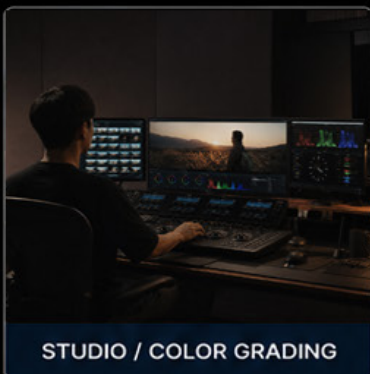
LIGHTWEIGHT & DURABLE

Built with aluminum chassis for a slim, lightweight design.

10.4kg / 22.9 lbs

DESIGNED FOR ANY PRODUCTION ENVIRONMENT

From controlled studio environments to demanding outdoor locations, the LEM-321P delivers reliable performance with flexible power options tailored for modern production workflows.



Specifications

Items		LEM-321P
OLED Panel	Size	31.5"
	Resolution	3840 x 2160 (16:9)
	Pixel Pitch	0.1814(H) x 0.1814(V) mm
	Color Depth	1.07B Colors (10 bit)
	Viewing Angle	178°(H) / 178°(V)
	Luminance of white	1000cd/m2
	Contrast Ratio	1,500,000 : 1
	Display Area	699.5(H) x 394.7(V) mm
Input	4 x BNC	12G/6G/3G/HD/SD-SDI A/B/C/D Channel Input
	1 x HDMI	HDMI 2.0 Input
	1 x BNC	Reference Input
Output	4 x BNC	12G/6G/3G/HD/SD-SDI A/B/C/D Channel Output
	1 x BNC	Processed Output
Input Signal	12G-SDI	12Gb/s
	6G-SDI	6Gb/s
	3G-SDI	2.970Gb/s
	HD-SDI	1.485Gb/s
	HDMI	480p/720p/1080p/2160p
SDI Input Signal Formats	SMPTE ST 2082	3840x2160 (60/50/30/25/24p)
	SMPTE ST 2081	3840x2160 (30/25/24p)
	SMPTE ST 2036-1:2009	3840x2160 (23.98/24/25/29.97/30/50/59.94/60p)
	SMPTE-425M-A/B	1080p (60/59.94/50/30/29.97/25/24/23.98/30sF/29.97sF/25sF/24sF/23.98sF)
		1080i (60/59.94/50)
	SMPTE-274M	1080i (60/59.94/50)
		1080p (30/29.97/25/24/24sF/23.98/23.98sF)
	SMPTE-296M	720p (60/59.94/50)
	SMPTE-260M	1035i (60/59.94)
	SMPTE-125M	480i (59.94)
ITU-R BT.656	576i (50)	
SMPTE ST 2048-2:2011	2048x1080 (23,98/24/25/29.97/30p/psf, 47.95/48/50/59.94/60p)	
Remote Control & Update	1 x LAN	RJ-45 Input(Ethernet), Firmware Update & Remote Control
	1 x REMOTE	RJ-45 Input, GPI Control
	2 x RS-422	RJ-45 Input & Output, Monitor Control by TVLogic Protocol or TSL Protocol
	1 x USB	USB A type
General	Audio Out	Internal Speakers (Stereo 3W x 3W) / Analog Stereo (Phone Jack)
	Power	AC100~240V(50~60Hz) / DC 24V
	Power Consumption	TBD
	Operating Temperature	0°C to 35°C (32°F to 95°F)
	Storage Temperature	-20°C to 60°C (-4°F to 140°F)
	Dimensions: Main Body	763.0 x 475.0 x 53.0 (mm) / 30.03 x 18.70 x 2.08 (inch)
	Dimensions: With Stand	763.0 x 530.8 x 150.0 (mm) / 30.03 x 20.89 x 5.90 (inch)
	Dimensions: Shipping Box	920 x 360 x 790 (mm) / 36.22 x 14.17 x 31.10 (inch)
	Weight (with stand)	10.4kg / 22.92lbs
	Basic Accessories	AC Power Cord, Stand
	Optional Accessories	Handle, Panel Protector, Acrylic Protector, Sun Hood, V-Mount, G-Mount

*The specifications above may be changed without notice.

The logo features a stylized 'TV' icon to the left of the word 'Logic' in a bold, sans-serif font. Below 'Logic' is the tagline 'Always ON-AIR' in a smaller, all-caps sans-serif font.

TV Logic Always ON-AIR

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