

LM7000 SD/HD/3G Monitor Series

7000 series: a new landmark in monitoring

LM7000 SERIES
SD/HD/3G Monitors



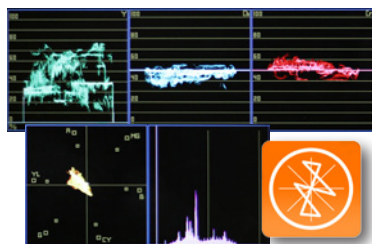
MAIN NEW FEATURES

The 7000 series from KROMA includes new functions to increase the signal monitoring capabilities: new inputs, camera calibration functions and improved features; setting a new landmark in broadcast monitoring.



The DVI-I and the new HDMI inputs, included by default, provide direct connection with compatible cameras, multiviewers, PCs and analogue component video signals.

The SD-SDI input is active by default, while the rest of video inputs (composite and HD/3G-SDI), are optional and license activated.



New tools have been included to assist in the signal monitoring, such as independent waveforms for Y, Cb and Cr, vectorscope and histogram, displayed in different colours for a quick identification of each tool.

It is possible to select the line of the signal in the waveforms for a more precise analysis of the picture.

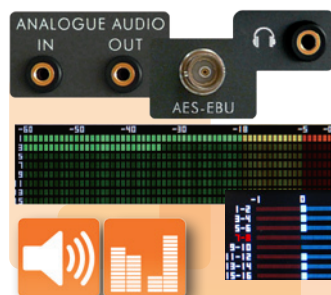


The camera calibration tools support correct camera settings:

- With *luma check*, the picture is generally displayed in b/w, and out of range luminance values (below 16 or over 235) are coloured in red (underexposure) or blue (overexposure).

- With *false colour*, the range of luminance values is scaled in ten different levels and displayed with different colours, making the luminance adjustment easier at extreme lighting conditions.

- With *focus assist*, the focused edges are highlighted when matching a certain level of sharpness (configurable by menu).



Audio monitoring is possible thanks to the different input options (analogue and SDI-embedded) and outputs (analogue, digital AES-EBU, headphones and stereo built-in speakers).

The on-screen meters, configurable in size and transparency, display up to 16 channels in different scales*

The audio phase indicator shows the phase relationship between left and right channels, with special signaling when channels are in phase.

* dBFS, BBC, DIN, Nordic, STD, NA, FRA, EBU



More than one signal may be monitored at once with PIP (Picture-in-Picture) and PbP (Picture-by-Picture) functions. PbP displays two inputs side by side in original aspect ratio, full screen and half of each input.

The new Dual-split displays two inputs and the corresponding WFM, vectorscope, IMD and tally info. A built-in dual splitter with no extra cost.



Pixel mapping shows the real pixels of pictures with no downscaling involved (1:1 resolution). In 9" and 18.5" monitors, FullHD signals are "zoomed" and a browser allows to select and display different areas of the image.



The 7000 series monitors' displays feature IPS (In-Plane Switching) technology, improving viewing angles and colour reproduction over regular LCD displays.

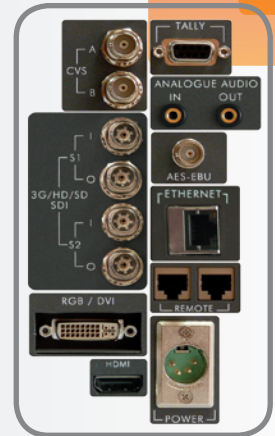


High resolution dynamic in-monitor displays (IMD) are available on-screen through serial protocol. Additionally, the tally info (on screen or lamp) can be received serially or through contact closure.

It is possible to control the monitors remotely thanks to a Ethernet port and the PC based KROMA Monitor Controller software.

Markers and safety area function have been greatly improved. Also including new markers, i.g. cinema formats, all compatible with the rest of on-screen functions.

REAR INPUTS



Audio bars and phase indicator

Signal

Dynamic IMD

Vectorscope

Waveforms

High resolution

Histogram

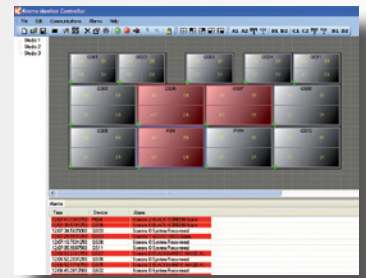
Phase indicator

DIFFERENT LAYOUTS

One of the advantages of the 7000 series is the great range of tools and additional functions to monitor video signals. It is possible to overlay most of these applications on the picture. Nevertheless, the layout function offers different preset designs to allow the correct display of all the tools, optimizing the spacing, and turning the 7000 series monitors in compact rasterizer.

KROMA MONITOR CONTROLLER

It is possible to control the monitors remotely thanks to the rear Ethernet port and the *KROMA monitor controller* software. This tool is specially interesting for facilities with multiple units, like monitoring walls; or when combining 7000 series monitors for PVW and PGM with quad-split monitors (QS series), in a multiviewer-like configuration.



SPECIFICATIONS

Model #	LM7009	LM7109	LM7018	LM7024
Size	9" (16:9 native)	9" (16:9 native)	18.5"	24" (16:10 native)
Resolution	1280x768	1280x768	1366x768 (16:9 native)	1920x1200
Active Area	195x113.4mm	195x113.4mm	409.8x230.4mm	518x324mm
Viewing Angle	178° H/V	178° H/V	178° H/V	178° H/V
MTTF	50,000 Hours	50,000 Hours	50,000 Hours	50,000 Hours
Brightness	350 cd/m ²	350 cd/m ²	250 cd/m ²	400 cd/m ²
Contrast	900:1	900:1	1000:1	1000:1
Response Time	8 ms	8 ms	6 ms	6ms
Inputs				
DVI	Connector	DVI-I		
	YPbPr RGB (VGA) DVI Graphic mode DVI Video mode	1080i (60,59,95, 50), 576@50i, 480@60i 640x480, 800x600, 1024x768, 1280x1024, 1600x1200 640x480 (60/50), 800x600 (60/50), 1024x768 (60/50), 1280x720(60), 1280x1024 (60/50), 1366x768 (60/50), 1366x768 (60/50), 1920x1200 (60/50) 1920x1080(50), 60i, 50p, 60p)		
HDMI		640x480(60/50), 800x600(60/50), 1024x768(60/50), 1280x720(60), 1280x1024(60/50), 1366x768(60/50), 1366x768(60/50), 1920x1200(60/50) 1920x1080(50), 60i, 50p, 60p)		
Composite	Connector	2xBNC or 1xBNC (selectable by menu)		
	SMPT-E 170M	PAL/NTSC/SECAM		
SD/HD-SDI/3G	Connector	2xBNC		
	SMPT-E-259M	576i@50, -480i@60		
	SMPT-E-296M	720p(60/59.94/50)		
	SMPT-E-274M SMPT-E-260M SMPT-E-424M	1080p(30/29.97/25/24/23.98), 1080iF(24/23.98), 1080i(60/59.94/50) 1035i(60/59.94) 1080p(60/50)		
Audio	SDI embedded audio Analogue audio (Jack connector)			
In-Monitor display	RJ45 Connector TSL Protocol (v3.1, Image Video,...)			
Remote control	Ethernet			
Tally	SUB-D9 Connector (contact closure and voltage) Connector RJ-45 (serial protocol)			
LTC/VITC/VITC2	SDI embedded			
Outputs				
Composite	1xBNC (selectable by menu)			
SD/HD/3G-SDI	2xBNC (active loop)			
Audio	2x Analogue audio (Jack connector), front and rear AES-EBU (BNC Connector) Speakers VU-meters			
Tally	On-screen Lamp			
In-Monitor display	On-screen RJ-45 (loop output)			
General				
Dimensions	222 x 177.5 x 85.5 mm	222 x 177.5 x 85.5 mm	446 x 264 x 106 mm	552 x 379 x 92.5mm
Weight	1.5 Kg	1.5 Kg	5.5 Kg	8 Kg
Power	External PSU 100-240 VAC	Battery External PSU 110-240 VAC	External PSU 100-240 VAC	Internal PSU 110-240 VAC
Power consumption	23 W	23 W	51 W	65 W
Model #	LM7009A12	LM7109A12	LM7018A11	LM7024A11
Accessories	LM7009X80: rack mounting kit (for 2 monitors) LM7009X03: blank panel	LM7109X80: rack mounting kit (for 2 monitors) AC1200X01: transport bag with sun hood and rain cover	LM7018X80: rack mounting kit MS2300X50: articulated desktop adaptor MS2304X50: fixed desktop adaptor	LM7024X80: rack mounting kit MS2300X50: articulated desktop adaptor
Input activations	LM7000X07: composite video inputs LM7009X03: HD/3G option	LM7000X07: composite video inputs LM7009X03: HD/3G option	LM7000X07: composite video inputs LM7009X03: HD/3G option	LM7000X07: composite video inputs LM7009X03: HD/3G option

Specifications may change without prior notice