



Flanders
Scientific
Inc.

REFERENCE DISPLAYS AND ADVANCED COLOR MANAGEMENT DEVICES



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XM SERIES

Our 31" 4K HDR mastering monitor and large format UHD monitoring solutions.



XM SERIES I/O

INPUTS

- 4 x BNC 12G/6G/3G/HD-SDI
- 1 x DP DisplayPort (4096x2160@30P 10bit)

OUTPUTS

- 4 x BNC 12G/6G/3G/HD-SDI Clean Out
- 4 x BNC 6G/3G/HD-SDI - Processed Out

DM SERIES

Mastering quality 17" and 24" HD monitors for the studio or the field. These monitors showcase FSI's most advanced feature set.



DM SERIES I/O

INPUTS

- 1 x DVI-D
- 2 x BNC 3G/Dual-Link/HD/SD-SDI
- 1 x DP DisplayPort

OUTPUTS

- 2 x BNC 3G/Dual-Link/HD/SD-SDI
- 2 x BNC Processed Out

BM SERIES

Capable 8bit monitoring options in a variety of panel sizes. The feature set is well suited for editorial or work in the field.



BM SERIES I/O

INPUTS

- 1 x DVI-I (Analog/Digital)
- 2 x BNC 3G/Dual-Link/HD/SD-SDI
- 1 x BNC Composite
- 3 x BNC Component (YPbPr/RGB)

OUTPUTS

- 2 x BNC 3G/Dual-Link/HD/SD-SDI
- 1 x BNC Composite
- 3 x BNC Component (YPbPr/RGB)

AM SERIES

Affordable and accurate monitoring solutions in a variety of sizes.



AM SERIES I/O

INPUTS

- 1 x DVI-I (Analog/Digital)
- 2 x BNC 3G/HD/SD-SDI
- 1 x BNC Composite
- 3 x BNC Component (YPbPr/RGB)

OUTPUTS

- 2 x BNC 3G/HD/SD-SDI
- 1 x BNC Composite
- 3 x BNC Component (YPbPr/RGB)

XM SERIES

XM310K

ULTRA WIDE GAMUT ZONED BACKLIGHT ARRAY LCD



Most professional HDR displays have a peak luminance of just 1,000nits. With a peak luminance of 3,000nits, the XM310K is one of the brightest commercially available professional HDR monitors. The XM310K achieves this with a full-array local dimming backlight with over 2,000 individually controlled LED elements to minimize the halation, flare, and other artifacts found on lower density zoned backlight systems. The XM310K is also one of the few professional FALD displays giving operators flexible control over modulation behavior.

XM310K
2,000+ Zones

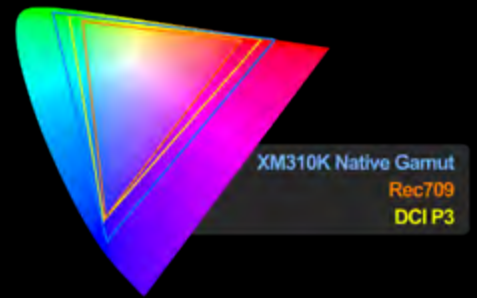


Other Monitors
500 Zones



XM310K Specs

- 31" 4K 10bit LCD
- 4096 x 2160 Native Resolution
- 3,000,000:1 Contrast Ratio
- 100% P3 Coverage
- HDR and SDR Mastering Monitor
- Support for Multiple HDR Formats
- Live LUT Update Capability
- Real-time Downscaled 3G/HD-SDI Output
- 12Gbps SDI Input/Loopthrough
- Quad 1.5Gbps and 3Gbps SDI Connectivity
- 4K Compatible Waveform and Vectorscope
- Qualifies as a Dolby Vision mastering monitor

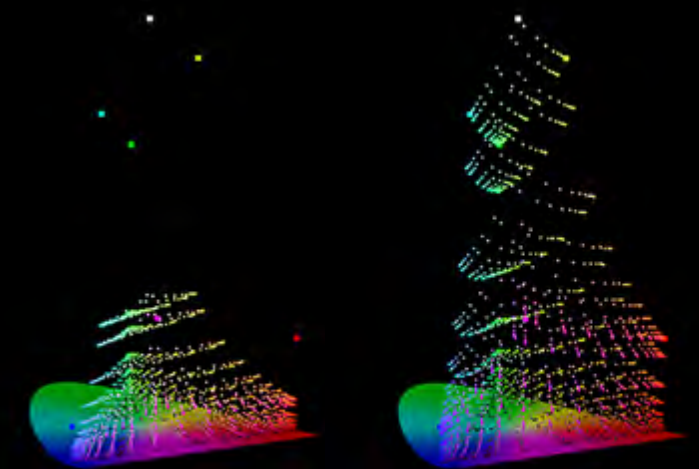


Ultra Wide Gamut Zoned Backlight Array
2000+ ZONES - 3,000 nits



The 3,000nit Advantage

The XM310K's industry leading peak luminance isn't just about specular highlight capability. With a 3,000nit capable HDR display colorists have a much larger color volume to work with that contains a wide palette of bright saturated colors simply not available on 1,000nit displays.



1,000nits

3,000nits

XM SERIES

XM SERIES FEATURES

XM551U



XM551U Specs

55" UHD 10bit OLED • 3840x2160 Native Resolution • SDR Reference Master Monitor • HDR Monitoring • 12Gbps SDI Input/Loopthrough • Real-time Downscaled 3G/HD-SDI Output • Quad 1.5Gbps and 3Gbps SDI Connectivity • 4K Compatible Waveform and Vectorscope

XM651U



XM651U Specs

65" UHD 10bit OLED • 3840x2160 Native Resolution • SDR Reference Master Monitor • HDR Monitoring • 12Gbps SDI Input/Loopthrough • Real-time Downscaled 3G/HD-SDI Output • Quad 1.5Gbps and 3Gbps SDI Connectivity • 4K Compatible Waveform and Vectorscope

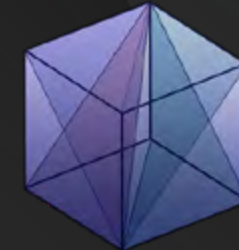
Advanced LUT Processing Options

XM series monitors have the unique ability to process 3D LUTs using your choice of trilinear or tetrahedral interpolation. Trilinear LUT interpolation is very common and having this option allows you to process LUTs as they will frequently be seen elsewhere. More advanced tetrahedral LUT interpolation, while not as ubiquitous, allows for a higher degree of precision with better on screen performance.

Trilinear Interpolation



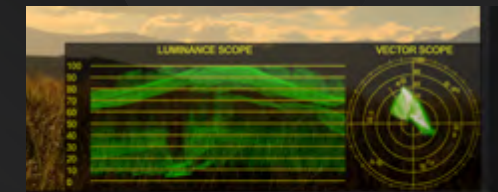
Tetrahedral Interpolation



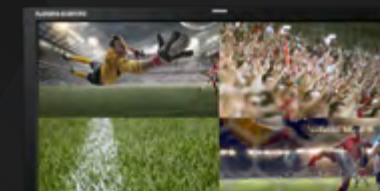
Unique Features for Content Creation and Mastering



Real-time Down Conversion



4K Compatible Real-time Waveform, Vectorscope, and Markers



Multi-cam Monitoring



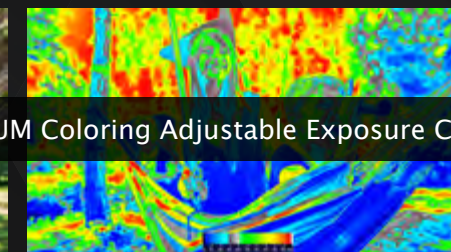
Two Deinterlace Options



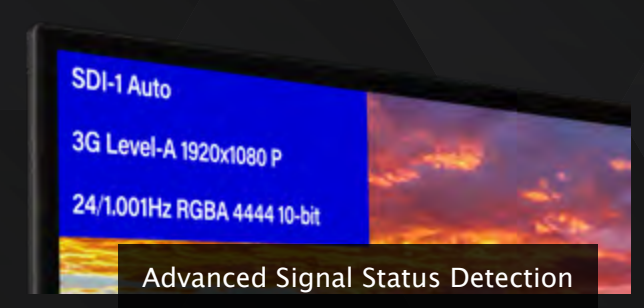
HD to UHD Upscaling



LUM Coloring Adjustable Exposure Check



On-set Color Management

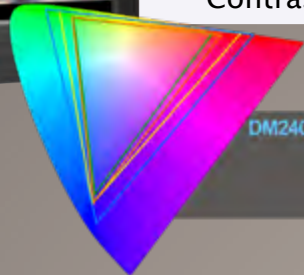


Advanced Signal Status Detection



DM240 MONITORING SYSTEM

Screen Size	24"
Resolution	1920 x 1200
Panel Bit Depth	10bit
Color Gamut	Wide
Backlight	Wide Gamut W-LED
Contrast Ratio	1500:1



DM240 Native Gamut
Rec709
SMPTC-C
DCI P3

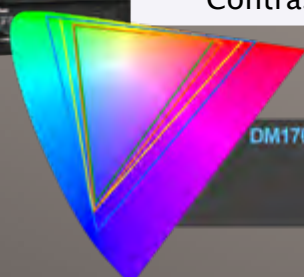


- Advanced Real-time Waveform & Vectorscope •
- Full Resolution Frame Capture and Callback • Image Flip •
- Real-time LUT Manipulation over IP • HDR Preview Modes •
- Zero Delay Mode • Cross Conversion • Second Screen Outputs

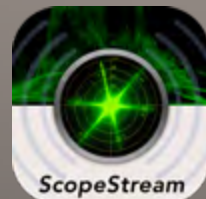


DM170 MONITORING SYSTEM

Screen Size	16.5"
Resolution	1920 x 1080
Panel Bit Depth	10bit
Color Gamut	Wide
Backlight	Wide Gamut W-LED
Contrast Ratio	1500:1



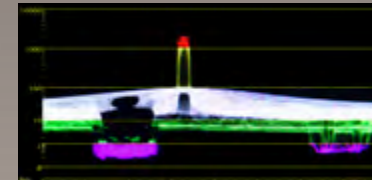
DM170 Native Gamut
Rec709
SMPTC-C
DCI P3



The DM series of monitors offer all AM series and BM series features, as well as the following extended capabilities unique to the DM series

Advanced Real-time Waveform & Vectorscope

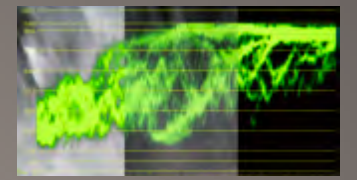
DM series monitors have real-time Waveform and Vectorscope that update every frame. Scope position, background, size, and scale can be adjusted independently using the rotary knobs on the face of the monitor, and multi-color waveform zones can be fully customized within the menu system. Real-time scopes work in all processing modes including Zero Delay Fast Mode.



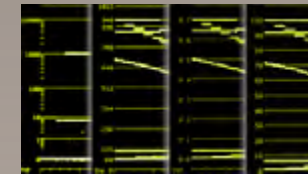
HDR Waveform Monitor View for use with PQ Signals



Use Concurrently with Markers or Timecode



Transparent, Translucent, or Solid background



User Selectable Graticule Modes: IRE, Voltage, 10bit Digital Levels, HDR WFM



Independently Positionable and Resizable



Fully Customizable Multi-color Zones

A Fully Functional On Set Color Management System

DM series monitors support real-time LUT updates over IP using compatible software such as Pomfort's LiveGrade Pro without the need for additional standalone LUT management hardware. All you need is a camera, computer, and a DM Series Monitor.

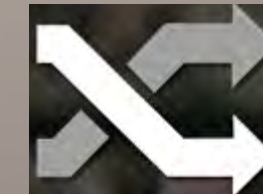


Powerful Features

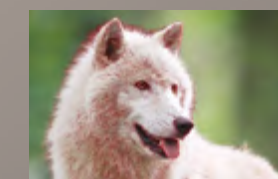
From production to post, DM series monitors offer many powerful features.



Frame Capture and ScopeStream Functionality



Cross Conversion

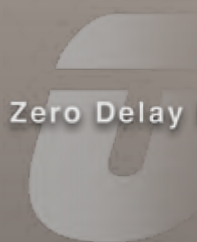


Adjustable Multi-color Advanced Focus Assist

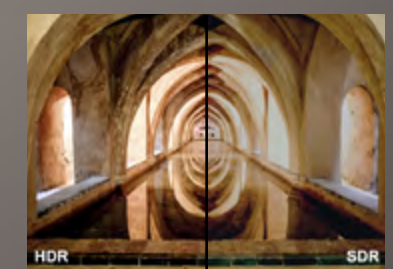


Mirror On-Screen Image to Downstream Equipment.

Zero Delay Mode



Real-time Image Flip with Second Screen Output

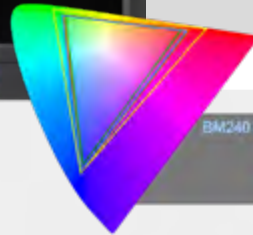


HDR Preview

The BM series of monitors offer all AM series features, as well as the following extended capabilities

BM240 BROADCAST MONITOR

Screen Size	23.8"
Resolution	1920 x 1080
Panel Bit Depth	8bit
Color Gamut	Rec709
Panel Technology	White LED LCD
Contrast Ratio	1000:1



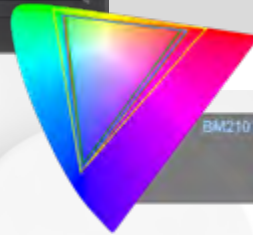
BM240 Max Gamut
Rec709
sRGB
DCI P3



3D DIT / Look LUTs

BM210 BROADCAST MONITOR

Screen Size	21.5"
Resolution	1920 x 1080
Panel Bit Depth	8bit
Color Gamut	Rec709
Panel Technology	White LED LCD
Contrast Ratio	1000:1



BM210 Max Gamut
Rec709
sRGB
DCI P3

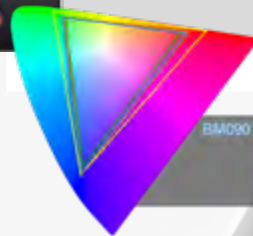


Live Picture and Picture



BM090 BROADCAST MONITOR

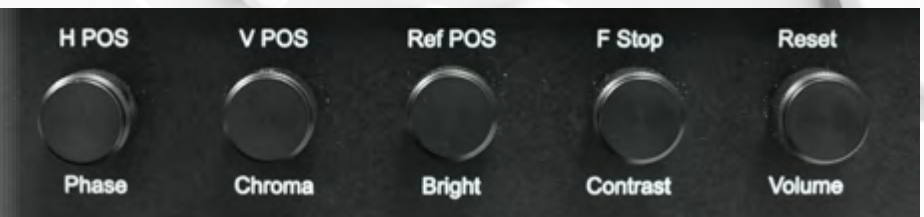
Screen Size	9"
Resolution	1920 x 1080
Panel Bit Depth	8bit
Color Gamut	Rec709
Panel Technology	White LED LCD
Contrast Ratio	750:1



BM090 Max Gamut
Rec709
sRGB
DCI P3



Rotary Knob Control



LOUDNESS Leg(RLB) Blocks: 14 z: 243156248

Ch	10s(LKFS)	Avg(LKFS)	10s(LKFS)	Avg(LKFS)
01	-7.92	-7.92	-6.33	-6.33
02	-11.45	-11.45	-7.76	-7.76
03	-10.20	-10.20	-10.95	-10.95
04	-11.43	-11.43	-7.76	-7.76
05	-14.09	-14.09	-7.76	-7.76
06	-13.84	-13.84	-91.01	-91.01
07	-10.20	-10.20	-91.01	-91.01
08	-11.42	-11.42	-91.01	-91.01
09	-91.01	-91.01	-91.01	-91.01
10	-91.01	-91.01	-91.01	-91.01
11	-91.01	-91.01	-91.01	-91.01
12	-91.01	-91.01	-91.01	-91.01
13	-91.01	-91.01	-91.01	-91.01
14	-91.01	-91.01	-91.01	-91.01
15	-91.01	-91.01	-91.01	-91.01
16	-91.01	-91.01	-91.01	-91.01

Loudness Meter



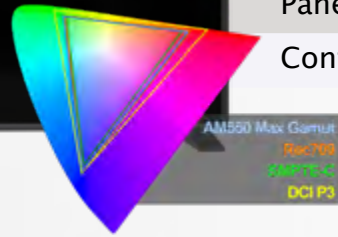
Video Data Analyzer



CIE Scope

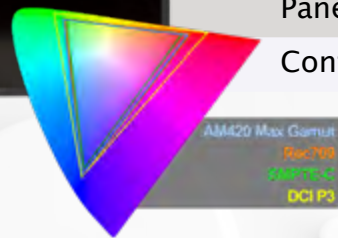
AM550 BROADCAST MONITOR

Screen Size	55"
Resolution	1920 X 1080
Panel Bit Depth	10bit
Color Gamut	Rec709
Panel Technology	White LED LCD
Contrast Ratio	1300:1



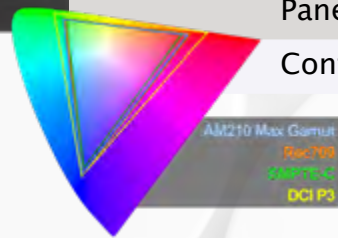
AM420 BROADCAST MONITOR

Screen Size	42"
Resolution	1920 X 1080
Panel Bit Depth	10bit
Color Gamut	Rec709
Panel Technology	White LED LCD
Contrast Ratio	1300:1



AM210 BROADCAST MONITOR

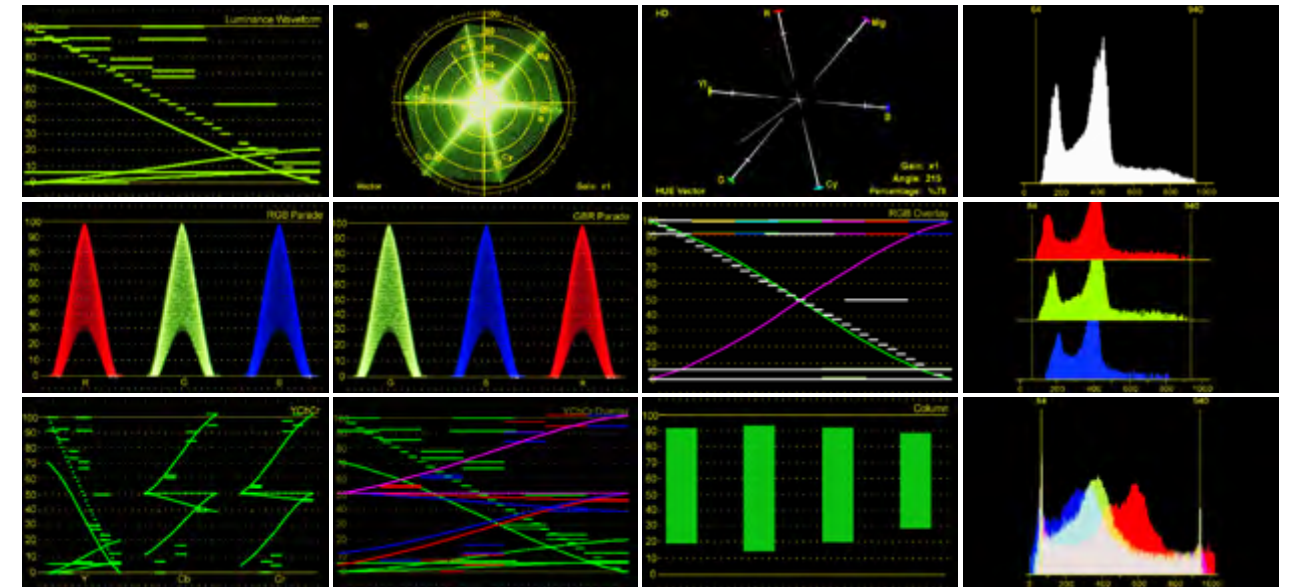
Screen Size	21.5"
Resolution	1920 X 1080
Panel Bit Depth	8bit
Color Gamut	Rec709
Panel Technology	White LED LCD
Contrast Ratio	1000:1



Standard features found on all AM, BM, and DM series monitors

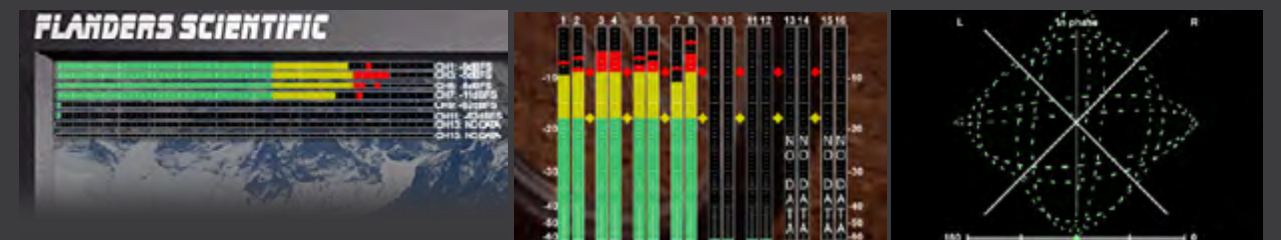
VIDEO SCOPES

Display up to two scopes on screen at a time. Scopes can be positioned in any of 6 on-screen positions. When using two scopes, the scope windows can be stacked horizontally or vertically depending on your preference. Video scopes work across all inputs, even DVI/DP.

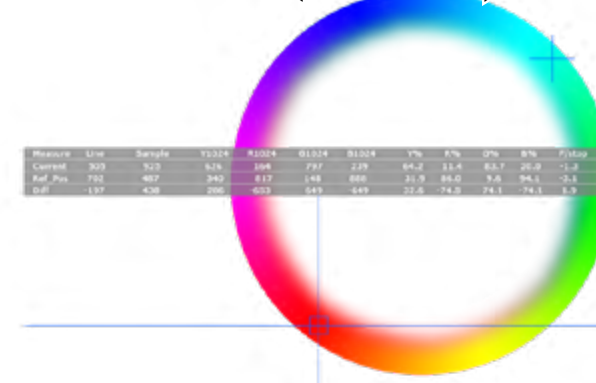


AUDIO METERS

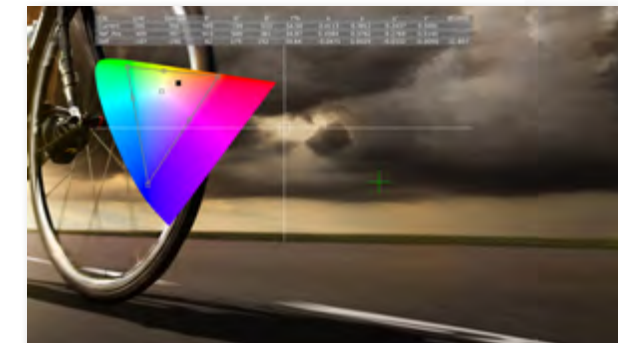
FSI monitors feature several audio metering tools as well as the ability to disembed any single channel or stereo pair of audio to the monitor's internal speakers or audio output. Disembedded audio is always synced to the exact amount of video processing time to ensure proper lip-sync.



MEASUREMENT (8 & 10bit)



CIE MEASUREMENT



FEATURES SPOTLIGHT

MARKERS

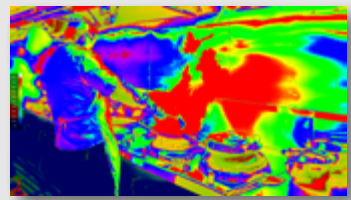
Choose from a wide assortment of standard markers and safety areas that can be displayed as lines, translucent overlays, or solid overlays. Lines and overlays have selectable colors for instant customization.



CROSSHATCH

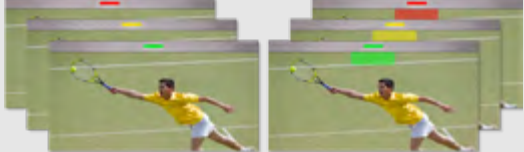


LUM COLORING (ADJUSTABLE EXPOSURE CHECK)



TALLY LIGHTS & RECORD STATUS TALLY*

*Not compatible with all cameras, camera must output recognized SDI flag. AM420 and AM550 have on-screen tally only.



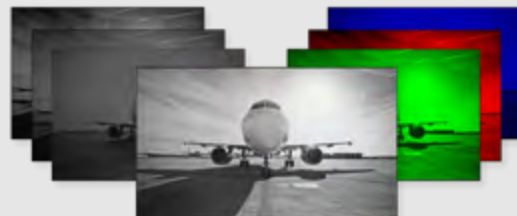
CUSTOM GRATICULES



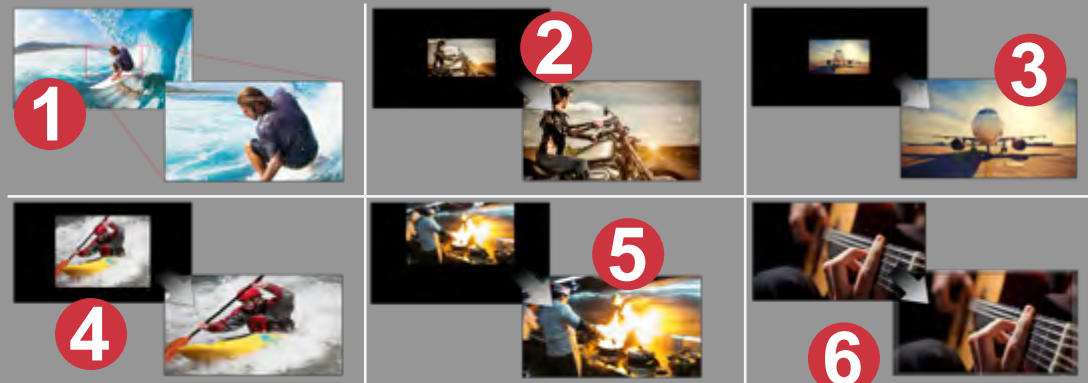
TIMECODE



BLUE ONLY, RED ONLY, GREEN ONLY, AND MONOCHROME



ZOOM MODES



- 1 Pixel Zoom
- 2 Zoom
- 3 DSLR Zoom
- 4 Full Screen
- 5 CX Scale
- 6 Overscan

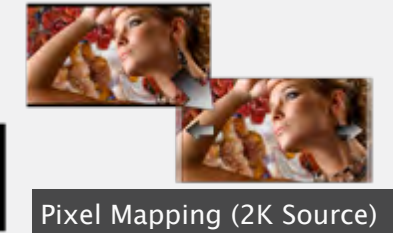
Pixel mapping

Allows for 1:1 and 2:1 pixel mapping of sources when their resolution is different than the native resolution of the panel. This feature is also capable of scaling 2K signals to fit or to be shown 1:1 with the ability to move left to right so any portion of the 2K image can be shown 1:1

1:1 Pixel Mapping (SD)

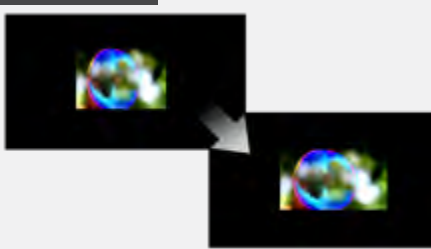


1:1 Pixel Mapping (720p)



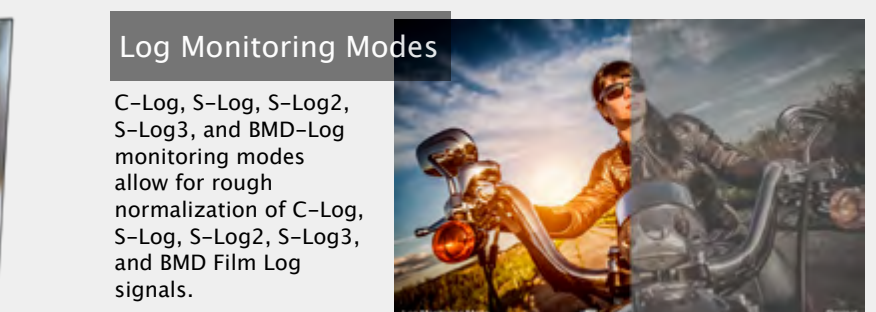
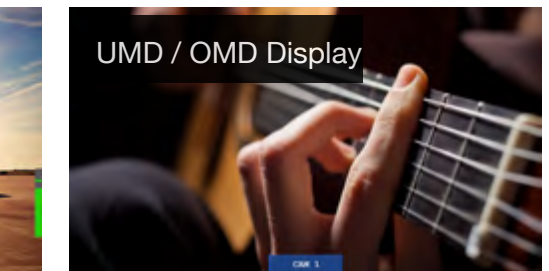
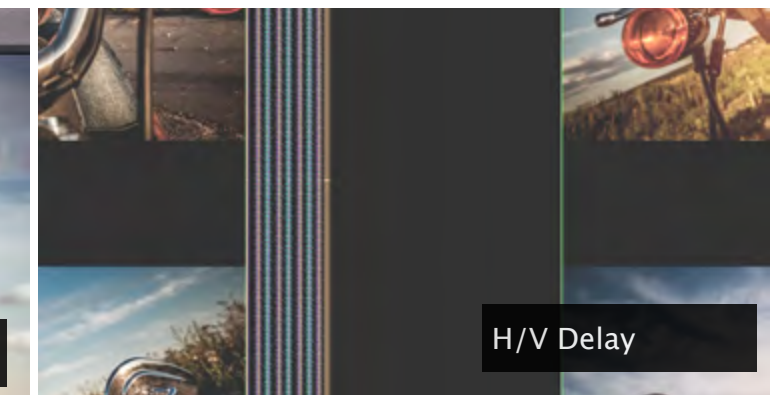
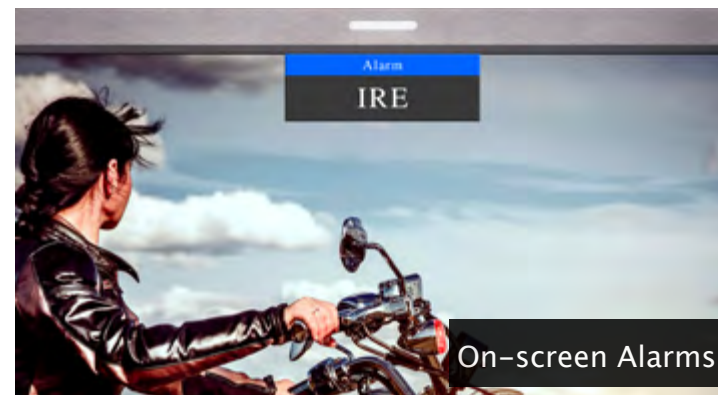
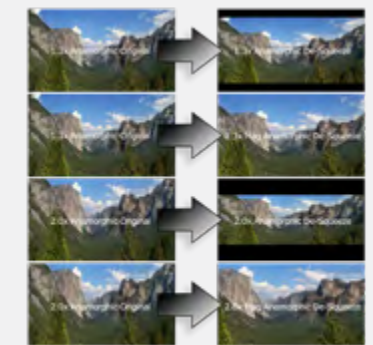
SD Aspect Ratio & PAL SD FHA

Allows users to toggle from 4:3 to anamorphic display of SD signals. Can be combined with the pixel mapping feature for proper display of PAL SD FHA signals.



Anamorphic De-Squeeze

1.3x, 1.3x mag, 2.0x, and 2.0x mag anamorphic de-squeeze for use with HD signals



Log Monitoring Modes

C-Log, S-Log, S-Log2, S-Log3, and BMD-Log monitoring modes allow for rough normalization of C-Log, S-Log, S-Log2, S-Log3, and BMD Film Log signals.

BoxIO SERIES

ADVANCED COLOR MANAGEMENT DEVICES

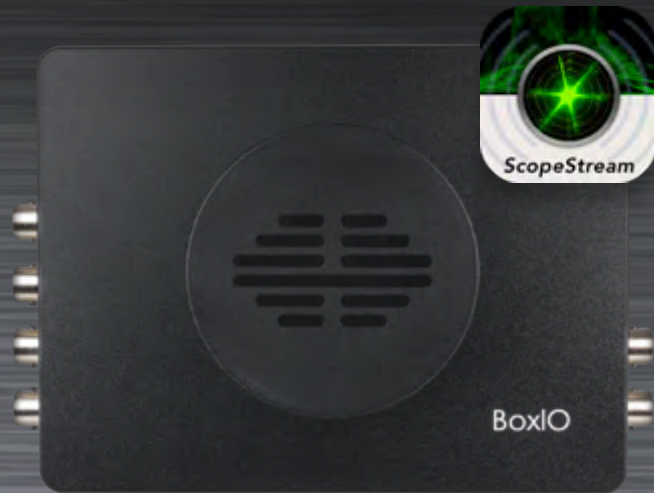
IP REMOTE UTILITY

BoxIO

BoxIO is an advanced color management device designed for both color critical post-production environments and demanding on set applications.

Unique capabilities include:

- Simultaneous support of 3D and 1D LUTs
- 12bit support
- Integration with on set grading applications
- Frame capture support
- Test pattern generation
- Compact and silent
- 2x 3G SDI inputs, outputs, and loop throughs
- ScopeStream integration



Single-Channel Mode

BoxIO can operate in a single-channel mode with a switched input. In single-channel mode BoxIO supports 33x33x33 size 3D LUTs.

Dual-Channel Mode

Two LUT Boxes In One.

BoxIO can apply two separate LUTs to two independent signals at the same time, essentially operating as two LUT boxes in a single device. In dual-channel mode each channel supports 17x17x17 size 3D LUTs.

Calibration With BoxIO

BoxIO interfaces directly with the industry's leading calibration software solutions for simple and accurate 3D LUT based display alignment, even on displays that don't offer built-in 3D LUT based calibration.



On Set Grading

BoxIO supports real-time LUT updates over IP, allowing for direct integration with these popular on set color management tools:



BoxIO Lite SDI

BoxIO Lite SDI is an advanced color management device with the same functionality as the BoxIO, but is designed for applications where the user only needs one 3G SDI input.

The IP Remote Utility (available for Mac, PC, and iOS devices) provides useful toggles and controls for management of your AM, BM, and DM series monitors as well as BoxIO units.

BoxIO

- Quickly change operation modes and alter channel settings
- Load LUTs to BoxIO to toggle On & Off quickly
- Update Firmware
- Manage BoxIO IP addresses and WiFi settings
- ScopeStream integration
- Capture frames at full resolution that can be saved instantly as a .JPG, .BMP, or .RAW image



Monitors

- Control AM, BM, and DM series function and menu keys
- Quickly switch inputs

On DM series monitors

- ScopeStream integration
- Capture frames at full resolution that can be saved instantly as a .JPG, .BMP, or .RAW image



SCOPESTREAM

Compatible with DM series monitors and BoxIO

ScopeStream transmits waveform and vectorscope information directly from your BoxIO or DM series monitor to any local network connected computer or iOS device, without the need for costly stand-alone devices.



FLEXIBLE CALIBRATION OPTIONS

COLOR MANAGEMENT SYSTEM BUNDLES

GOOD	BETTER	BEST	GOOD	BETTER	BEST
FSI LTE	LS FSI Pro	LS FSI Pro	CalMAN for FSI	CalMAN for FSI	CalMAN for FSI
i1 (basic probe)	CR-100	CR-100/250	i1 (basic probe)	CR-100	CR-100/250



FACTORY CALIBRATION

FREE recalibration at FSI's Atlanta, GA or Lier, Belgium service centers. You pay for shipping, but the service is free. As often as you like, for as long as you own your monitor.

FSI SOLUTIONS
www.FSIolutions.net



FSI Solutions is a division of Flanders Scientific that develops innovative non-electrical studio and field products for cinematography, broadcast, professional video, and photography applications.



HD MONITOR TECH SPECS

Model	AM210	AM420	AM550	BM090	BM210	BM240	DM170	DM240
PANEL SPECIFICATIONS								
Screen Size	21.5"	42"	55"	9"	21.5"	23.8"	16.5"	24"
Resolution	1920x1080	1920x1080	1920x1080	1920x1080	1920x1080	1920x1080	1920x1080	1920x1200
Panel Bit Depth	8bit	10bit	10bit	8bit	8bit	8bit	10bit	10bit
Color Gamut	Rec709	Rec709	Rec709	Rec 709	Rec709	Rec709	Wide	Wide
Panel Technology	LCD	LCD	LCD	LCD	LCD	LCD	LCD	LCD
Backlight	White LED	White LED	White LED	White LED	White LED	White LED	Wide Gamut W-LED	Wide Gamut W-LED
Pixel Efficiency	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%
Contrast Ratio	1,000:1	1,300:1	1,300:1	1,000:1	1,000:1	1,000:1	1,500:1	1,500:1
Viewing Angle (typical)	178°	178°	178°	178°	178°	178°	179°	179°
Panel Surface	Matte	Matte	Matte	Matte	Matte	Matte	Matte	Matte
CONNECTIVITY								
12bit SDI Signal Support	✓	✓	✓	✓	✓	✓	✓	✓
2K Signal Support	✓	✓	✓	✓	✓	✓	✓	✓
XYZ Signal Support	✓	✓	✓	✓	✓	✓	✓	✓
3G/HD/SD-SDI	✓	✓	✓	✓	✓	✓	✓	✓
Dual-Link Support	✗	✗	✗	✓	✓	✓	✓	✓
Component Analog Input	✓	✓	✓	✗	✓	✓	✗	✗
Composite Analog Input	✓	✓	✓	✗	✓	✓	✗	✗
Audio In	✓	✓	✓	✓	✓	✓	✓	✓
Audio Out	✓	✓	✓	✓	✓	✓	✓	✓
DVI / HDMI / DP	DVI-I (Analog & Digital Support)			DVI-I (Analog & Digital Support)			DisplayPort & DVI-D	
Cross Conversion	✗	✗	✗	✗	✗	✗	✓	✓
SDI Loop Through Outputs	✓	✓	✓	✓	✓	✓	✓	✓
2nd Screen Output	✗	✗	✗	✗	✗	✗	✓	✓
USB Device Port	✓	✓	✓	✓	✓	✓	✓	✓
USB Host Port	✗	✗	✗	✗	✗	✗	✓	✓
LAN	✓	✓	✓	✓	✓	✓	✓	✓
FEATURES								
Scopes and Meters	16	16	16	18	18	18	18	18
Markers	✓	✓	✓	✓	✓	✓	✓	✓
Blue/Red/Green Only Modes	✓	✓	✓	✓	✓	✓	✓	✓
Timecode Display	✓	✓	✓	✓	✓	✓	✓	✓
PAP, Split-Screen Variable Wipe	✗	✗	✗	✓	✓	✓	✓	✓
Zero Delay Mode	✗	✗	✗	✗	✗	✗	✓	✓
Customizable Multi-Color Waveform	✗	✗	✗	✗	✗	✗	✓	✓
3rd Generation Focus Assist	✗	✗	✗	✗	✗	✗	✓	✓
Measurement Tool (8 & 10bit)	✓	✓	✓	✓	✓	✓	✓	✓
CIE Measurement	✓	✓	✓	✓	✓	✓	✓	✓
CIE Scope	✗	✗	✗	✓	✓	✓	✓	✓
Video Data Analyzer	✗	✗	✗	✓	✓	✓	✓	✓
LUM Coloring / Exposure Check	✓	✓	✓	✓	✓	✓	✓	✓
3D Disparity	✗	✗	✗	✓	✓	✓	✓	✓
Anamorphic De-Squeeze	✓	✓	✓	✓	✓	✓	✓	✓
DSLR Zoom	✓	✓	✓	✓	✓	✓	✓	✓
COLOR FIDELITY ENGINE								
Calibration LUT Positions	✓	✓	✓	✓	✓	✓	✓	✓
DIT LUT Positions	✗	✗	✗	✓	✓	✓	✓	✓
Real-time LUT Update & SDI Output	✗	✗	✗	✗	✗	✗	✓	✓
POWER								
AC Input	IEC / C14	IEC / C14	IEC / C14	Optional PSU	IEC / C14	IEC / C14	IEC / C14	IEC / C14
DC Input	4 PIN XLR	4 PIN XLR	4 PIN XLR	4 PIN XLR	4 PIN XLR	4 PIN XLR	4 PIN XLR	4 PIN XLR
Battery Plate	Optional	Optional	Optional	Standard	Optional	Optional	Optional	Optional
Power Requirement	100~240 VAC/ 12VDC	100~240 VAC/ 24VDC	100~240 VAC/ 24VDC	12VDC	100~240 VAC/ 12VDC	100~240 VAC/ 12VDC	100~240 VAC/ 12VDC	100~240 VAC/ 12-24VDC
DC Power Consumption (Approx.)	28 Watts	40 Watts	45 Watts	23 Watts	28 Watts	30 Watts	23 Watts	29 Watts
PHYSICAL CHARACTERISTICS								
Keyboard	5 function buttons - no rotary knobs			5 function buttons - rotary knobs			6 function buttons - rotary knobs	
Speakers	2	2	2	2	2	2	2	2
Weight without stand	9 lbs (4.1 kg)	48.5 lbs (22 kg)	72 lbs (32.65 kg)	3.35 lbs (1.5 kg)	9 lbs (4.1 kg)	10 lbs (4.5 kg)	8 lbs. (3.6 kg)	13.4 lbs (6 Kg)
Weight with basic desktop stand	11.6 lbs (5.2 kg)	N/A	N/A	N/A	11.6 lbs (5.2 kg)	13.3 lbs (5.9 kg)	10.6 lbs (4.8 kg)	16.7 lbs (7.5 Kg)

*All specifications subject to change without prior notice



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