NEON SERIES
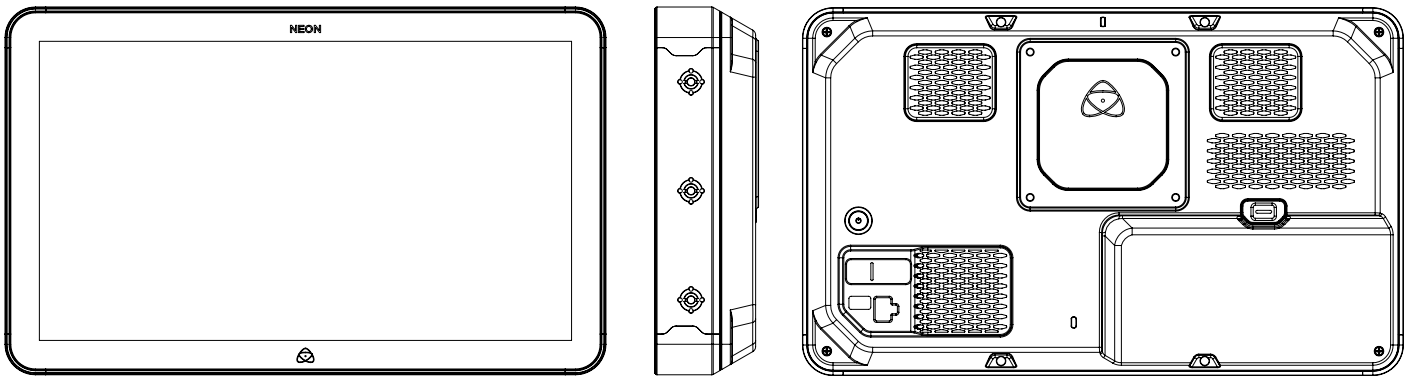
10-Bit HDR Cinema monitor-recorders for on-set and in-studio production

Certainty of image for the entire crew

The Atomos Neon is a series of four precision on-set and in-studio 4K HDR monitor-recorder production workhorses where reliable and trustworthy monitoring is essential. Neons can be synced together to provide an ecosystem of field monitors where accuracy of image representation and consistency of image is critical between crew members... all controlled by the Atomos App.

The Neons' best-in-class 512 zoned dynamic backlight displays provide a calibrated 4KDCI 180-degree perfect viewing, 10-bit DCI-P3 100% color coverage, and 1,000,000:1 HDR-ready contrast for cinematographers to maintain exposure and creative look. Directors can make more creative on-set decisions, viewing perfect images in TV and Cinema standards at all times. Camera assistants and focus pullers can trust the ultra-sharpness of an actor's eyes. Editors and color graders can lock down the director's creative intent from shot to shot, frame by frame and review it across varying displays from SDR to HDR – accurately in real-time.

With the built-in 4Kp60/HDp240 Apple ProRes RAW recorder capturing each take, Neon enables quick review and real-time playout with Dolby Vision to reality test content on domestic TVs. With Neon, Atomos has reimagined the role of the reference monitor to meet the HDR challenges of modern TV and film production.

Digital filmmaking re-imagined for today's creator

Neon is the beginning of a new journey for filmmakers by bringing together traditional filmmaking roles and pairing it with Atomos innovation and technology. We do this by combining RAW recording with cinema display technology for monitoring, on-screen production checking and review of creative intent, story flow and matching continuity between scenes.

Neon streamlines the creative workflow from lens to viewing. We have adopted industry standard formats like ProRes RAW from major camera makers enabling the performance of

ProRes and the flexibility of RAW into cinema productions and built for computer finishing. Neon performs real-time

Dolby Vision processing to enable down-stream viewing on any Dolby Vision capable TV or monitor.

The upshot is an on-set computer replacement merged with an ecosystem of field monitors that saves the creator time by allowing them to make more decisions in the moment of recording, playback, monitoring and editing.

Four sizes for flexibility in any production

The Neon comes in 17", 24", 31" and 55" screen sizes, and complements other Atomos products such as the Shinobi SDI, Ninja V, Shogun 7 and Sumo 19 to provide a flexible ecosystem of field reference monitors.

Neon allows you the flexibility of utilizing your Atomos on low budget productions with HDMI 10-bit uncompressed video cameras, right up to 12G-SDI 12-Bit, 4Kp60 RAW from the best cinema cameras in the world.

Atomos App or remote control for simple operation.

Neon deliberately does away with touchscreen operation and is Bluetooth controlled by the Atomos iOS App or a physical remote control. Neon has the simple-to-use AtomOS built into it so that you can use the App to access real-time production tools including focus peaking, exposure, calibration, zoom, waveform monitor, RGB monitor, vector scope and LUT selection.

Neon shortens the gap between capture and final edit with real-time recording and playback of your captured shots at up to 4Kp60 in formats including ProRes, ProRes RAW, Cinema DNG, Avid DNx. When you've got the take you like, tag it on-set with the App for easy identification during editing.

The App unlocks the ability to insert project specific metadata frame-by-frame, allowing project management of a complex production to be simplified and automated so that the creator

NEON SERIES - Technical specifications

Physical Properties

Weight (monitor only)	Neon17	4.5kg / 9.92lb
	Neon24	8.6kg / 18.95lb
	Neon31	(TBC)
	Neon55	(TBC)
Weight (Master Control Unit)	300g	
Dimensions (W x H x D mm)	Neon17	413 x 253 x 71.4mm
	Neon24	594 x 340 x 72.5mm
	Neon31	760 x 430 x 62mm
	Neon55	1274 x 745 x 91mm
Dimensions (Master Control Unit)	151 x 91.5 x 31mm	
Construction	Aluminium alloy chassis with ABS Polycarbonate back plate	
Mounting points	Full ARRI compatible, 3 Left, 3 Right, 7 Top, 7 Bottom; VESA Mount.	

Power

| Operating power | (TBC) |
| Power adaptor | (TBC) |

Display

Size	Neon17	17"
	Neon24	24"
	Neon31	31"
	Neon55	55"
Resolution / PPI	Neon17	1920 x 1080 / 142ppi
	Neon24	4096 x 2160 / 193ppi
	Neon32	4096 x 2160 / 147ppi
	Neon55	3840 x 2160 / 84ppi
Aspect Ratio	Neon17	16:9
	Neon24	17:9
	Neon31	17:9
	Neon55	16:9
Color Gamut	DCI-P3 100% Coverage, D65 or D93 White Point, Calibrated	
Look up table (LUT) support	3D LUTs (.cube format)	
Anamorphic de-squeeze	2x, 1.5x, 1.33x, Panasonic 4:3	
Calibration	Calibration to DCI-P3 with optional calibration unit	
User interface	iOS App via Bluetooth, IR Remote control of focus peaking, exposure, calibration, zoom, waveform monitor, RGB monitor, vector scope	

Dynamic HDR Technology

Zone Backlights (direct backlight individual LEDs)	Neon17	128
	Neon24	512
	Neon31	512
	Neon55	512
LEDs	Wide Color Calibrated D65 or D95	
Bit Depth	True 10-bit	
Color	DCI-P3 100% coverage	
Brightness	1000nit (+/- 10%)	
Control	Dynamic backlight control	
SDR Monitoring	Native Rec.709, Log/RAW to Rec.709	
HDR Monitoring	Log/RAW to HLG or PQ	
Supported input /Gamma	Sony SLog / SLog2 / SLog3 Canon CLog / CLog2 / Clog3 ARRI Log CEI160 / LogCEI200 / LogCEI250 / LogCEI320 / LogCEI400 / LogCEI500 / LogCEI640 / LogCEI800 / LogCEI1000 / LogCEI1280 / LogCEI1600 Panasonic Vlog JVC JLog1 RED Log3G10 / RED LogFilm FujiFilm F-log PQ10k HLG	
Supported input/Gamut	Sony SGamut / SGamut3 / SGamut3.cine Canon Cinema / DCI P3 / DCI P3+ Nikon NLog Panasonic V Gamut Arri Alexa Wide Gamut Rec709 / BT.2020 JVC RED WideGamut / RED DragonColor / DragonColor2 / RED Color2 / RED Color3 / RED Color4	
Supported input RAW/Gamma	Sony SLog / SLog2 / SLog3 Canon CLog / CLog2 / Clog3 Panasonic Vlog	
Supported input RAW/Gamut	Sony SGamut / SGamut3 / SGamut3.cine Canon Cinema / DCI P3 / DCI P3+ Nikon NLog Panasonic V Gamut	
Video output	Rec.709, HLG, PQ, LUT	

Input Connections

HDMI	1 x HDMI 2.0b
SDI - SDI Expansion Module required	2 x configurable BNC
Signal	Up to uncompressed true 10-bit

Output Connections

HDMI	1 x HDMI 2.0b
SDI - SDI Expansion Module required	2 x configruable BNC
Signal	Up to uncompressed true 10-bit

Supported Loop Out Formats

HDMI to HDMI	720p 50/60, 1080i 50/60, 1080p 24/25/30/50/60/100/120, 4kUHD/4kDCI 24/25/30/50/60
SDI to SDI - SDI Expansion Module required	720p 50/60, 1080i 50/60, 1080p 24/25/30/50/60/100/120, 4kUHD/4kDCI 24/25/30/50/60
HDMI to SDI Note: No simultaneous HDMI out possible	720p 50/60, 1080i 50/60, 1080p 24/25/30/50/60/100/120, 4kUHD/4kDCI 24/25/30/50/60
Dolby Vision Tunnelling	Selectable on HDMI

Supported Codecs & Frame Rates

| Video to ProRes / DNxHR | Apple ProRes RAW, ProRes HQ, 422, LT AVID DNx, HQX, HQ, SQ, LB, Cinema DNG RAW |
| Resolution / Frame rate | 4K DCI / UHD 24/25/30/50/60p 2K 24/25/30/50/60/100/120p 1080p 24/25/30/50/60/100/120/200/240p 1080i 50/60i, 720p 50/60p |

Onboard Processing

Pulldown removal	24/25/30pSF > 24/25/30p (2:2 pulldown) 60i > 24p (3:2 pulldown)
4K DCI > UHD	Yes - Loop-out and playback
4K UHD downscaling	Yes - Loop-out and playback
HDMI	2 or 8ch 24-bit, camera dependent
SDI - SDI Expansion Module required	12ch 48kHz 24-bit

Audio

Audio in	Line in / Mic in
Headphone out	3.5mm Headphone out 2ch 48kHz 24-bit
Built-in speakers	No

Remote Start/Stop

HDMI	Auto HDMI Trigger Supported Protocols - Canon, Sony Atomos Open Standard - Panasonic, Nikon, Olympus, Fuji, Leica
SDI - SDI Expansion Module required	SDI trigger camera selectable
Genlock / LTC	Yes – Bluetooth / iOS App
Serial Control	LANC control – Slave RS232
Playback Features	Jog control, slow motion, scheduled, tag-based scheduling
Pre-roll record	HD 8s, 4K 2s
Project Metadata	AtomOS on unit and iOS App input
Supported media	Support for AtomX SSDmini and Master Caddy II with 2.5" SSD/HDD **Please visit atomos.com/drives for list of approved drives.**
Master caddy dock	2.5" SATA to USB 2.0/3.0/USB-C 3.1
Supported applications	All popular NLE applications, 3D applications
Metadata tagging	Yes (10 tags available)
XML support	FCPX XML native, FCPX/Adobe limited supported with 3rd party conversion tools

What's in the Box

Included	Neon Series Unit, Master Control Unit, IR Remote, Master Caddy II x 1, AC power supply, AtomX SDI Expansion Module, Road Case, Feet, Quick Start Guide
Optional extras	Atomos HDMI cables, Master Caddy Dock, X-Rite, i1DisplayPro calibration
Warranty	1 year Extended to 3 years on product registration

Please note: Specifications are subject to change without notice. All information correct at time of publishing.