ATOMOS SAMURAI
YOUR 10-BIT HD/SD-SDI SMART PRODUCTION WEAPON

Continuous-Power

AtomOS3.0

Easy-to-use Touchscreen Operating System
Access all of the Samurai's operations via the fast, responsive touch interface. The real power of the Samurai comes from **AtomOS**, our innovative and intuitive operating system.

One-touch Navigation
allows for simple operation – everything is one touch away.

AtomOS
upgrades are provided free of charge, via download.

Record Trigger
Select this to ARM and record from the TCF trigger of your source feed, camera or other SDI device

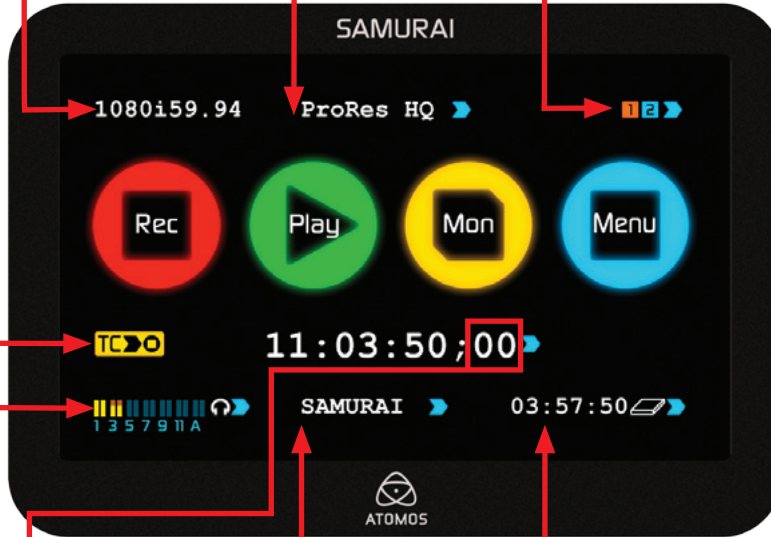**Current Video Input Format and Pulldown Status**
Displays native format from source signal ie. 1080i 59.94
3:2 3:2 pulldown has been removed (reverse telecine applied) to record native 24p

Recording Format
Select the variety of ProRes® or Avid DNxHD codec you are recording to; Avid DNxHD-220X (10-bit), DNxHD-220 (8-bit), DNxHD-145 (8-bit), DNxHD-36 Proxy (8-bit) + all ProRes® options.

Continuous Power Battery Indicator
Shows which battery is currently being used to power the Samurai. You are free to replace the one that *isn't* being used, the active battery is illuminated orange

SAMURAI

Rec   Play   Mon   Menu

1080i59.94   ProRes HQ ▶   1 2 ▶

TC▶O   11:03:50;00 ▶

▮▮▮▮▮▮▮▮ ⌂▶   SAMURAI ▶   03:57:50 ▱ ▶
1 3 5 7 9 11 A

ATOMOS

HD-SDI In

HD-SDI out
→Record loop through
→PLAYOUT

LANC in

LANC Loop out

Stereo in

Headphone

Audio Input Level Meters + Headphone Line Out Volume
Touch audio meters to adjust up to 14 channels audio and set headphone level.
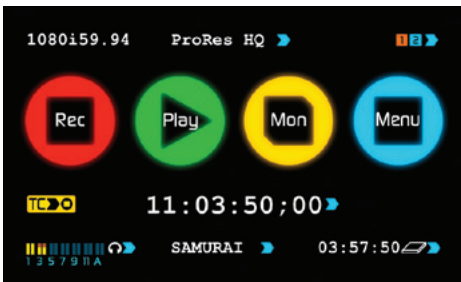
Timecode
Choose between **On board, time of day, record run or auto restart time code modes** or utilise **external timecode** from camera or any source input

Unit Name
Name your Samurai by project or camera. Media drives and recorded files are subsequently named with the unit name upon formatting.

Time Remaining
Shows remaining record time. Remaining time is calculated dynamically and is based on the bitrate of the current recording format and the memory capacity of the HDD/SSD in use.

Master Caddy Slot
Simple, locking **HDD/SSD** system.
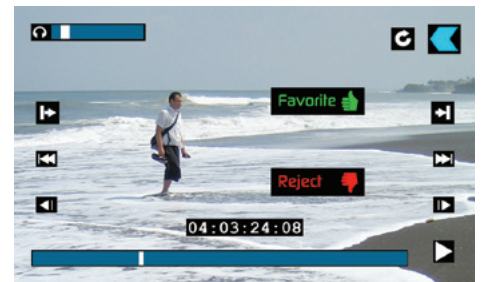A safe, practical solution to media management

---

Rec Mon One-touch Recording

1080i59.94   ProRes HQ ▶   1 2 ▶

Rec   Play   Mon   Menu

TC▶O   11:03:50;00 ▶

▮▮▮▮▮▮▮▮ ⌂▶   SAMURAI ▶   03:57:50 ▱ ▶
1 3 5 7 9 11 A

SmartControl

Control individual, or multiple, Samurai field recorders, in any combination via serial control from a deck, PC, Mac, or iPad/iPhone.

→ All functions of the Samurai can be controlled from a separate device, even remotely over the internet.

→ Standard deck control functions are available to integrate into existing infrastructure - perfect for custom system design.

→ Auto record means that as soon as a signal is detected by the Samurai, recording will be started. Perfect for motion sensor recording or fail-safe recording from live feeds.

Rec Mon One-touch Monitoring

04:03:16:02

SmartMonitor

Accurately assess focus and exposure with:

📷 **Focus Peaking**

▨ **Adjustable Zebra**

🌈 **False Color Twin Mode**

🔵 **Blue Only - Exposure Check**

⚙ **Control - Adjustments for individual filters**

⚑ **SmartLog**

Play Edit One-touch Review

Favorite 👍

Reject 👎

04:03:24:08

SmartLog

Log in and out points on your footage and tag these clips with keywords such as 'good shot', 'bad shot' etc.

Reject 👎   **Favorite** 👍   ▶| →| ↻

With the Samurai this part of the post production process can now be done on set, or on the move, with Continuous Power.

SmartLog operates while in Monitor or Playback mode. It saves time, money and allows fast, collaborative pre-editing prior to final post production.

Rec
Online or Offline, Master or Back-up

10-bit 4:2:2, 220Mbps, 2.5" HDD or SSD

Professional media production is all about balancing quality, cost and time. We understand this dynamic and our aim is to redefine the digital recording workflow to maintain the highest recording quality, minimize the time taken to move video from camera to computer and lower the cost of production using affordable, high capacity, high speed media.

The Samurai takes any uncompressed HD or SD source and encodes it in real-time to 10-bit, 4:2:2 Apple ProRes or Avid DNxHD at up to 220Mbps. Both are class-leading codecs for production, broadcasting, editing and post-production. Because we are portable, we can record from the ultimate image source, the sensor of the camera.

The Samurai always records in 10-bit, even from an 8-bit source. We add color registries for integration into higher bit-depth graphics from CG, animation and special effects. This avoids banding and makes editing and grading, in fact any precision effect, more accurate.

Any HD-SDI or HDMI™ source...

DSLRs, Decks, Switchers, PC, Mac, iPad & iPhone

Samurai has HD-SDI In/Out and optional HDMI In*. Virtually any device transmitting an HD/SD-SDI or HDMI signal is compatible with the Samurai, including cameras, decks, switchers, routers, PCs, MAC, tablets and smart phones as well as audio equipment, which make it an indispensible tool for any number of scenarios.

Nikon/Sony/Panasonic/Canon/Red/Arri/JVC/GoPro

Whether you are a Hollywood DOP needing high quality review and tagging tool from an Arri, RED, Canon or Sony camera, or an independent filmmaker using a Nikon DSLR for end-to-end digital production, the Samurai makes all types of production faster, better and easier, and at very little cost.

James Cameron used Samurai field recorders on his *Deep Sea Challenge* - need we say more? From 4 miles down to 20,000 feet up, Samurai will record your adventures in super high quality – it's got you covered on land, air and sea!

Ready to deliver, high-capacity HDD or SSD
No more expensive memory cards!

Samurai frees you from the financial and operational constraints of expensive Flash media (e.g. SxS and P2) and aggressive compression (MPEG-2) by allowing you to use cheap, commodity storage that's available anywhere.

Choose inexpensive 2.5" hard disk drives (spinning disks) for 90% of projects and Flash-based SSDs for rough terrain or high security use. HDDs are now cheaper than tapes! Store them on a shelf or hand them to your client. Modern commodity storage is extremely reliable.

A 750GB/5400rpm drive holds up to 16 hours of high quality Apple ProRes® footage.

HDD
SSD
COMPATIBLE

Supported Drives
HDD: Western Digital, Hitachi, Samsung, Toshiba
SSD: Intel, OCZ, Cruise

Latest recommended drives: www.atomos.com

Mon
800x480 screen with 170° viewing and loop play

Focus Peaking, Zebra, False Color & Blue Only Exposure

The Samurai replaces your current monitor with sharper images, better direct sunlight performance, loop play and professional monitoring tools such as Focus Peaking to help you really nail that shot. Accessories such as Loupe and Sun visors are also available.

Combining monitoring with other essential production and post production tasks is just another example of why the Samurai is a Weapon of Smart Production.

Play
Pristine Playback & Playout
SmartLog – Just Mark & Tag

Use your Samurai's 800x480 16:9 screen to navigate through and review your footage, to mark in and out points and input XML tags. Instantly show your material to production colleagues, clients or talent, and check each shot in detail, during or after the shoot – logging their suggestions without leaving the set. Review and edit an entire day's shoot on-set, or while travelling, with high-quality playback and comprehensive clip logging & navigation controls.

Just touch "Play" on the Samurai touchscreen and view your full HD recordings, with up to of 10 hours playback and editing on one battery charge (and don't forget our patent-pending Continuous Power for unlimited operation in the field).

Edit
Instant editing on Mac or PC!

The Samurai seamlessly migrates your productions to the efficient and cost-effective world of file-based workflows. By recording directly to a production-quality, edit-friendly format, it bypasses the codec in the camera and eliminates the time-consuming capture process completely.

The Samurai's tight integration with Apple ProRes® means recorded footage is instantly and natively editable in Final Cut, Media Composer, Premiere, EDIUS, Vegas and Lightworks.

Everything you need

Samurai works right out of the box, you can be using it within minutes! We supply everything (except storage media) in a tough professional carry case.
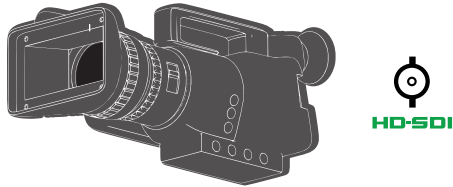
FROM SENSOR TO EDIT SUITE
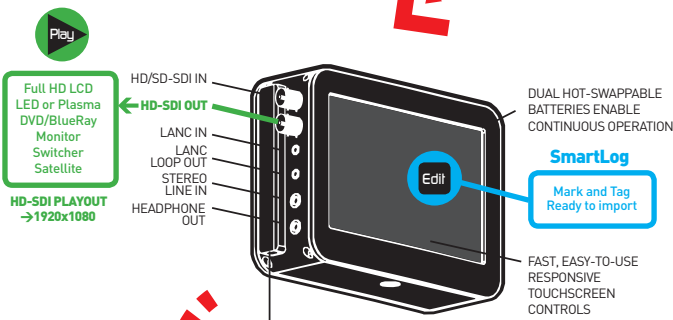## UNCOMPRESSED 10-BIT HD/SD

SAMURAI
TECH SPECS

▶ **Uncompressed 8/10-bit HD/SD from HD-SDI**

HD-SDI

▶ **To Apple ProRes® or Avid DNxHD on HDD/SSD**

ProRes   Avid DNxHD

REAL-TIME PULLDOWN REMOVAL

Full HD LCD LED or Plasma DVD/BlueRay Monitor Switcher Satellite

HD-SDI PLAYOUT →1920x1080

HD/SD-SDI IN
HD-SDI OUT
LANC IN
LANC LOOP OUT
STEREO LINE IN
HEADPHONE OUT

DUAL HOT-SWAPPABLE BATTERIES ENABLE CONTINUOUS OPERATION

SmartLog
Mark and Tag Ready to import

FAST, EASY-TO-USE RESPONSIVE TOUCHSCREEN CONTROLS
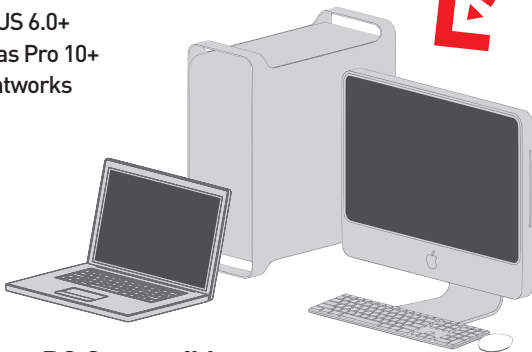
EJECT MASTER CADDY

REMOVABLE LOW COST 2½" HDD/SSD CONNECTS VIA USB 2/3 OR FIREWIRE® 800

CONNECT TO ANY WORKSTATION VIA MASTER CADDY DOCKING STATION

DOCK

▶ **Ready to Edit**

FCPX/FCP7+
Media Composer 5.0+
Premiere 5.0+
EDIUS 6.0+
Vegas Pro 10+
Lightworks

Mac + PC Compatible

Samurai Main Unit

Light Weight	390g (without batteries & HDD) 690g (with batteries & HDD)	
Dimensions (without batteries)	140(W)x87(H)x41(D)mm	
Construction	Aircraft grade aluminium for durability + portability. Fanless for silent operation.	
Operating Power	3.3W (Monitoring Only) / 6.8W (Rec, Mon & Play)	
Batteries 7.2V-14.4V Battery System Compatible any source NP Series DTap and supporting accessories	**All 7.4v** 1. 2600mAh - Up to 4hrs 2. 5200mAh - Up to 8hrs 3. 7800mAh - Up to 12hrs 4. AC Power via adaptor plate (option) 5. DTap Dummy Battery (cables sold separately)	
Continuous Power* Power that never ends	Primary-Secondary battery system. Change batteries without losing power. Loop batteries continuously. *Patent Pending	
Touchscreen	Size: 5" diagonal. Resolution: 800x480 Aspect Ratio: 16:9 native /4:3 Letterbox. Screen Flipping enabled	
Video Input Uncompressed 10/8-bit 4:2:2 Simultaneously displayed on internal 5" Samurai screen Mini BNC to BNC cables provided	3G/HD/SD-SDI x 1 HDMI x 1 (with optional H2S Connect HDMI -> SDI converter)	DI SMPTE 259/292/296 Mini BNC (with BNC Adaptor cables) HDMI v1.4
Video Out Uncompressed 10-bit 4:2:2 Simultaneously displayed on internal 5" Samurai screen Mini BNC to BNC cables provided	HD-SDI/SD-SDI x 1 HDMI x 1 (with optional S2H Connect SDI > HDMI converter)	DI SMPTE 259/292/296 Mini BNC (with BNC Adaptor cables) HDMI v1.4
Supported Formats (In/Out)	**HD 1080i60, 1080i59.94, 1080i50, 1080p30, 1080p25, 1080p24, 1080p23.98, 1080pSF23.98, 1080pSF24, 1080pSF25, 1080pSF30, 720p60, 720p59.94, 720p50, SD 480i, 486i, 576i**	
Realtime Hardware Encoding 1920x1080 8/10-bit 4:2:2 to:	→ Apple ProRes®	HQ - 220Mbps 422 - 150Mbps LT - 100Mbps
	→ Avid DNxHD	Avid DNxHD-220X - 220Mbps (10-bit) Avid DNxHD-220 - 36 Mbps (8-bit) Avid DNxHD-145 - 36 Mbps (8-bit)
Onboard Processing Auto detect and remove or insert pulldown	25pSF (50i) → 25p 30pSF (60i) → 30p 24p (3:2-60i) → 24p 23.98p (3:2-59.94i) → 23.98p	
Audio input 48kHZ PCM audio	SDI 12 channels + 2 analogue channels with gain controls	
Audio output 48kHZ PCM audio	SDI 12 channels + headphone for onboard review. (Select any pair of channels)	
Remote start and stop	Via SDI trigger / Via SD timecode / Via Lanc controller Via Lanc timecode / Via touchscreen interface	
Customisable Remote Controls (control all Samurai functions)	System integrator custom controls available on request	
Genlock sync for broadcast and 3D infrastructure	Any incoming Genlock signal is looped out of the SDI-out of the Samurai. SDI playout is genlockable from any external genlocked SDI fed into the SDI input. For 3D, two Samurais will genlock together if fed signals from a genlocked camera pair.	

Recording Time	Edit Formats (I-Frame Only, 422, 8/10-bit)	HDD or SSD		
HDD & SSD's are hot swappable on the fly in the field		**250GB**	**500GB**	**1TB**
ProRes® HQ (10-bit, 220Mbps)		2.5 hrs	5hrs	10hrs
ProRes Avid DNxHD	Avid DNxHD 220x (10 bit, 220Mbps)	2.5 hrs	5hrs	10hrs
	ProRes® 422 (10 bit, 150Mbps)	4 hrs	8hrs	16hrs
	Avid DNxHD 145 (8 bit, 145Mbps)	4 hrs	8hrs	16hrs
	ProRes® LT (10 bit, 100Mbps)	5.5 hrs	11hrs	22hrs

Master Caddy Case for HDD or SSD 2.5" SSD or HDD minimum 5400rpm to 10,000rpm Standard 9.5mm height	75x105x12mm **For recommended drives visit: www.atomos.com** Available in packs of 5 for: USD 29.95 / £19.95 / €19.95 / AUD 34.95	
Master Caddy Dock	2.5" internal drive SATA to FireWire® 800, USB2.0/3.0	
Supported Applications	**FCPX/FCP7+ / Media Composer 5.0+ / Premiere 5.0+ EDIUS 6.0+ / Vegas Pro 10+ / Lightworks**	
Accessories included	• Universal Battery Charger 110-240V • Docking station and Leads • 2 x Master Caddy Cases • 2 x Atomos 2600mAh batteries • Rugged Carry case • BNC Adaptor cables • DTap Dummy Battery	
Optional extras	• Avid DNxHD Codec • Connect H2S converter • Connect S2H converter • 5 x Master Caddy Cases • Atomos AC Adapter • DTap Dummy Battery • Docking station and Leads • Sun hood • Cable Clamp • Replacement Foam	