

# **BlackStorm**



**NEW!!**  
**FOUR CHANNEL  
PLAYOUT SERVER**

**ROSS**<sup>®</sup>  
LIVING LIVE!

# Concentrated Server Power.



# BlackStorm

[blak-‘stòrm]

**1** of or relating to covert intelligence operation. **2** by or as if by employing a bold swift frontal movement especially with the intent of defeating or winning over quickly. **3** in remarkable or energetic fashion - used as an intensifier. **4** an intelligent choice for feature-packed, high-performance video playout.

## **Easy, Affordable, Future-Proof**

Getting the right clip on air at the right time is key to any live production. This is where the BlackStorm Playout Server excels as an easy-to-use Production Clip Player with a comprehensive production workflow.

It starts in editing with an elegant networked file-based workflow, supporting popular editing systems like Apple's Final Cut, Adobe's Creative Suite and Avid's Media Composer. The workflow continues with standard protocols like AMP and VDCP allowing point-of-control integration with virtually any production switcher or remote control panel on the market. Finally, a sophisticated client / server interface gives easy and distributed operator control including production playlists with built-in transitions.

BlackStorm delivers in live production. From a technology standpoint, it is a unique software-based server platform using standard off-the-shelf hardware and offers a long-range growth path for future technology.

**BlackStorm - Concentrated Server Power.**

# SMART MONEY

## EASY

- QuickTime .MOV support
- DVCPPro HD, DVCPPro 50, DVCam, QuickTime, Animation, Targa file support
- Network file transfer
- Drag and Drop, FTP
- AMP & VDCP control protocols
- Comprehensive control with the DashBoard GUI

## AFFORDABLE

- Standard off-the-shelf non-proprietary hardware
- Standard RossCare+ 24/7 technical support
- Dell on-site hardware support

## FUTURE-PROOF

- Software based solution
- Migrate to new hardware in the future
- Next-generation technology
- Harnessing the power of multi-core parallel processing, 64-bit O/S, 6Gb/s internal backplane





LIVE PRODUCTIONS

Remote Protocols  
Fast Cueing  
Multi-Platform

### TAKE CONTROL

Live production can be fast-paced, with no margin for error. BlackStorm is ideally suited to this application with its unique production oriented playlist and ability to be controlled by production switchers and device controllers.

BlackStorm provides easy-to-use, flexible control from Vision, Carbonite and CrossOver production switchers as well as 3rd party models. It supports RS-422 VDCP control and both AMP and VDCP over Ethernet.

The BlackStorm User Interface runs within the Ross DashBoard Command and Control system, allowing full configuration, management and live control over the system. This single interface can be used to combine control over multiple servers simultaneously, putting everything at the operator's finger tips.

## HOUSE OF WORSHIP

Ease of Use  
Flexible Interface  
Cost-Effective



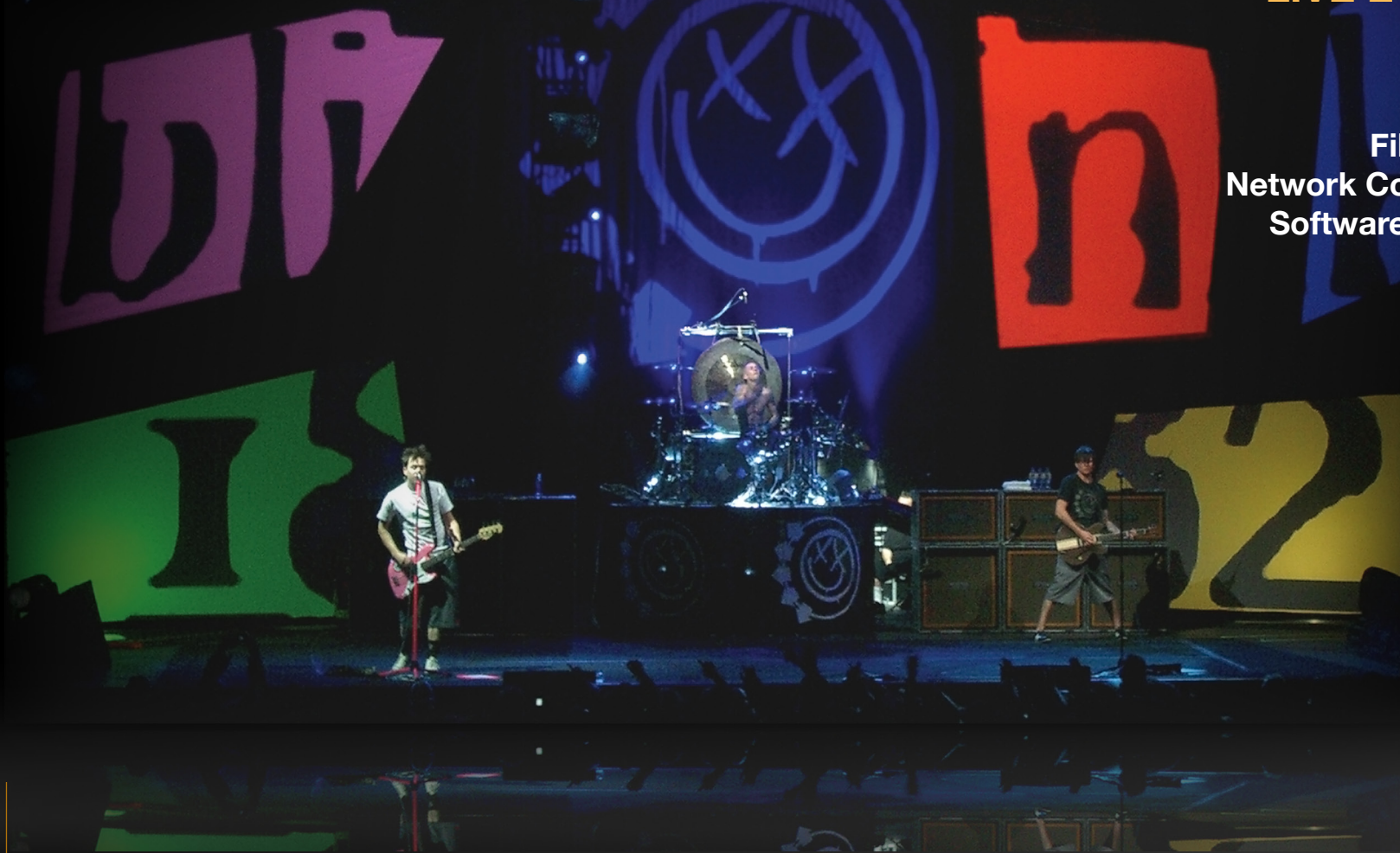
### SIMPLE

Whether your production is produced using in-house staff or a dedicated team of volunteers, it needs to be professional. BlackStorm provides a simple intuitive user interface for control, industry standard codecs with an easy file-based workflow for content and a powerful combination of RossCare<sup>+</sup> technical support with Dell on-site hardware support you can rely on.

BlackStorm allows for lower cost of ownership while reducing complexity and increasing the quality of your production.

## LIVE EVENTS

File-Based  
Network Connected  
Software Codecs



### PRESENT

Live events present their own set of challenges and the BlackStorm 100 Series Playout Server gives you the right tools for the job.

The new PlayList Manager offers seamless playback of media content within a single channel. Combined with cross-clip transitions and the ability to dynamically modify playlists, the BlackStorm 100 provides power and flexibility.

The compact size of the 1RU form factor combined with the power of a Quad-Core processor gives you a portable solution to drive your events.

# BLACKSTORM USER INTERFACE

## DASHBOARD CONTROL SYSTEM

The BlackStorm user interface runs within the multi-platform DashBoard Control System and will run on a PC or Mac computer.

## SLP (SERVICE LOCATION PROTOCOL)

The BlackStorm UI can run remotely and automatically detects all of the BlackStorm servers on your network and makes them available to control.

## MULTI-SERVER CONTROL

Control all the servers within your facility from within DashBoard.

## FLEXIBLE CUSTOM GUI

Take control of the UI layout and customize the look and feel for the needs of your facility. Save custom layouts and recall them with a simple click.

## EXPAND YOUR VIEWING OPTIONS

Dual Monitor support on a remote client machine.



BlackStorm100 GUI

Playlist Client

## PLAYLIST MANAGER

Build dynamic playlists for back-to-back playback on a single channel. Alter the content of the playlist in real-time. Add, and remove media items, skip elements in the playlist and re-order dynamically.

## PLAYLIST TRANSITIONS

Enhance the look of your production by inserting V-Fade, X-Fade or cut transitions. Play seamlessly back-to-back on a single channel.

## SUB-CLIPPING

Create multiple sub-clips from the same source clip without destroying the original source material. Build highlight reels and teasers.

## DRAG AND DROP CONTROL

Drag and Drop media items from the Media Manager directly to a playback channel or playlist and take it to air.

## MEDIA MANAGER

View, filter, sort, delete, rename and copy content based on your needs.

## INDEPENDENT CHANNEL CONTROL

Control each channel independently while having them automatically gang together for clip and alpha channel playback.

## NETWORK CONTROL

BlackStorm Client Software can be run on the server or remotely via network. Run BlackStorm client software on the platform of your choice, either PC or Mac.



# WORKFLOW SIMPLIFIED



## BLACKSTORM 100 VIDEO SERVER



Existing Ethernet Network

ADOBE CS6  
PREMIERE PRO

### CREATE

BlackStorm is designed to integrate into a modern content creation workflow. Designed to work with file-based media, BlackStorm natively supports .MOV files and a variety of popular formats. Drag and Drop or FTP throttled transfers move content efficiently from editing or graphics into BlackStorm.

Network Based File  
Transfer or FTP



FINAL CUT PRO

AVID MEDIA COMPOSER



*Network Based File  
Transfer or FTP*

*AMP / VDCP control  
over Ethernet Network*



### **MANAGE**

Manage and play your content easily either locally or across a network via BlackStorm's DashBoard user interface. Create and run production playlists with transitions.

### **CONTROL**

Working in concert with the powerful device-control capabilities of your Vision and OverDrive production environments, BlackStorm is an ideal companion for clip and graphics playout, bumps, teases and more. BlackStorm also integrates nicely with other production switcher and automation system brands.

# ROBUST DELL HARDWARE

**Robust. Serviceable. Ross Ingenuity, Dell Reliability.** Your productions are critical. Combining the best of the IT world with the best of the broadcast world, Ross delivers a rock-solid, highly dependable solution.

## SERVER GRADE CHASSIS

- Heavy-gauge steel construction for extra strength

## LCD STATUS DISPLAY

- Fan, power and temperature alarms
- Disk and LAN activity

## USB 2.0

- Front mounted to allow quick connect of external storage devices

## Slimline DVD ROM Drive

BlackStorm 100 Chassis Front (Face Removed)



## 4 HOT-SWAP DRIVES

- Hot swap RAID 5 for system reliability and performance
- Scalable and field upgradeable to meet your storage needs

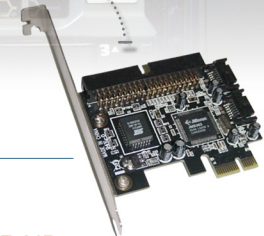


## HARD DRIVES

BlackStorm uses Enterprise Class SATA-II drives designed for 24/7/365 operation. Ross support and Dell support provides the utmost flexibility in sourcing spares

## HARDWARE RAID

- For maximum performance and reliability



## Intel Xeon Processor

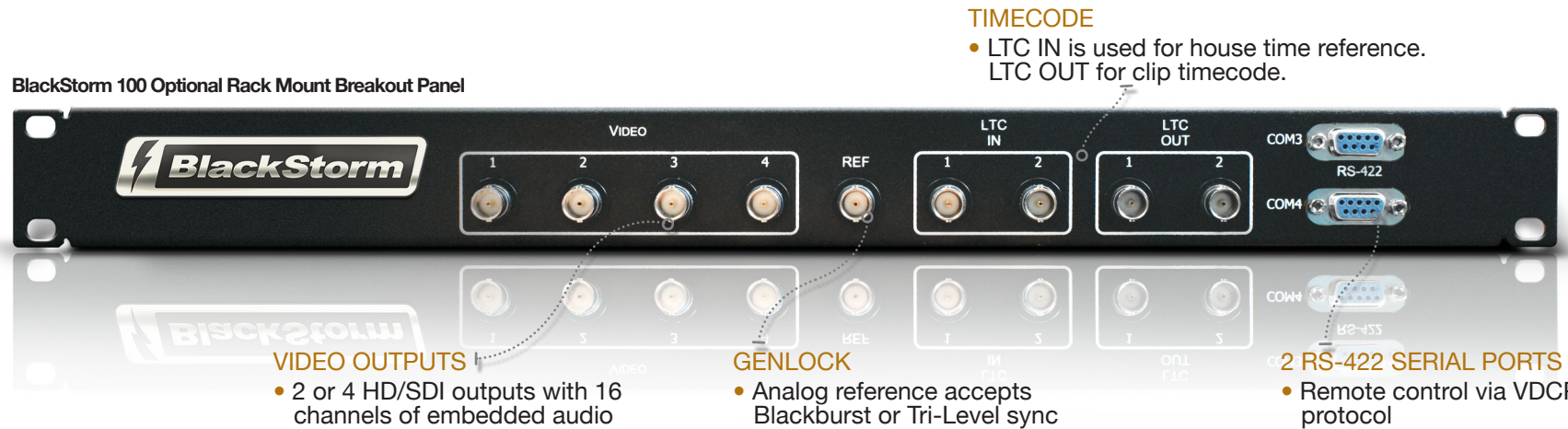
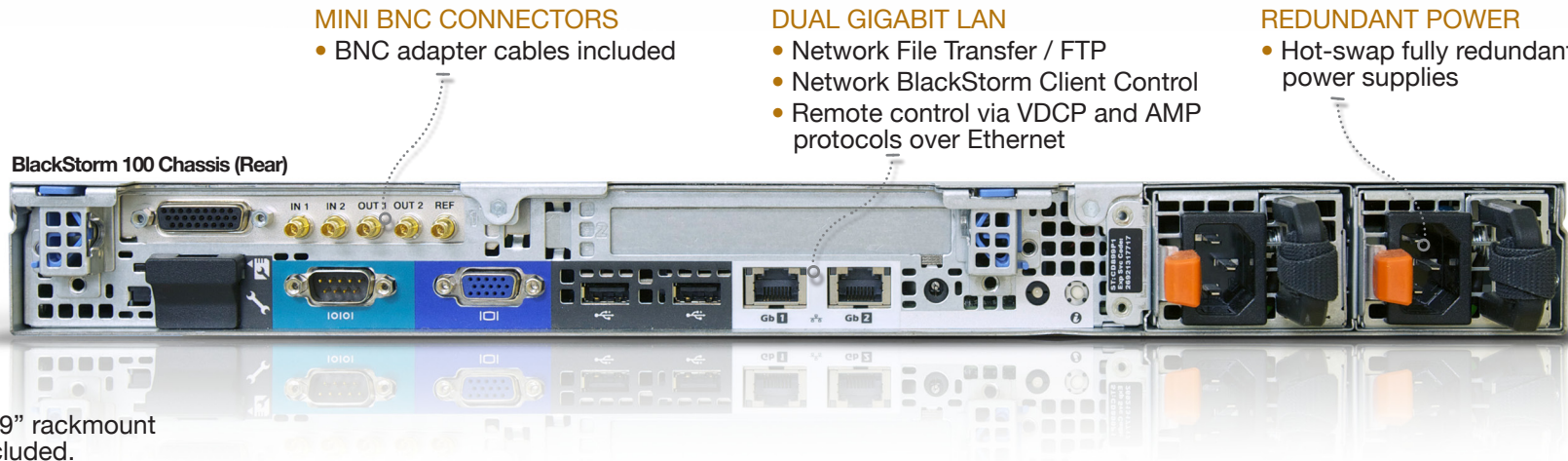
All video coding is done in software. The heart of the BlackStorm is a Quad-Core Xeon processor. Server-grade; bullet-proof; high-performance.



## Dell Server

Industry leading hardware combined with industry leading software and support provides industry leading solutions.

# CONNECTIVITY



**Dell ProSupport.** 24/7/365 Dell Technical Support. Next business day on-site. Accelerated support queues.

# BlackStorm Studio Systems

**A complete Ross Studio Solution.** A “Studio System” is a pre-selected package of the core production tools required for any live production. Ross Video is in the unique position of being the only manufacturer to have production switchers, graphics and video servers together in our production portfolio. This unique strength has led to the creation of these systems.



**XPRESSION**  
World Class Motion Graphics



**VISION**  
The World's Most Powerful Switcher



**CARBONITE**  
Best-in-Class Mid-Sized Switcher

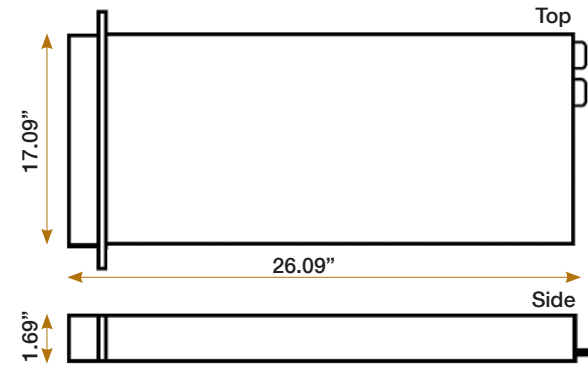
**BLACKSTORM 100**  
Concentrated Server Power



# SPECIFICATIONS

With a chassis design centered on 24/7/365 server grade technology, combined with flexible I/O and storage capacity, BlackStorm provides an array of configurations for every environment.

COMPONENT	DETAILS
DIMENSIONS	24.00" (D) x 17.10" (W) x 1.67" (H) (w/o bezel) (19" rackmount kit included)
POWER SUPPLY	Hot-swap redundant, 2 x 400W, 100-240V
POWER CONSUMPTION	350W Max
CPU	X3450 Xeon Processor, 2.66GHz, 8M Cache, Turbo, HT
RAM	8Gb Memory (2x4Gb), 1333MHz Single Ranked UDIMM
LAN	2x GbE LOM
CHIPSET	Intel® 3420 Chipset
USB	4x USB 2.0, 2 front, 2 rear
GRAPHICS – CONNECTOR	Analog VGA, 15-pin D-Sub
GRAPHICS – RESOLUTION	1280x1024@85Hz for KVM
OPTICAL DRIVE	Slimline DVD-ROM
HARD DRIVES > STANDARD > OPTIONAL	> 1 or 2 TB, 7200 RPM SATA-2 Enterprise-class, 3.5" > SSD Drive
HARD DRIVES – CONFIGURATION	4x Drives, RAID 5 Hot-swap
RAID CONTROLLER	PERC H700 Adapter, RAID Controller 512MB Cache
OPERATING SYSTEM	Microsoft Windows 7 Professional, 64-bit
I/O CARD > STANDARD > OPTIONAL	> AJA CorVid22 2Ch SD/HD/3G IO Card > AJA CorVid24, 4Ch SD/HD/3G IO Card
VIDEO – CONNECTORS	3G/HD/SD-SDI, SMPTE-259/292/296/424, BNC 75Ω
VIDEO – CONFIGURATION	0-in / 2-out or 0-in / 4-out
REFERENCE – CONNECTORS	BNC, 75Ω
REFERENCE - FORMAT	Analog Blackburst or Tri-Level Sync
AUDIO – CONNECTORS	HD/SD-SDI
AUDIO – FORMAT	16-channel 24-bit SDI embedded, 48KHz
COOLING	5x midplane fans
SERIAL PORTS	2x RS-422, DB-9



COMPONENT	DETAILS
VIDEO FORMAT SUPPORT	480i / 59.94 576i / 50 720p / 59.94 720p / 50 1080i / 59.94 1080i / 50
CODEC SUPPORT	DV DVCAM DVCPRO 25 / 50 DVCPRO HD QuickTime Animation TGA RLE encoded, 24/32 bit Uncompressed
FILE FORMAT SUPPORT	MOV TGA

CODEC	FORMAT	BITRATE*	HOURS / TB	MOV	TOTAL STORAGE PER CODEC		
					4TB Model	8TB Model	SSD Model
DV, DVCam, DVCPro	SD	25	82	P	225 hours	470 hours	16 hours
DVCPro 50	SD	50	43	P	118 hours	235 hours	8 hours
QUICKTIME ANIMATION	SD			P	N/A	N/A	N/A
DVCPRO HD	HD	100	22	P	60 hours	126 hours	4 hours
QUICKTIME ANIMATION	HD			P	N/A	N/A	N/A

\*Mb/s P= Play

# ORDERING INFORMATION

BVS-10NP-XX

ORDER MODEL

OPTION X	DRIVES	AVAILABLE STORAGE
10	4x 1TB	2.5TB
20	4x 2TB	5.5TB
SSD	4x 100GB	250GB

OPTION N	VIDEO IN	VIDEO OUT	AUDIO IN	AUDIO OUT
2	n/a	2	n/a	16 Embedded
4	n/a	4	n/a	16 Embedded

MODEL	FORMATS
MULTI-DEFINITION	480i / 576i / 720p / 1080i

## BlackStorm Care

Ross Video has a complete range of technical services available to ensure your BlackStorm installation is a success.

**Commissioning** is a service to help get your BlackStorm system properly configured and installed. This service is performed by factory trained Ross technical staff.

**Technical Training** can be provided at Ross Video or on-site at your location. Technical training will teach your engineering staff the technical details of the system you have purchased. Signal flow, system configuration and routine maintenance procedures are some of the topics covered.

**Operational Training** is available either at Ross headquarters or on-site at your location. Experienced Ross operators will teach your staff to get the most out of your new system, and enhance your productions.

**Technical advice** is available simply by telephone, fax or email to Ross Video - **free for the life of your system.**

BlackStorm comes standard with 1 year comprehensive **Warranty**. RossCare+ coverage for both software and system hardware is available for an annual fee.



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Visit [www.rossvideo.com](http://www.rossvideo.com) for the latest information on the complete line of Ross products and services.



**Furio / CamBot**  
Robotic Camera  
Systems



**Vision, Carbonite,  
and CrossOver**  
Production Switchers



**XPression**  
3D HD CG and  
Motion Graphics



**openGear®**  
Terminal Equipment



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and Mobile Trucks