

MAXX-2400  
Broadcast Server

●●● Large scale server.  
Small scale price.

## MAXX-2400 Broadcast Server

Lowest Cost Per Video Port

Better Cost-per-hour For Program Storage

Widest Possible Range of Connectivity

### MAXX-2400 Delivers More

360 Systems' new MAXX 2400 brings a lot more video server to broadcasting with two video inputs, four outputs, 700 hours of storage (six Terabytes), a broad set of video formats, and a comprehensive collection of server tools in an attractively priced package.

### Next-Gen File-Based Workflow

A clean synthesis of today's file-based workflows, with all the advantages of traditional base-band connections, MAXX-2400 fits well with today's production tools, while its hardware features and software tools make it a smooth upgrade for tape-based facilities. Fully compatible with leading automation systems, MAXX-2400 is ideally suited as a play-to-air server, as a cache for satellite ingest, for graphics storage, in weather systems, remote trucks, and for extra channels in DTV broadcast.

### Widest Range of Connectivity

MAXX-2400 is a two-channel video recorder, a four-channel playout server, and a graphics store with linked key-and-fill capability. Standard features include both composite and SDI video ports, a frame synchronizer for recording wild sources like tape and satellite feeds, and a complete set of audio formats, including Embedded, AES/EBU digital, and +4 analog.

The file-based design of MAXX-2400 effectively speeds production and on-air tasks. It easily exchanges MPEG-2, IMX, and DV files over Gigabit Ethernet with popular NLEs like Final Cut Pro® and Avid®. Plus, it imports TARGA files—with their alpha channel—from many professional graphics programs.

### FEATURES

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Two input channels with frame sync, bi-directional

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Four outputs: two dedicated, two bi-directional

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Double Fault-Tolerant™ RAID-6 protection of stored program material

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Over 700 hours of storage at 12 Mb/sec

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SDI & Composite on all inputs and outputs

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Redundant power and cooling

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Includes DV video, TARGA graphics, Advanced Playlisting, As-Run logs

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Workstation software creates remote stations for ingest, edit, playlisting and playout

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File import & export on Gigabit Ethernet

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+4 analog, AES/EBU digital, and embedded audio.

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4 audio channels per video channel

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Fast search functions, new tree-format directory

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Full-featured Graphic User Interface

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Hot-swap drives with easy front access

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IMX® transfers to and from Final Cut Pro® (optional)

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Industry leader in price and performance

**MAXX-2400** delivers more channels, massive storage, expanded software features, and a price that makes economic sense.



**The Preferred Design for Mid-Markets**

Nearly 3,000 360 Systems video servers deliver content across America and 60 other countries.



**MAXX Makes Broadcasting More Profitable**

The file-based design includes base-band connections for easy and economical plant upgrades.

**Double Fault Tolerant RAID-6**  
Program data is distributed across the entire drive array for the highest level of security. Even if two drives fail, program safety or server performance are not compromised.

# MAXX-2400 Broadcast Server

700 Hours of Program Storage

Exceptional Value in Every Broadcast and Pro A/V Market

## Applications Include

- Exchanging content with NLEs
- Transfers between satellite “cache” and air servers
- File exchange with other MXF servers
- Archive with playout capability
- File exchange with Network Attached Storage
- Sharing content with affiliates over broadband networks
- Bi-directional IMX® transfers with Final Cut Pro® (option)
- Remote Workstations for ingest, trimming, playlisting

## On-Line Archiving

With the MAXX-2400’s attractive price, on-line archiving of program content makes economic sense for the first time. Six Terabytes of storage and four VDCP playout channels ensure that the material you need is always on-line and ready to play. Just switch over automation control and keep on broadcasting. There’s no need to bring it in from off-line storage – it’s already there.

## Compatible with Leading Broadcast Equipment

360 Systems’ servers are on air with market leaders like Crispin, Florical, Harris, Nverzion and Sundance. In Europe, it’s Ibis, Pebble Beach ProBel, Ninsight and many more.

MAXX-2400 is also a plug-and-play fit with serial control from video switchers like Ross and Echolab, accepting commands to play up to four channels of video and graphics in perfect sync. Most desktop controllers also work with MAXX-2400, making it a good choice for sports and entertainment. Additionally, a new folder-based directory and fast search functions quickly locate any clip among thousands.

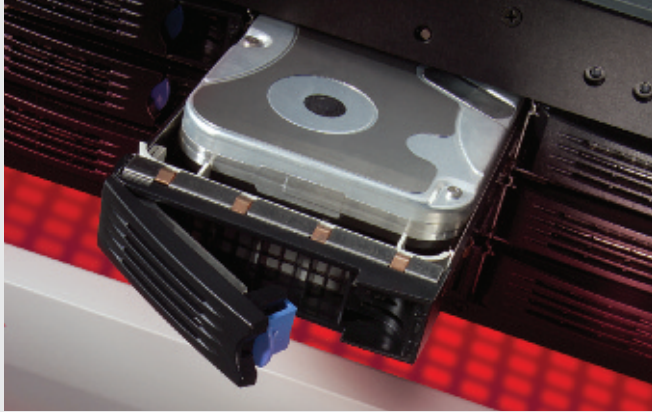
The MAXX-2400 is available in both NTSC and PAL, handles content in many file formats, and provides the widest possible range of connectivity.

## Designed for Broadcast Reliability

**Redundant Power & Cooling.** Dual plug-in power supplies employ separate AC mains, and can be replaced with the server in use. Conservatively rated fans allow for more efficient forced-air cooling. And a sophisticated fault alarm provides immediate user notification should the server need attention.

**Advanced RAID-6 Storage.** Six Terabytes of internal storage—more than 700 hours of programming—are now standard.

VIDEO DATA RATE	PLAYING TIME - HOURS
8 Mb/sec	1,000
12 Mb/sec	700
25 Mb/sec	350



### Advanced Tools for Production and Broadcasting

MAXX-2400's GUI controls all four video channels at once, with VTR-style buttons and displays for a familiar look and feel. You'll be able to do head and tail trims, segment network feeds for broadcast, and rapidly locate any file.

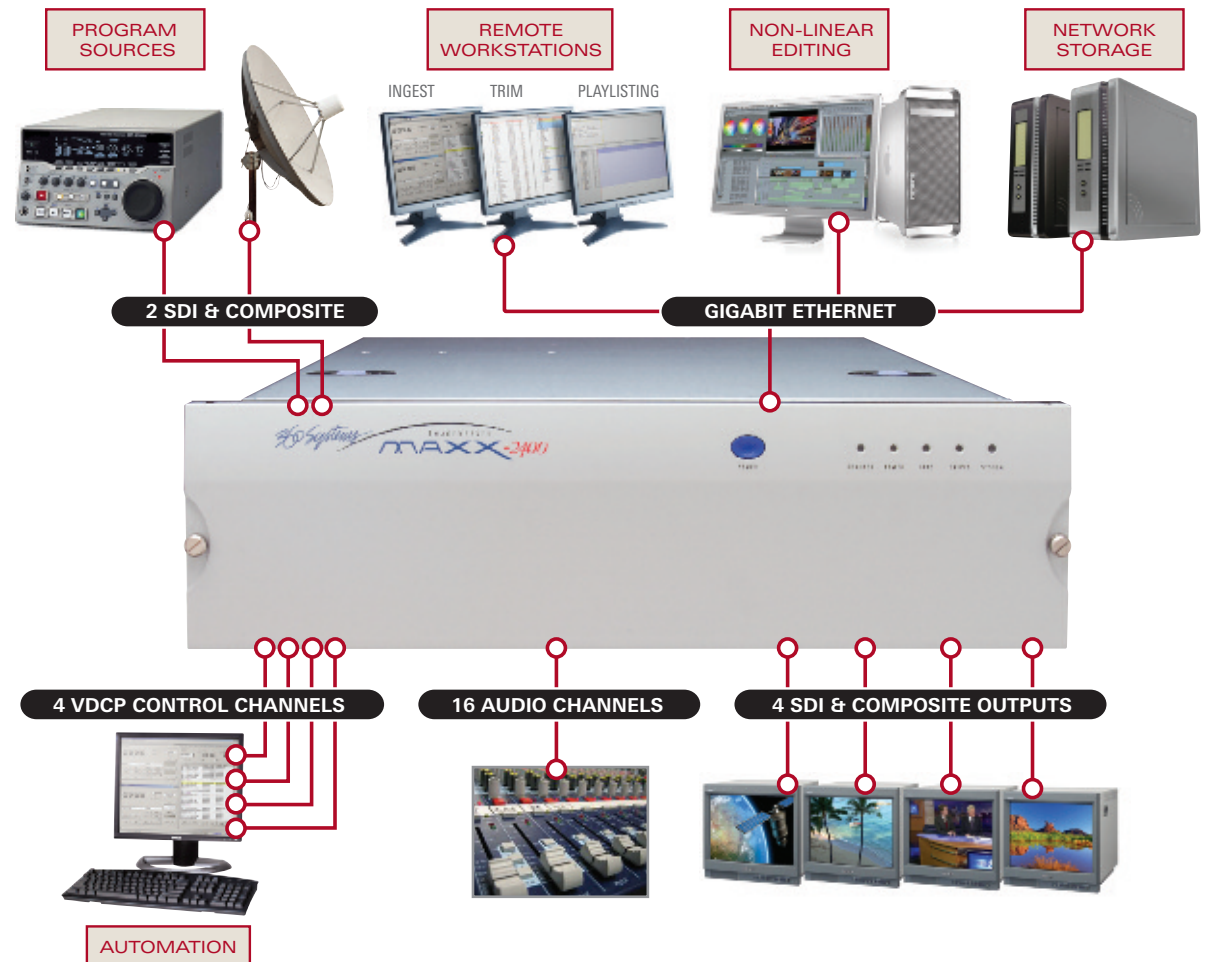
Playlisting tools provide rapid list-building, editing and playout of sequences for news or commercial islands. With its production-oriented features, it may be all that's needed to get to air.

Remote Workstation Software gives users full control of the MAXX-2400 from any location on the network, using only Ethernet and a low-cost PC.

### Networking for Digital Broadcasting

Sharing content with the rest of the world is easy with fast file transfers over Gigabit Ethernet. Connect it to other servers, NLEs, and affordable Network Attached Storage for almost unlimited capacity. Now, it's possible to move content across the room—or across the country—rapidly and at low cost.

For additional info, see *Technical Specifications* on the back panel of this brochure.



To find out how the MAXX-2400 Server can make your future more profitable, please visit our web site at

[www.360systems.com](http://www.360systems.com)

Or call us direct at

(818) 991-0360

## TECHNICAL SPECIFICATIONS

### VIDEO

<b>Input Channels (baseband)</b>	Two, bi-directional
<b>Output Channels</b>	Four, two are bi-directional
<b>Analog video I/O</b>	Composite, RS-170, 75Ω, BNC
<b>Digital video I/O</b>	SDI, SMPTE 259M, 75Ω BNC
<b>Video standards</b>	525/60 NTSC; 625/50 PAL (Model dependent)
<b>Recording format</b>	MPEG-2: 4:2:2 Profile @ Main Level to 30 Mb/sec. Main Profile @ Main Level to 15 Mb/sec (4:2:0 or 4:1:1)
<b>DV playback format</b>	25 Mb/sec, DV files imported via Ethernet
<b>IMX® (D10) recording format</b>	30 Mb/sec (Optional)
<b>Graphics playback format</b>	TARGA files with key & fill imported via Gigabit Ethernet.
<b>Word Size</b>	10 bits dithered to 8
<b>Frame format</b>	I-frame, 6-GOP, 14 GOP
<b>Video sync reference (Genlock)</b>	External black burst or internal crystal

### AUDIO

<b>Digital Inputs/Outputs</b>	2 stereo pairs (4 channels) per video input or output
<b>Digital audio format</b>	AES/EBU, 110-ohm, AES-3-2000
<b>Bit-for-Bit® data handling</b>	Transparent to Dolby®-E, Dolby AC-3
<b>Embedded audio</b>	20-bit, 4-channel
<b>Analog Inputs/Outputs</b>	2 channels per video input or output
<b>Audio coding</b>	48k sample rate, 24-bit word size, linear PCM
<b>Analog audio format</b>	Balanced, +4 dBu
<b>Frequency response, analog</b>	10 Hz – 20 kHz ±0.1 dB
<b>Harmonic distortion, analog</b>	<0.002% THD+N at full scale –1 dB
<b>Dynamic range (analog)</b>	112 dB (24-bit word size)
<b>Audio I/O Panels</b>	Audio breakout panel AXP1 provides 2 audio channels per video port, selectable +4 analog or AES/EBU. Audio breakout panel AXP2 (optional) provides 2 additional audio channels per video port, selectable +4 analog or AES/EBU. Each panel 1RU x 19". Gold plated XLR-3 connectors.
<b>Audio</b>	Derived from video reference

### TIME CODE & VERTICAL INTERVAL

<b>LTC (External time code)</b>	Zin = 10k Ω, BNC; Zout = 750Ω, BNC
<b>VITC line number, NTSC</b>	Field 1: Lines 14, 16; Field 2: Lines 277, 279
<b>VITC line number, PAL</b>	Field 1: Lines 19, 21; Field 2: Lines 332, 334
<b>Closed Captions</b>	Records and plays CC data per EIA-608B

### CONTROL INPUTS/OUTPUTS

<b>Serial control</b>	4 ports, 9-pin female "D" on CXP1 Connector breakout panel. VDCP, Sony BVW, and Odetics control formats
<b>GPI control</b>	12 optically isolated inputs, 12 open-collector outputs on CXP1 Connector breakout panel. 2 x 25-pin female "D"

### VIDEO NETWORKING

<b>File interchange formats</b>	MXF (SMPTE 377M, 378M, 381M ) OP-1a; MPEG-2 program streams & elementary streams; IMX (D10); DV stream (.dv or .avi); TARGA graphics import
<b>Network port</b>	Gigabit Ethernet
<b>File transfer protocol</b>	FTP

### DISK STORAGE

<b>Storage time (max)</b>	Approx 700 hours at 12 Mb/s
<b>Total storage capacity</b>	6 Terabytes
<b>Data redundancy</b>	RAID-6 utilizing 12 server-quality SATA drives
<b>Drive replacement</b>	Hot-swap permitted, Front panel access
<b>CD-ROM drive</b>	Front access; loading operating system and upgrades

### MISCELLANEOUS

<b>Operating system</b>	Linux®
<b>Front panel indicators</b>	5 LEDs indicate Power-on, Genlock, Fan alarm, RAID alarm, System alarm
<b>Miscellaneous ports</b>	Keyboard, mouse, SVGA display
<b>Cooling/Operating Temperature</b>	Redundant fans; operating temperature 10° to 35° C
<b>Power Supplies</b>	Redundant 450-watt, separate AC mains, may be hot-plugged. Replaceable from rear exterior.
<b>Software features included</b>	GUI for 4-channel management; Head/tail trimming, Advanced Playlist, Remote Workstation Interface, RAID management; As-Run log, Import of DV and TARGA graphics w/ key-and-fill
<b>Power requirement</b>	100 – 240 VAC, 50/60 Hz, 4 amp max. Software shut down switch behind front panel; AC mains switch on power supplies

### PHYSICAL

<b>Mechanical</b>	5 ¼" x 19" x 27 ¾" (133 x 482 x 705 mm) H-W-D
<b>Mounting</b>	Rack mount (3U), includes rack slide rails
<b>Weight</b>	Approx. 90 lb. (41 Kg) net
<b>Agency approvals</b>	UL, C-UL, FCC Class A, CE mark, RoHS

*360 Systems brings legendary quality and reliability to broadcasting and Pro A/V projects. With 35 years of experience and 30,000 hard disk products in service worldwide, 360 Systems leads the field in practical experience.*



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