



AVID

THUNDER

Multi-channel video, still, and graphics live production server

The Avid® Thunder® family of live production servers is engineered for real-time on-air HD and SD playback: instant news and feature packages, live over-the-shoulder stills and clips, animated graphics backgrounds, promo clips, and sports and entertainment graphics. And with their compact, single-box form factors, reliable Thunder servers are the ideal mobile solution for on-location news or entertainment events.

Thunder MX servers provide one or two channels of broadcast-quality SD video and key, and can be configured for stills, or stills and clips integrated in a single user interface, in both 4:3 and 16:9 aspect ratios.

Thunder HD servers provide one or two channels of HD video, each with eight channels of audio and video key. With up to 17 hours of MPEG-2 I-Frame playback at 100 Mbps and internal RAID 5 storage for native 720p and 1080i MXF files, Thunder HD is ideal for live HD news and entertainment applications. Thunder Hybrid servers can be configured in either HD or SD with a simple software switch.

Avid Thunder options

ThunderBrowse software allows users to remotely perform tasks, including: browsing, previewing of stills and clips, trimming clips, deleting and copying files, and creating sequences. Remote operation also includes complete record and playback capability, allowing a single Thunder system to be used in multiple control rooms.

ThunderSelect allows news journalists to browse and search for stills and clips from within the newsroom computer system. The playout sequence is automatically updated as stories are modified in the newsroom computer system.

Clip option adds integrated symmetrical video clip, key clip, and audio clip record and playback to the standard still store capabilities.

Security administrator extends permission and operator workspaces for secure media management.

Streamlined production and reduced costs

A single, compact Avid Thunder system replaces multiple VTRs, still stores, and legacy devices for video and audio playback, for enormous improvements in production efficiency and reduced equipment and maintenance costs.

Maximized channel throughput for maximum efficiency

Avid Thunder systems include built-in, real-time 2D DVE transitions from one video clip with key to a separate video clip with key, using a single Thunder channel—other systems require up to four channels to accomplish the same transitions. Simultaneous capture on one channel while playing back on the other provides advanced playout efficiency.

Powerful real-time playback capabilities

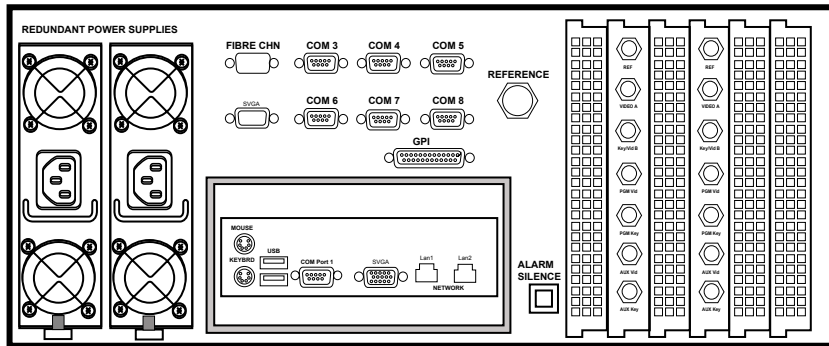
Avid Thunder systems offer fast recall and play-to-air of clips and stills, a downstream key on each channel, and optional integrated titling, all from a single user interface. The built-in sequencer provides remote playout control of stills and clips from an integrated database with metadata, keyword, or content search capabilities. Built-in ODBC support allows simultaneous search of multiple databases.

Integrated newsroom workflow

Avid Thunder systems interface with Avid iNEWS®, ENPS, and other popular automation and newsroom computer systems through MOS or other common automation protocols. As journalists combine stills and clips with their story script, Avid Thunder plays them back as part of the rundown.

Avid and third-party interoperability

Connect with Avid Deko® graphics systems and Avid editing systems for seamless transfer of video files. Avid Thunder systems work with a wide range of third-party products and support industry-standard file formats such as MPEG-2, QuickTime, .mxf, .dv, .avi, and sequential .tga and .tif files with key.



Avid Thunder back panel

SYSTEM SPECIFICATIONS

Turnkey system specifications (minimum)

- CPU: SD: 3.4 GHz Intel Xeon T (or faster)
HD: Dual 3.4 GHz Intel Xeon T (or faster)
- Thunder internal storage: 750 GB or greater RAID 5
- Operating system: Windows XP Professional
- RAM: 2 GB
- Storage: DVD+R/+RW writer
- Ethernet: 1000 BASE-T (RJ-45) with AFAP driver
- Ports: 1 serial RS-232 (DB9),
4 USB 2.0

Physical dimensions

- 4RU rack mount chassis
- Height: 7 inches (17.78 cm)
- Width: 19 inches (48.26 cm)
- Depth: 22 inches (55.88 cm)

Power specifications

- Redundant hot-swappable power supplies
- 110/220 Volt 60/50 Hz (auto-sensing)
- 400 watt maximum

Supported video standards (software configurable)

- Standard definition NTSC, PAL (both 4:3 and 16:9 supported)
- High definition 1080i/60, 1080i/59.94, 1080i/50, 720p/60, 720p/59.94

Video I/O

- Standard definition
- SDI video and key input per channel – SMPTE 259M compliant
- SDI video and key output per channel – SMPTE 259M compliant

- Standard 8-bit, 4:2:2:4 sampling
- High Definition
- SDI video and key input per channel – SMPTE 292M compliant
- Automatic retiming of synchronous inputs
- SDI video and key output per channel – SMPTE 292M compliant
- Standard 10-bit, 4:2:2:4 sampling

Thunder MX video reference

- Analog color black

Thunder HD/Hybrid video reference

- Analog color black or tri-level sync
- NTSC color black reference supported with 1080i/59.94 and 720p/59.94 formats
- PAL color black reference supported with 1080i/50 format

Thunder MX downstream keyer

- 10-bit video resolution
- 1 frame processing delay through box

Thunder HD/Hybrid downstream keyer

- 10-bit video and key resolution
- 1 Frame Processing Delay for interlaced, 2 Frame for progressive formats through box

Clip record and playback support (optional)

- Standard definition
 - MPEG-2 I-Frame (25 Mbps), (.MXF file format)
 - QuickTime format through import or file copy

High definition

- MPEG-2 I-Frame 100 Mbps (.MXF file format)

Audio I/O

- Standard definition
- Standard 24-Bit, 48 KHz sampling
- 8 channels of audio input – embedded in SDI video input
- 8 channels of audio output – embedded in SDI video output
- High definition
- Standard 24-Bit, 48 KHz sampling
- 8 channels of audio input – embedded in SDI video input
- 8 channels of audio output – embedded in SDI video output

Automation control

- 6 RS-422 ports
- VDCP (Louth/Harris), Odetics, MOS, PbusII, ThunderNet, BVW-75 protocols
- 8 GPI inputs
- 8 GPI outputs

System specifications subject to change.

AVID TOTAL SERVICES

Providing faster return on your investment by getting your systems and personnel up and running quickly, maximizing workflow efficiency, and meeting your production schedules. To learn more about Avid Total Services, please visit: www.avid.com/services.



Avid Thunder servers offer real-time, independent DVES per channel for clip-to-clip transitions within a single output channel; edit graphics right up to air time with an integrated database engineered for graphics production.

To learn more—visit www.avid.com/Thunder

Corporate Headquarters
800 949 AVID (2843)

Asian Headquarters
+ 65 6476 7666

European Headquarters
+ 44 1753 655999

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