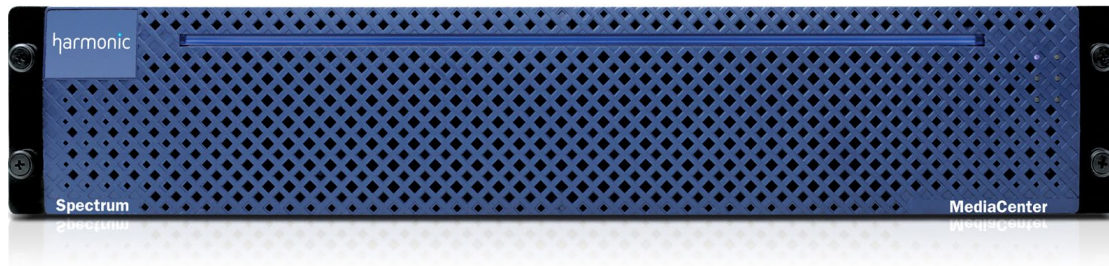


Spectrum™ MediaCenter 2200/2200A

MEDIA SERVER WITH INTEGRATED STORAGE



Ideal for moderate (up to 20) channel-count applications, the Spectrum™ MediaCenter 2200 and 2200A media servers from Harmonic provide file system and communication management and storage for video and audio ingest and playout at a compelling price point.

MediaCenter 2200/2200A servers support up to 10 Spectrum™ MediaPort 7000- and 5000-series I/O modules, which provide video/audio interfaces as well as encode and decode for record and playback. The servers also support the Spectrum™ ChannelPort integrated channel playout system, a next-generation solution that speeds the cost-effective deployment of new SD and HD television channels by integrating branding and master control switching with clip playback. This modular approach lets you configure your media server to meet your needs today while allowing for future expansion.

Clients access MediaCenter 2200/2200A servers via up to four gigabit Ethernet (GbE) connections, and have access to FTP, CIFS and AFP services. Combined, these services offer network throughput of up to 225 MBps (depending on real-time play/record activity).

Rock-solid Reliability

All Spectrum media server systems are designed specifically to isolate potential problems so that a failure of one component does not disrupt operations across the rest of the system. Optional integrated SSD storage further increases content availability in broadcast facilities where environmental factors might compromise traditional disk-drive performance. Redundancy features include:

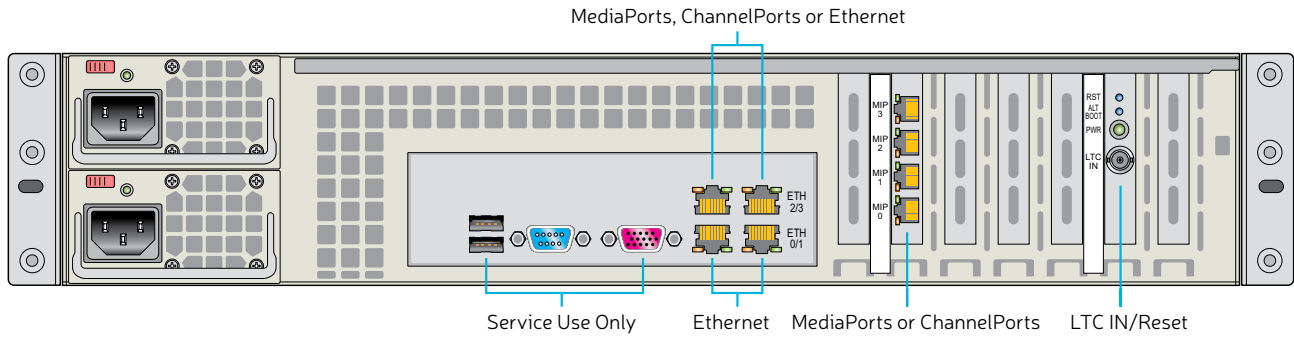
- Disconnection of a media I/O module causes only that unit to stop operating until replaced or reconnected, while no other component in the system is affected.
- Failure of a power supply does not disrupt system operation. A replacement power supply can be hot-swapped while the system is running.
- Failure of a disk drive does not result in loss of content or even a dropped frame.
- The isolation of component failures to minimize overall system impact is a key architectural advantage of the Spectrum™ MediaCenter system. It lowers the risk of a catastrophic failure, since the impact of any one component is limited to only a portion of the system, and failed components can be quickly replaced while the system remains operational.

HIGHLIGHTS

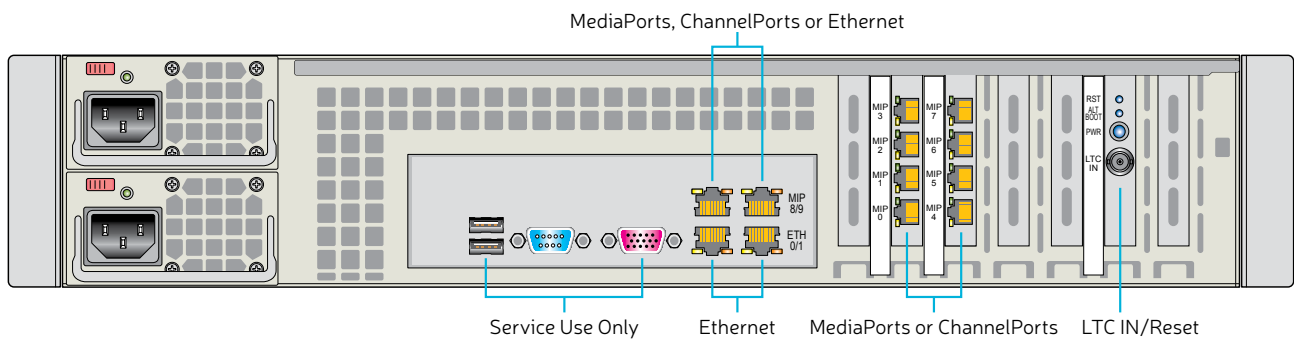
- Compact media server solution for up to 20 channels
- Choice of storage: 16- or 32-TB useable HDD, or 4.8-TB SSD
- Easily add features to support new services, ensuring complete investment protection
- Implement best-of-breed solutions for transmission, studio production, news and sports highlights, and distributed broadcast workflows
- Choose from hundreds of applications, enabled by broad support built around open standards and APIs

Spectrum™ MediaCenter 2200/2200A

MEDIA SERVER WITH INTEGRATED STORAGE



Rear views of MediaCenter MCP-2200 (top) and MCP-2200A



MediaCenter Features

Spectrum Modular Architecture

The Spectrum media server system is built on a modular architecture that allows for maximum configuration flexibility and adaptability to future needs. Every system can be precisely tailored to each customer's unique requirements, and new channels can be added at any time. Software license upgrades are available to increase channel capabilities without requiring new hardware. These upgrades and additions can be performed on the system without taking it off the air.

Flexibility to Fit Any Workflow

The flexible MediaCenter server is ideal for operations requiring between four and 20 channels. MediaCenter model MCP-2200 supports up to 12 channels at 50 Mbps, or six channels at 100 Mbps; MCP-2200A supports up to 20 channels at 50 Mbps, or 10 channels at 100 Mbps. Both models support a variety of advanced file-based workflows for ingest, transmission, live studio production and news production, as well as for facilities requiring simultaneous support for multiple applications.

Utilizing MediaPort or ChannelPort modules for I/O, MediaCenter 2200 and 2200A servers provide broad support for a wide range of production and playout formats – including AVC-Intra, ProRes and PitchBlue® – and file wrappers, including QuickTime and MXF. Playout channels can perform up-, down- and cross-conversion without channel-count or performance penalties, and play back any mix of SD and HD content on a single timeline. SD/HD simulcast is also available on every channel.

Media Processing Performance

MediaCenter provides a wide range of powerful media processing functions, including:

- Back-to-back playback of clips of different formats
- Simultaneous proxy creation during recording
- Support for up to 16 channels of embedded audio per video clip
- API-based audio track manipulation for multi-language applications
- Edit-in-place for up to two Apple® Final Cut Pro® or Adobe® Premiere® Pro seats
- Aspect ratio signaling to downstream equipment
- Optional closed-caption and SCTE-104 file insertion
- Full VBI and VANC support

Spectrum™ MediaCenter 2200/2200A

MEDIA SERVER WITH INTEGRATED STORAGE



Storage Options

MediaCenter is available with several storage configurations. MCP-2200 offers a choice of 16 TB (approximately 600 hours at 50 Mbps) using 2-TB SATA drives, or 32 TB (approximately 1,200 hours at 50 Mbps) using 4-TB SAS drives. MCP-2200A is configured with 4-TB SAS drives. All HDD storage is protected with Spectrum's robust RAID 6 (dual parity) technology.

For the most uncompromising production and playout environments, solidstate drive (SSD) storage is available for MediaCenter model MCP-2200. Choose from six or 12 480-GB SSDs, providing total usable storage from 2.4 TB to 4.8 TB (95-190 hours at 50 Mbps). Storage for a six-drive configuration is partitioned into one 5+1 RAID set; a 12-drive configuration employs two 5+1 RAID sets, fully protecting all content in the event of a drive failure.

SPECIFICATIONS

VIDEO

Video Channels	
MCP-2200	12 @ 50 Mbps 6 @ 100 Mbps
MCP-2200A	20 @ 50 Mbps 10 @ 100 Mbps
Video I/O Modules	
MCP-2200	Up to six dual-channel ChannelPort or MediaPort 7000- or 5000-series modules per MediaCenter chassis
MCP-2200A	Up to 10 dual-channel ChannelPort or MediaPort 7000- or 5000-series modules per MediaCenter chassis
HDD Storage	
MCP-2200	12 2-TB SATA drives (standard), 16 TB usable in two 4+2 RAID sets (600 hours at 50 Mbps) 12 4-TB SAS drives (optional), 32 TB usable in two 4+2 RAID sets (1,200 hours at 50 Mbps)
MCP-2200A	12 4-TB SAS drives, 32 TB usable in two 4+2 RAID sets (1,200 hours at 50 Mbps)
SSD Storage (Option for MCP-2200 only)	6 or 12 480-GB solid-state drives Up to 4.8 TB usable in one or two 5+1 RAID sets (95-190 hours at 50 Mbps)
Network	Two to four GbE ports Two dedicated network ports, two additional ports configurable for network or MediaPort operation Access to FTP, CIFS and AFP services
Reference	Per MediaPort Support for multiple timing standards

POWER

Power Supply	Dual redundant, hot-swappable
Input Voltage	100-240 VAC
Line Frequency	50-60 Hz
Consumption	360 W maximum

PHYSICAL

Dimensions (W x H x D)	17.5 in x 3.5 in x 27 in (2 RU)/ 44.4 cm x 8.8 cm x 68.6 cm
Weight	58 lbs/26.3 kg (12 disk drives)

ENVIRONMENTAL

Operational Temperature	40° F to 104° F/+5° C to 40° C
Operational Relative Humidity	10-85% non-condensing
Electromagnetic Compliance	
Emissions from Information Technology	
Equipment Class A	EN 55022:2006+A1:2007
Current Harmonics	EN61000-3-2:2006+A1:2009+A2:2009
Voltage Fluctuations	EN61000-3-3:2008

ENVIRONMENTAL (CONT.)

International Standards Compliance	
USA	FCC Part 15 Subpart B Class A UL 60950-1:2007 R12.11
Canada	Industry Canada ICES-003:2004 Class A CAN/CSA C22.2 No. 60950-1-07+A1:2011
Australia & New Zealand	AS/NZS CISPR22:2009 Class A
China	GB/T 18268:2000
EU	EN 55022 Class A
Japan	VCCI:2010-04 Class A
Korea	KN22 Class A and KN 24
Taiwan	CNS 13438:2006 Class A
Safety	IEC 60950-1:2005 (2nd Edition); Am 1:2009 EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011 RoHS directive 2002/95/EC

ORDERING INFORMATION

Part Number	Description
MCP-2200-64S	MediaCenter with 6x 480-GB SSDs, supporting up to 12 50-Mbps channels; includes two power cords and rack-mount hardware kit (26.5-36.4 in / 673.1-924.6 mm)
MCP-2200-C2H	MediaCenter with 12x 2-TB SATA HDDs, supporting up to 12 50-Mbps channels; includes two power cords and rack-mount hardware kit (26.5-36.4 in/673.1-924.6 mm)
MCP-2200-C4H	MediaCenter with 12x 4-TB SAS HDDs, supporting up to 12 50-Mbps channels; includes two power cords and rack-mount hardware kit (26.5-36.4 in/673.1-924.6 mm)
MCP-2200-C4S	MediaCenter with 12x 480-GB SSDs, supporting up to 12 50-Mbps channels; includes two power cords and rack-mount hardware kit (26.5-36.4 in / 673.1-924.6 mm)
MCP-2200A-C4H	MediaCenter with 12x 4-TB SAS HDDs, supporting up to 20 50-Mbps channels; includes two power cords and rack-mount hardware kit (26.5-36.4 in/673.1-924.6 mm)

SPARES KITS

Part Number	Description
SP-0099-001	MediaCenter 2-TB SATA HDD spare
SP-0114-001	MediaCenter 480 GB SSD spare
SP-0097-001	Rack-mount hardware kit (19-26.6 in/ 482.6-675.6 mm)
SP-0100-001	MediaCenter front bezel
SP-0101-001	MediaCenter power supply module
SP-0114-001	MediaCenter 480-GB SSD spare
SP-0128-001	MediaCenter 4-TB SAS HDD spare