

sQ 1000 Series

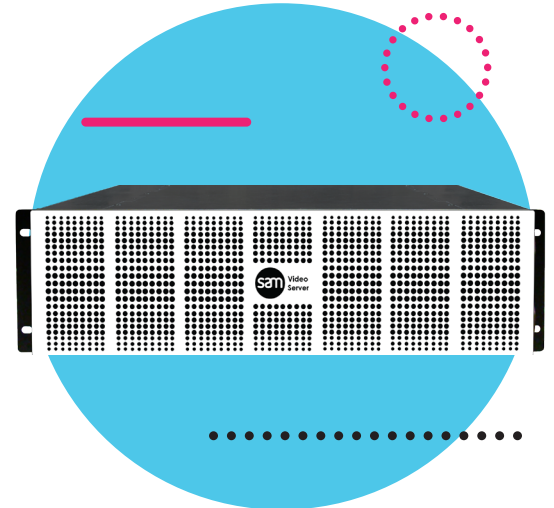
Powerful and resilient servers for fast-turnaround News and Sports production editing, replay and playout



Snell
Advanced
Media

Data Sheet

The sQ 1000 series is an intelligent, scalable and media optimized storage system. Based on a real-time operating system and robust design, sQ servers can deliver sustained multi-year 24-7 operation for high-pressure fast-turnaround workflows within news and sports.



sQ 1000 Series Overview

- 100% compatible with existing sQ Servers
- sQ 1000 series is the most compact video server for 12 SDI ports
- 3G 16 channel audio
- New servers extend life of Enterprise sQ systems providing opportunities for future system growth
- 16 channel audio support
- SDI recordings, file ingest, editors, SDI playout and file export
- 2.5x faster than realtime for file ingests and delta frames
- Software based codecs - format future proof
- Dual 10G or 4x1G Ethernet Network
- Easy migration to IT infrastructure via sQ FileFlow
- MXF, MOV, MP4, H.264 file wrapper support via sQ FileFlow

What's New?

- 12G SDI, 16 channel audio
- XDCAM HD LongGOP 50/35Mbps codec
- UHD 2160p 50/59.94hz
- XAVCi Class 300 600Mbps codec

Storage

- Uses 6G SAS controller and the latest SAS drives
- 8x Storage in 2/3 space than previous generation of sQ
- 3x disk performance than previous generation of sQ
- sQ 1200 has internal storage around 200 HD hours¹ or 38 UHD hours²
- sQ 1800 has external (2U) storage around 600 HD hours¹ per array
- Up to 4 arrays per server for a massive 2,400 HD hours¹ per sQ1800

Server Options

- Up to 12x 3G ports I/O
- Up to 4x 12G ports I/O Incl. 4x 3G O/P
- Up to 20x 3G IP 2022-6 streams

IP I/O Mapping	Config.1	Config.2	Config.3	Config.4
Channel In<>Out	16 <> 0	8 <> 8	12 <> 4	10 <> 6
Codec Support	2022-6			
	TR-03			
	TR-04			

- FileFlow file transcoding in and out sQ
- Redundant ISA Manager
- IMON monitoring

¹ HD hour = 1 hour of AVCi 100Mb/s + 8ch 24bit 48KHz audio

² UHD hour = 1 hour of XAVCi 600Mb/s + 8ch 24bit 48KHz audio

Software Option - sQ Record

- sQ Record supports direct recording from SDI feeds, including VTRs via RS422 control
- sQ Record provides automatic recording according to preset times
- sQ Record creates broadcast quality clips and automatic proxies

Software Option - sQ Play

- sQ Play manages up to four channels of playout with options to integrate with NRCS via MOS gateway
- sQ Play is driven directly from its host PC or via a dedicated on-air control panel

Software Option - sQ Load

- sQ Load is a desktop bulk ingest tool for loading P2, XDCAM, XDCAM EX and XAVC files
- sQ Load ingests content in batches and converts according to sQ preferred format

Software Option - Editing

- sQ Cut is a simple desktop editor for basic story telling in news and sports
- Qube is available as a turnkey or software solution for editing and finishing for SD, HD and UHD

www.s-a-m.com

Specifications

Mainframe

- 3RU, Front Loading
- Individual card cooling
- sQ 1200 has Internal SAS storage
- Dual redundant hot swap PSUs
- Simple back panel layout

Main System Connections

sQ SAS Array

- External storage array providing up to 600 HD hours¹
- 24 x 1.8TB enterprise class SAS drives
- Raid 30: 3 x (7+1 parity)
- 12Gb SAS Interface
- Dual PSU
- Up to 4 sQ SAS arrays per sQ server providing 2,400 HD hours¹
- Easily expand storage capacity by adding more sQ SAS arrays - No restriping required
- Mix and match latest 1.8TB drive arrays with previous 900GB drive arrays

Formats and Standards Supported

- HD/UHD Formats - all in 50/59.94Hz
 - XAVCi Class 50 & 100: 720p, 1080i, 1080p, Class 300, 2160p
 - AVCi Class 50 & 100: 720p, 1080i, 1080p
 - DVCPRO HD: 720p, 1080i
 - DNxHD 720p, 1080i, 1080p 8/10bit
 - XDCAM HD LongGOP 50/35Mbps

XDCAM Family ⁴	Resolution	Bit Rate (Mbps)	Format
XDCAM HD (4:2:0)	1920x1080 Encoded as 1440x1080	HQ 35 (VBR)	59.94i
			50i
	1280x720	HQ 35 (VBR)	59.94p
			50p
XDCAM HD (4:2:2)	1920x1080	50 (CBR)	59.94i
			50i
	1280x720	50 (CBR)	59.94p
			50p

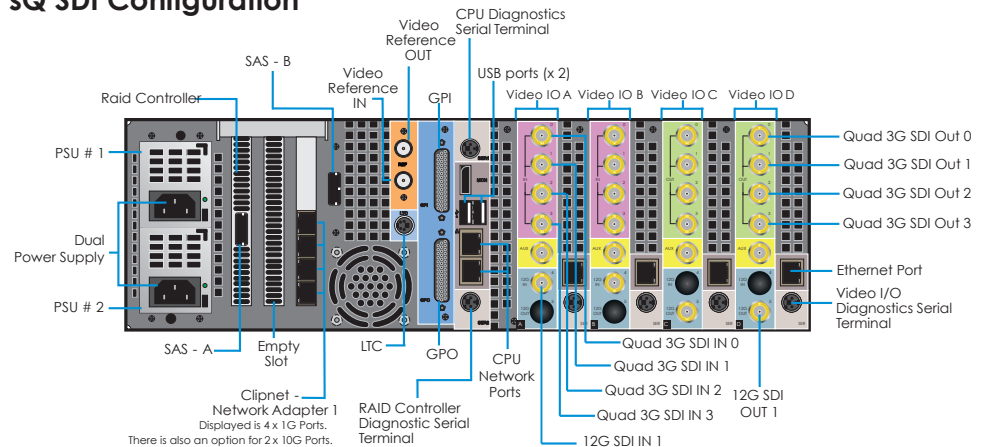
- SD Formats - all in 50/59.94Hz
 - IMX 30/40/50: 625i or 525i
 - DVCPRO 25/50: 625i or 525i
- Unrestricted mixed format on playout including support for PQ10, HLG and SLog3 conversion from existing UHD HDR media
- LBR Codecs
 - MPEG-1 (1.5Mbit) or MPEG-4/H.264 (2.5Mbit)

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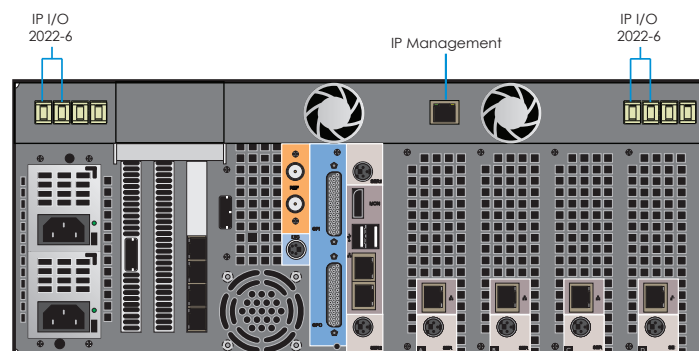
Comparison Table

Feature	sQ 1200	sQ 1300	sQ 1800	sQ 1900
Size	3U	4U	3U + 2U per array	4U + 2U per array
Storage	Internal, max 200 HD hrs ¹ or max 38 UHD hrs ³		External, 600 HD hrs ¹ per array. Max 2,400 HD hrs ¹	
External Storage array	0		1 to 4	
Video ports	Up to 12 (3G), 4 (12G)	3G IP 2022-6/7 Dual 25G	Up to 12 (3G)	3G IP 2022-6/7 Dual 25G
3G SDI	Yes	No	Yes	No
12G SDI ²	Yes	No	No	No
3G IP	No	Yes	No	Yes
HDD Disks	Yes	Yes	Yes	Yes
SSD Disks	Yes	Yes	No	No
Max audio channels	16	16	16	16
Browse create	2-3 x real time per Engine, multiple Engines			
Network	Dual 10 G Ethernet or Quad 1Gb Ethernet			
Video formats	SD, 720p, 1080i, 1080p, 2160p		SD, 720p, 1080i, 1080p	
Compression	IMX, DVCPRO, DVCPROHD, AVCI & XAVC Class 50, Class 100, XDCAM HD LongGOP and DNxHD			
Codec technology	FPGA Hardware			

sQ SDI Configuration



sQ IP Configuration



¹ HD hour = 1 hour of AVCI 100Mb/s + 8ch 24bit 48KHz audio

² 12G and UHD I/O requires internal SSD drives

³ UHD hour = 1 hour of XAVCi 600Mb/s + 8ch 24bit 48KHz audio

⁴ XDCAM HD LongGOP is not supported within LiveTouch