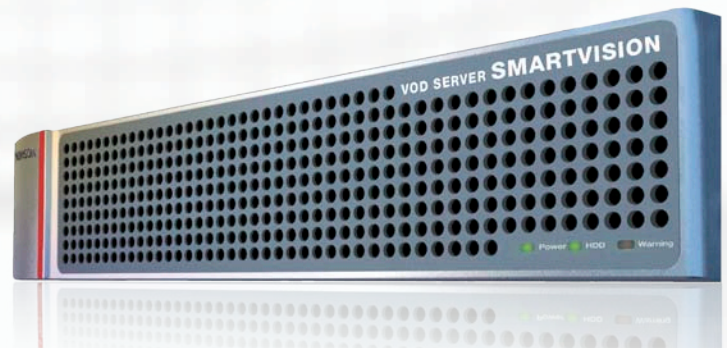


SmartVision VoD Server

ON-DEMAND VIDEO SERVER

SmartVision VoD Server is a core device that can ingest video assets and stream them based on subscriber requests. It supports value-added applications such as VoD, network personal video recording (nPVR), and network time shifting (nTS) services.



Leveraging our world-renowned expertise in all stages of the content-delivery chain, we offer an ideal infrastructure solution for telecom service providers and cable operators to rapidly deploy innovative broadband telephony, TV, and video-on-demand (VoD) services.

By combining best-of-breed, scalable servers with our powerful Gigabit Ethernet streaming (Quad GES) network adapters, the SmartVision VoD server provides outstanding throughput while delivering jitter-free media streams.

Highly flexible and scalable, you can add storage capacity and media streams to your architecture by bringing a new SmartVision VoD Server online. Whether it is a library server with an extremely high storage capacity or a cache server that handles many streams at a time, you can simply add capacity to the total system as you need it.

Standard Processors, Best-of-Breed Ethernet Adapters

SmartVision VoD servers use the most popular Intel-based servers. By avoiding custom-designed host platforms, you're not locked into a proprietary system and can benefit from the continuing performance and price advances of the computer industry.

Our outstanding Quad GES network adapters provide the basis for our high server throughput. By using a high-speed applications programming interface (API), a SmartVision VoD server can reach as much as 3.6 Gb/s per Quad GES adapter—while offloading from the server CPU a variety of content-delivery tasks. By saving host resources, SmartVision VoD servers can manage parallel ingest or administration tasks.

Best Quality of Experience

In typical deployments, manufacturers rely on a computer clock to pace the delivery of media streams. By doing so,

they introduce jitter that gets amplified as media streams transition through various network appliances. The inherent jitter introduced by those unstable server clocks inevitably leads to quality of experience (QoE) issues that often take the form of picture loss on the terminal side. With its advanced Quad GES boards, SmartVision VoD Servers deliver jitter-free streams for maximum QoE. Packet loss is the second type of network impairment that can affect QoE. The SmartVision VoD server implements a strategy for active packet loss recovery, even when it is due to burst packet loss on the network.

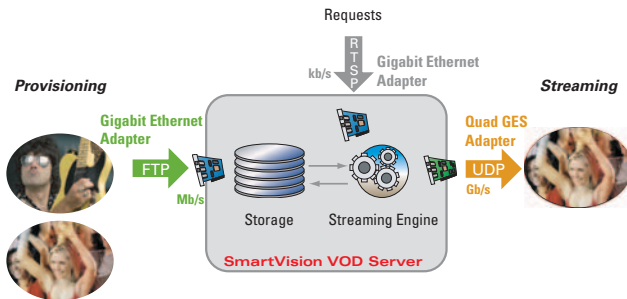
Robust and Scalable Video Solution

The load balancing and failover among an array of SmartVision VoD servers is managed by our SmartVision CDN, while collecting and redistributing streaming requests. The SmartVision VoD Server and the SmartVision CDN are fully integrated with the Thomson SmartVision service platform.

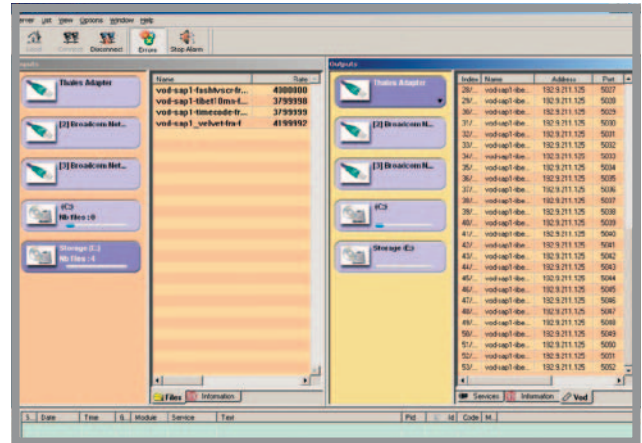
KEY FEATURES

- Massive streaming and record capacity
- Multiple video formats: H.264/MPEG-2, SD/HD
- Multiple streaming and download formats: MPEG-2TS, HTTP, ISMA RTP
- Jitter-free streams for maximum QOS
- Failover/load balancing mechanisms to maximize uptime
- Packet loss recovery mechanism based on RTP
- Support for variable bit rate (VBR) transport streams
- Combined VoD, nPVR, and nTS functions from the same server
- Integrated with major conditional-access (CA) system providers
- Flexible and scalable storage options: RAM, DAS (SAS/SATA2), SAN

SYSTEM ARCHITECTURE



SMARTVISION VOD SERVER GRAPHICAL USER INTERFACE



SPECIFICATIONS

Media File Formats

- MPEG-2 over MPEG-2 transport streams
- H.264 over MPEG-2 transport streams
- H.263, H.264, and MPEG-4 part 2 over RTP
- CBR & VBR

Streaming Protocols

- Transport: UDP/IP, RTP/UDP/IP, TCP/IP
- Control: RTSP
- HTTP download and tunneling

Performances (per Quad GES adapter)

- 1800 streams @ 2 Mb/s
- Up to 800 mbps of recording
- RTP-Retry (error repair)
- Unmatched clock stability: 0.1 ppm

Trick Mode

- Supported for MPEG-2 and H.264
- Fast-forward and rewind at different speeds: x2, x4, x8, x12, x16, x64

Network Interfaces

- On-board 4-port Gigabit Ethernet for provisioning, one RJ-45 connector
- From 1 to 4 Quad GES on a single server
- Each Quad GES adapter includes four SFP cages for either RJ45 or SX/LS Fiber modules

Hardware Characteristics

- Chassis: 2 RU (download, entry, standard) or 4 RU (advanced)
- Storage media: RAM, SAS, SATA 2,
- Storage organization: RAM caching, SAN, or directly attached storage (DAS) for Fiber modules

Storage Characteristics:

- From 1.5 to 40 TB of storage in DAS
- Up to 90 TB of storage in SAN
- RAM: from 32 GB (standard) to 96 GB (advanced)

ORDERING INFORMATION

TNM-323E-C (entry)

SmartVision VOD Server - 2 RU - maximum streaming capacity 3.6 Gb/s

TNM-3231-C (standard)

SmartVision VOD Server - 2 RU - maximum streaming capacity 7.2 Gb/s

TNM-3232-C (advanced)

SmartVision VOD Server - 4 RU - maximum streaming capacity from 7.2 up to 14.4 Gb/s

TNM-323D-C (download)

SmartVision download Server - 2 RU - maximum download capacity 1.8 Gb/s

TNM-32GES4 (additional QuadGES)

Each Quad GES can add 3.6 Gb/s of streaming capacity in the TNM-3232-C advanced server

TNM-3254

Add License for 10 streaming output

TNM-3281

Adds network PVR (nPVR) function

TNM-3282

Adds network time-shifting (nTS) function

TNM-3280

Adds TV Channel input license

Please refer to your usual Thomson Sales contact for details about HW, licenses and storage architecture and for an exhaustive list of HW components and options

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PROFESSIONAL SERVICES

Our professional services offerings ensure optimal system performance and maximize uptime. These services include call centers staffed around the clock; system planning, design, and commissioning; professional training courses; and technical maintenance programs and service agreements.

www.thomson.net/support

FINANCING

Financing is available through Thomson financial services. Please contact your products representative for more details.