

> BLEEDING-EDGE MEDIA SERVER HARDWARE

For demanding generative and frame-based media serving applications.



> OVERVIEW

7thSense's 'W-Series' is our flagship media server hardware, engineered for high-bandwidth generative workflows and uncompromised playback performance. Built on PCIe® 5.0 technology, W-Series leverages high-performance GPU processing and ultra-fast media storage to support the most demanding visual workflows.

As an uncompressed media server, it can deliver:

- Up to 10 channels of 4K 10-bit 4:4:4 at 60fps
- Up to 12 channels of 4K 10-bit 4:2:2 at 60fps
- Up to 16 channels of 4K 10-bit 4:2:2 at 30fps

The system architecture supports simultaneous operation of a generative engine and media server engine, enabling real-time warp, blend, and visual effects processing on generative output.

W-Series supports projection warp & blend, pixel mapping for LED processors, and compositing of generative media with live video capture, movie playback, web content, dynamic text, and effects, creating rich, dynamic visual compositions.

> SUPPORT

- Same day email/phone support Monday-Friday
- Optional extended warranty (up to 5 years)
- Enhanced support contract options available:
 - 24/7 support
 - Priority phone response time
 - Engineer on call
 - Engineer on site

> TECH SPECS

> HARDWARE

- Up to 16x DisplayPort outputs
- Dual circuit redundant power supply
- PCIe 5.0 expansion (video capture, audio, high-speed networking, genlock, SDI, SMPTE ST 2110)
- Toolless rack rails included
- Optional liquid-cooled CPU
- Reliable operation in ambient temperatures up to 30°C

> PERFORMANCE

4K Output

- 16 × 4096×2160 @ 30fps (10-bit 4:2:2)
- 15 × 4096×2160 @ 30fps (10-bit 4:4:4)
- 12 × 4096×2160 @ 60fps (10-bit 4:2:2)
- 10 × 4096×2160 @ 60fps (10-bit 4:4:4)

WUXGA Output

- 16 × 1920×1200 @ 60fps (10-bit 4:4:4)

Layer Support

(max simultaneous playback on a 7680x4320 canvas)

- 29x 4K @ 60fps (8-bit 4:2:2)
- 24x 4K @ 60fps (10-bit 4:4:4)
- 21x 4K @ 60fps (8-bit 4:4:4)
- 16x 4K @ 60fps (10-bit 4:4:4)
- 10x 4K @ 60fps (NotchLC 10-bit equivalent)

> HIGHLIGHTS

- Tested and certified for deployment around the world, warranty and support included
- Supports Delta Media Server® and 7thSense Actor®
- Available without 7thSense software for third-party engines
- Optional integration with 7thSense Juggler® product for seamless switching, IntelligentSource™ signal failover, source compositing

Licensed add-on options:

- Camera-based auto-alignment

Optional Hardware:

- Genlock
- Video Capture for HDMI, SDI, or SMPTE ST 2110
- Expandable RAM
- SDI output
- SMPTE ST 2110 output
- High-speed networking
- Audio output options (AES3, AES67, Balanced Analogue, Dante)



> KEY FEATURES & BENEFITS

- Flagship hardware product certified to international safety and emissions standards
- Supports both generative and frame-based playback/timeline workflow
- Real-time compositing of generative content, video playback, and live inputs
- Integrated warp and blend capabilities
- Network-based playhead synchronisation across multiple 7thSense media servers
- Genlock support for multi-server GPU synchronisation
- NDI® for capture, confidence monitoring, or full-resolution output
- Flexible video capture support (PCIe, ST 2110, NDI, USB)
- Open control via ASCII (TCP/UDP), Art-Net™, OSC, and internal macro scripting
- Scalable architecture for integration with wider 7thSense systems
- Available as hardware-only platform for Unreal Engine, Unity, Notch, or TouchDesigner deployments



> BENCHMARK SCORES

- Notchmarks: 151674
- Blender Benchmark: [Monster, Junk Shop, Classroom]
 - CPU: 548, 358, 277
 - GPU: 8769, 4487, 4055
- Cinebench:
 - CPU MultiCore: 74457
 - CPU SingleCore: 2206
- V-Ray Benchmarks:
 - CPU Score: 64880
 - GPU RTX Score: 10929
 - GPU CUDA Score: 8729
- OctaneBench:
 - ATV - DirectLighting: 190
 - ATV - InfoChannels: 109
 - ATV - PathTracing: 246
 - Box - DirectLighting: 165
 - Box - InfoChannels: 57
 - Box - PathTracing: 178
 - Idea - DirectLighting: 145
 - Idea - InfoChannels: 41
 - Idea - PathTracing: 171
 - Interior - DirectLighting: 175
 - Interior - InfoChannels: 68
 - Interior - PathTracing: 219

* Single graphics card benchmark scores with RTX PRO 6000 Workstation GPU

> TECH SPECS



> HARDWARE SPECIFICATIONS

Video Outputs	Up to 16 × DisplayPort*
General Network	2 × 10 Gb/sec Ethernet 1 × 1 Gb/sec IPMI NIC
Data Peripherals	2 × USB4 ports (type C) 1 × USB 3.2 Gen2x2 port (type C) 6 × USB 3.2 Gen2 ports (type A) 2 × USB 3.2 Gen1 ports (type A)
Operating System	Windows® 11 IoT Enterprise LTSC
Memory	64GB DDR5 RAM*
Audio	2 channels of unbalanced analogue* 32 channels of Dante network audio
GPU	NVIDIA Professional Graphics
Media Storage	from 2x 900GB up to 4x 28800GB NVMe SSD*
Power Consumption (playback)	1 GPU 650 W (typical), 733 W (max) † 2 GPUs 672 W (typical), 800 W (max) † 3 GPUs 827 W (typical), 959 W (max) † 4 GPUs 657 W (typical), 856 W (max) †
Mounting System	4RU 19" with toolless rack rails
Server Dims (H × W × D)	177mm (4U) × 217mm × 610mm
Server weight (approx.)	38.0 kg
Power Supply	Dual Circuit Redundant Power Supply

*Customisable based on requirements

†Power requirements dependent on usage

Specifications subject to change. Last updated: 11 June 2026

> CONFIGURATION OPTIONS

Feature	Standard Build	Available Options
GPU / DisplayPort Outputs	<ul style="list-style-type: none"> 1 × dual-slot GPU with 4 outputs 	<ul style="list-style-type: none"> 2 × dual-slot GPUs (8 outputs) 3 × dual-slot GPUs (12 outputs) 4 × single-slot GPUs (16 outputs)
High-Speed Media Drives	<ul style="list-style-type: none"> 2 × 900 GB drives in RAID0 array (2 drives are suitable for a 4-output server but should be increased to 4 drives for servers with more than one GPU) 	<ul style="list-style-type: none"> 4 × drives in RAID0 array Available drive capacities: 900, 1800, 3600, 7200, 14400, 28800 GB
Video Output	<ul style="list-style-type: none"> DisplayPort 	<ul style="list-style-type: none"> HDMI SDI (3G or 12G) NDI SMPTE ST 2110 including custom frame rates, resolutions, and NMOS
Audio Output	<ul style="list-style-type: none"> 2 channels of unbalanced analogue 32 channels of Dante (via Dante Virtual Soundcard) 	<ul style="list-style-type: none"> AES3 AES67 10 channel balanced analogue (via USB) SMPTE ST 2110-30
Video Capture	<ul style="list-style-type: none"> NDI Web Page (CEF) 	<ul style="list-style-type: none"> HDMI (non-HDCP) SDI (3G or 12G) SMPTE ST 2110
Additional Options		<ul style="list-style-type: none"> Liquid-cooled CPU Camera-based auto alignment RAM upgrade GPU upgrade

> MEDIA LAYERS BY ENCODING TYPE

60 fps 30 fps

Media Encoding	4 Output Server	8 Output Server	12 Output Server	16 Output Server
4K 10-bit 4:4:4	16	12	10	15
4K 8-bit 4:4:4	21	16	14	
4K 10-bit 4:2:2	24	18	17	20
4K 8-bit 4:2:2	29	24	19	

It is possible to play more layers of media on the canvas than the server has outputs, for purposes of picture-in-picture or cross-fading between playing clips. The number of layers of media in the chart above shows the maximum number of movies that can be played simultaneously without dropping frames.

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> DRIVE CAPACITY IN MINUTES AT 60FPS UNCOMPRESSED

			900 GB	1800 GB	3600 GB	7200 GB	14400 GB
DCI 8K 8192 x 4320	8 bit	4:2:2	3.7	7.5	15.1	30.3	60.6
DCI 4K 4096 x 2160	10 bit	4:4:4	8	16.1	32.3	64.7	129.4
		4:2:2	12.1	24.2	48.5	97	194.1
	8 bit	4:4:4	10.1	20.2	40.4	80.9	161.8
		4:2:2	15.1	30.3	60.6	121.3	242.7
WUXGA 1920 x 1200	10 bit	4:4:4	31	62.1	124.2	248.5	497.1
		4:2:2	46.6	93.2	186.4	372.8	745.6
	8 bit	4:4:4	38.8	77.6	155.3	310.6	621.3
		4:2:2	58.2	116.5	233	466	932

- Media duration shown is for 60fps; reducing to 30fps doubles the media duration
- Total duration is shown for drive capacity; all outputs/layers read media from the same drive
- Not all resolutions / frame rates / bit depths / colour subsampling combinations are able to be played on all servers. For example, S-Series can play 8K at 8-bit 4:2:2 60fps, but not 10-bit or 4:4:4 at that resolution.
- NotchLC encoded media has an approximate compression rate of 5:1 vs 10-bit 4:4:4, actual compression ratio is dependent on the image data

THE POWER BEHIND THE STORY



EXPLORE THE 7THSENSE PERFORMER RANGE

W-Series **R-Series**
P-Series **S-Series**

7thSense's media server hardware platform range. Designed to be the host of Actor®, Conjurer®, and Delta Media Server®. Available as hardware-only for use in generative media applications.

delta 

The original 7thSense media server product line, and the first to bring uncompressed media playback to the world.

medialon 

Our Show Control product suite, connecting the Performer Range to other brands and products within an installation, including lighting, audio, DSPs, and special effects hardware.


actor 

The next generation 7thSense media server – optimised for uncompressed video playback, projection mapping, pixel-packing for LED displays, and real-time motion tracking.



juggler 

Our award-winning pixel processor range designed to be the backbone of complex high-resolution systems and mega canvasses to streamline, simplify and optimise workflows.

conjurer 

Our generative content solution – bringing generative engines such as Unreal®, Unity® and Notch® into our Compere workflow.

compere 

Our intelligent workflow interface that brings together the Performer Range.