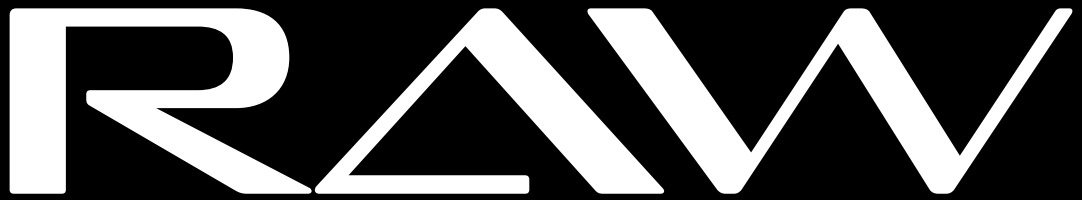


MEDIASERVER BY stumpfl®

RAW 8K

RAW SERVER

Uncompromising playback quality

Tired of limited color subsampling, banding effects and jitter when presenting videos on large format displays and screens? We are pushing the limits of current video playback solutions with our top level media server platform RAW Server delivering up to four times uncompressed 4K60 playback.

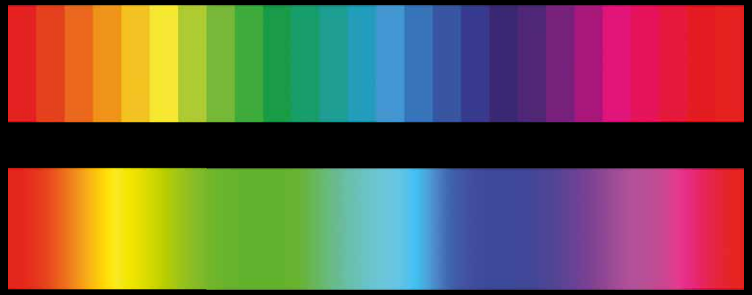
Uncompressed Video Playback

Video compression is one of the major challenges in media applications these days. Everyone knows compression artifacts such as color fringes or pixelated pictures. RAW Server is built and optimized for playing uncompressed video contents which avoids all the negative effects of video compression.

avstumpfl.com/uncompressed

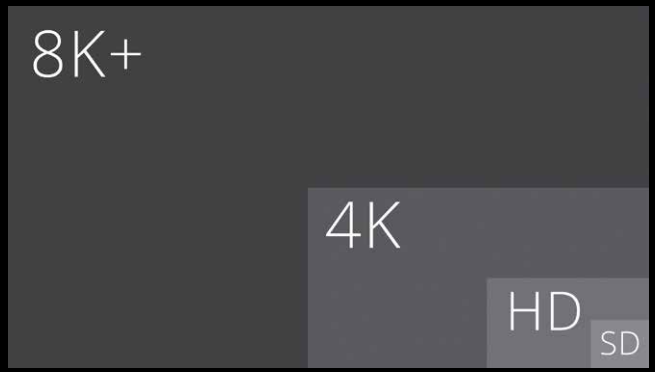
Realtime Frame Blending

If the content has been produced in a lower frame rate than the display or projector supports, our RenderEngine™ can produce intermediate frames in realtime to achieve a smoother video playback.



Maximum Color Depth

By reducing the quantity of colors used in videos the amount of data and processing time is massively reduced. However this way also the picture quality suffers and the overall viewing experience is drastically impaired. RAW Server is capable of processing and delivering video content with full 4:4:4 color sampling and with 8/10/12/16 bits color depth per channel.



Highest Resolution

RAW Server is capable of playing up to four times 4K uncompressed video content at 60fps. These contents can be native picture sequences like TGA or TIFF without any need to convert it into any intermediate codec format. Wings Engine Raw is even capable of processing PNG sequences straight away.

SERVER HARDWARE

The Most Advanced Hardware Platform

Instead of standard consumer/gaming computer hardware RAW Server contains sophisticated server technology derived from professional IT data center equipment. RAW Server comes with Xeon CPU, redundant high performance power supply, 2x10 GBit LAN, server chipset, up to 8 3G-SDI live inputs and Displayport 1.2 and DVI-D output connectors.

Highest Data Rate

The core of a RAW Server is a custom engineered RAID 10 system, which features a constant data stream of four times uncompressed 4K content at 60fps plus up to 16 text and picture layers plus up to 128 uncompressed audio streams. On top of all that, this data system not only features a massive data throughput but also redundancy. Even if one of the SSDs fails the data rate and the system's functionality in general is not impaired.

Highest Software Performance

RAW Server hosts our new WingsRX™ render core engine which has been developed and optimized especially for premium picture quality applications. Its 64bit program architecture and clever usage of SSE CPU instructions leads to an unequaled decentralized processing power. Of course RAW Server also comes with our proven embedded operating system, Backup-Manager, features a dedicated EDID management as well as our award winning automatic camera based calibration system for softedge blending and geometry mapping.

TECHNICAL SPECIFICATIONS

	RAW Server	4k1	4k2	4k3	4k4	Options
Product Type	Uncompressed Media Server					
Available models	Quad					
Art. Nr.		SMW-RW41	SMW-RW42	SMW-RW43	SMW-RW44	
Physical						
Case Dimension (WxDxH)	446 x 715 x 178mm					
Max. Product Dimension*	482 x 796 x 178mm					
Product Weight		25,4kg	25,8kg	26,2kg	31,4kg	
Shipping Dimension	595 x 930 x 310mm					
Shipping Weight		37,2kg	37,6kg	38kg	43,2kg	
Hardware						
Server Grade Hardware Components	Yes					
CPU Type	Intel Xeon					
CPU # of Cores/# of Threads	8/16					
CPU Frequency	3,4GHz					
RAM	64GB					
ECC RAM	Yes					
Touch Display	-					

Power		**4K1**	**4K2**	**4K3**	**4K4**	**Options**
Power Supply	100-240VAC, 50-60Hz					
Power Consumption Peak	1000W					
Power Consumption Average with High Load*)		480W	480W	480W	620W	
Redundant Power Supply Hot-Plug	Yes					
Operating System Storage						
Operating System Amount of Physical SSDs	2					
Operating System Capacity (Net)	480GB					
Operating System RAID Level	RAID 1					
Data Storage						
Data Storage Amount of Physical SSDs		8	16	24	32	
Data Storage Capacity (Net)		1,92TB	3,84TB	5,76TB	7,68TB	15,36TB | 30,72TB | 61,44TB | 92,16TB
Data Storage RAID Level	RAID 10					
Data Storage Max. Read Rate		1,85GB/s	3,7GB/s	5,55GB/s	7,5GB/s	
Data Storage Max. Read Rate with Defective SSD		1,75GB/s	3,5GB/s	5,25GB/s	6,4GB/s	
Seamless Playback with Defective SSD	Yes					
Uncompressed Content Playback		1x 4k60	2x 4k60	3x 4k60	4x 4k60	
Playback Duration Uncompressed Content (Single Stream)		21min (4k60)	42min (4k60)	64min (4k60)	85min (4k60)	170min | 340min | 680min | 1020min (4k60)
Video Outputs						
Licensed Video Outputs	4					
Physical Video Outputs	4					
Video Output Standard	DP1.2					
Video Output Resolution (Max.)	4096x2160 @60Hz					
EDID Management	Yes					
Genlock	Yes					
Framelock	Yes					
GUI Outputs						
GUI Outputs	2					
GUI Output Standard	1x DVI, 1x DP1.2					
Max GUI Output Resolution	DVI: 1920x1200, DP1.2: 4096x2160					

Connection		4K1	4K2	4K3	4K4	Options
USB	2x USB2 Front, 6x USB3 Back					
Network (Not all configs possible*)	2x Gbps	2x 10Gbps	2x 10Gbps	2x 10Gbps	2x 10Gbps (max. 270MB/s)	
Video Inputs (Not all configs possible*)						
DVI/RGB/YUV	-					2
HDMI 2.0	-					2
3G-SDI	-					2 | 4 | 8
Audio (Not all configs possible*)						
Analog Unbalanced Out	Stereo (3,5mm TRS)					2 (RCA), Stereo-Phones (6,3mm TRS)
Analog Balanced Out	-					4 (6,3mm TRS)
SPDIF Out	-					1 (RCA)
AES Out	-					1 (XLR)
ADAT Out	-					1 (Optical)
ADAT In	-					1 (Optical)
Analog Balanced In	-					-
MIDI	-					In/Out
Software						
Operating System	AV Stumpfl Media Server OS*					
Backup and Snapshot Manager	Yes					
Wings Vioso Software	Wings Vioso RX Pro					
Vioso Camera Calibration	Any surface, Multi Client					
Video Layers	Unlimited					
Image Layers	Unlimited					
Audio Layers	Unlimited					
Show Control Layers	Unlimited					
Marker Layers	Unlimited					
Group Layers	Unlimited					
Performance Monitoring	Yes					
Offline Preview	Yes					

		4K1	4K2	4K3	4K4	Options
Wings Avio	Avio Advanced					Avio PR|PM|UT
Avio Manager	Yes					
Wings Touch	Yes					
Environmental Specifications - Operating						
Temperature (altitude less than 1000m, no direct sunlight)	10°C to 30°C					
Maximum Termperature Gradation	10°C per hour					
Temperature De-Rating (altitude more than 1000m)	Reduce max. temp. by 1°C per 300m					
Maximum Altitude	3000m					
Relative Humidity (noncondensing)	20%RH to 80%RH					
Maximum Humidity Gradation	10%RH per hour					
Environmental Specifications -Storage						
Temperature (no direct sunlight)	-30°C to 55°C					
Maximum Termperature Gradation	20°C per hour					
Relative Humidity (noncondensing)	5%RH to 95%RH					
Maximum Humidity Gradation	10%RH per hour					
General						
Warranty	2 years					Total 3 | 4 |5 years

FHD = 1920x1080, Uncompressed Datarate at 60fps = 360MB/s
UHD = 3840x2160, Uncompressed Datarate at 60fps = 1,4GB/s
4k = 4096x2160, Uncompressed Datarate at 60fps = 1,5GB/s

* Power Consumption Average with High Load = Tested with very high CPU, GPU and SSD load
* Not all configs possible = Not all configurations of video input, network, audio cards are possible. Please ask.
* AV Stumpfl Media Server OS = Based on Windows embedded/IoT x64
* Max. Product Dimension = Product dimension incl. front handles, back handles, rubber bumpers, etc.. Handles can not be removed on all products!

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Technical information contained in this document is subject to change without prior notice. Should you need further clarification/information, please contact AV Stumpfl directly.