G&L AVPU

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G&L's Audio Video Processing Unit (AVPU) is a cutting-edge, high-density, low-energy, 19" rack server designed to meet high-quality live video processing workflow needs across various environments.

The AVPU provides flexible input, storage, and hardware acceleration options, maximizing the number of live streams processed per rack unit while minimizing energy consumption. It supports SRT, MPEG-TS, RTMP, and SDI input options, with planned support for DVB-S, SMPTE 2110, and NDI. Its flexible software options can seamlessly integrate into a broader enterprise environment, offering features like Single-Sign-On (SSO) with multifactor authentication (MFT) and advanced authorization capabilities with users, groups, and profiles.

Key features

— Low energy, less than 190 Watt CPU

— Various input options including: SDI, SRT, RTMP, and MPEG-TS

— Input option roadmap: DVB-S, SMPTE 2110, NDI

— Seamless enterprise environment integration

— Up to 10 ASIC-based encoding accelerators

— Codecs AVC and HEVC supported today, with AV1 on the roadmap

— VMAF scores comparable or better than software-only encoding in quality modes

— Flexible software options: graphical overlay, VOD to live, mixed live/VOD playlists, live to VOD, trimming & editing, AI audio transcription and translation

Key advantages

Versatile, Compact, 19" Rack Server:

— All-in-one solution for a variety of different video processing workflows, with flexible input, storage, and hardware acceleration.

— Connects hundreds of IP inputs and up to 64 3G-SDI or 16 12G-SDI inputs.

— Transcodes up to 20 x 8Kp30, 80 4Kp30, or 320 x 1080p30.

Scalable, Energy and Cost-efficient:

— High channel density per rack unit for low-energy consumption, making it ideal for high-volume, 24x7 operations.

Assurance of Continuous Operations

— Can run in cluster mode with external Kubernetes management for continuous operations.

Flexible Deployment:

— Hardware and Software are de-coupled. Software licenses that run on the AVPU can be migrated to future versions or to cloud workflows if appropriate.

Quality and Storage Optimization:

— Includes options for balancing performance, stream size, and visual quality, based on VMAF score measurements.
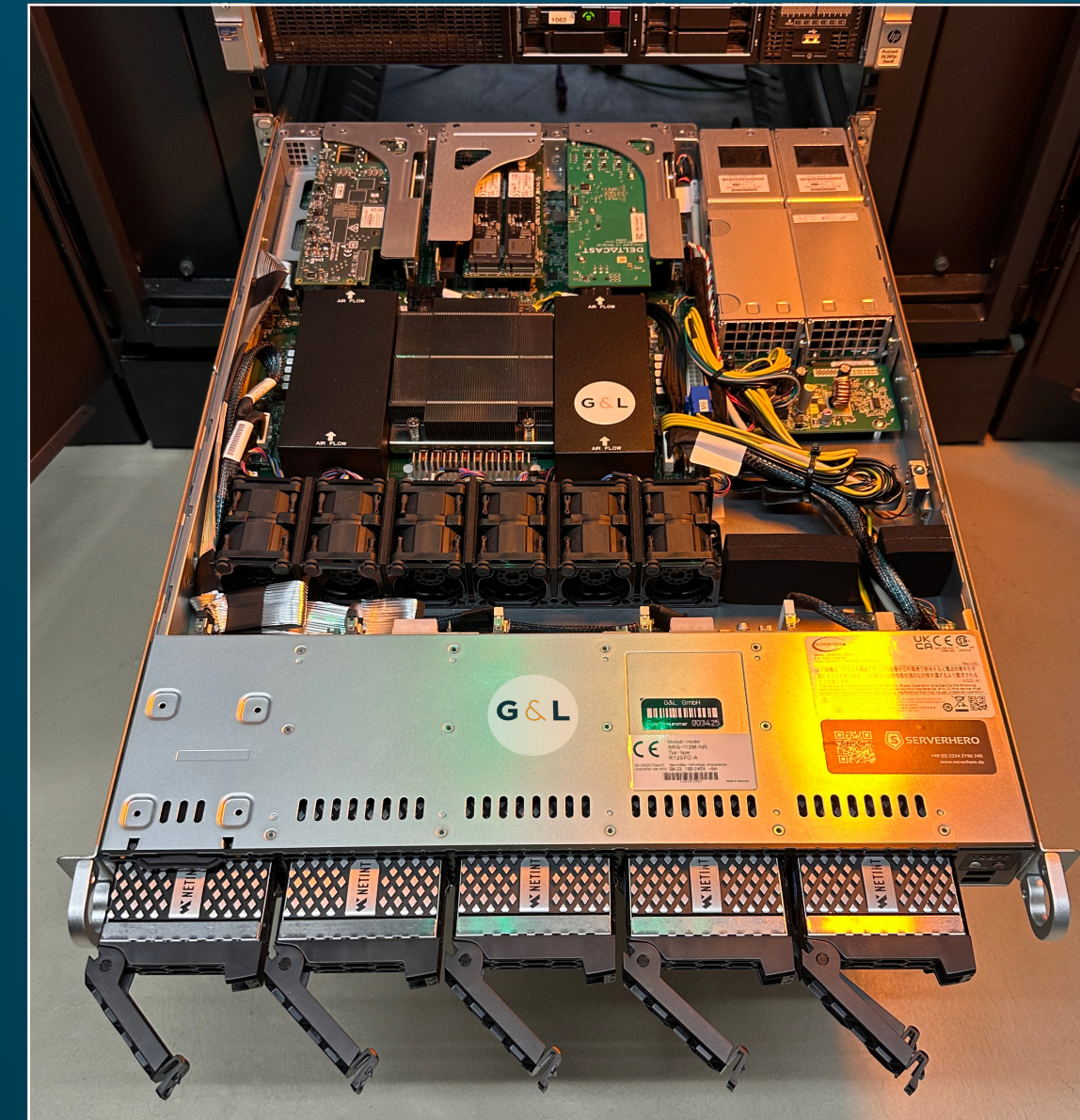
Broad Industry Application:

— Caters to broadcasters, IPTV & OTT networks, cable operators, ISPs, media regulators, authorities, and screening companies.

— Addresses the rising demand for efficient video processing in various industries.

Attractive for On-Premises Solutions:

— Appeals to organizations seeking on-premises hardware solutions due to flexibility, manageability, and compatibility.

— Meets the need for physical control, cost-effectiveness, and hands-on video processing.

— With de-coupled software licensing, flexible CapEx and OpEx business models are available.

G&L Expert 24-hour Support

— Problems can be solved quickly with our fast-responding, multilingual team, before they become an issue.

CPU Options	High-performance Processor, 128 cores, 3.0 GHz, 32 MB System Level Cache, 250W TDP
Memory	Minimum of 256 GB DDR4-3200 ECC registered RAM
Storage	Redundant M.2 960 GB NVMe boot & logging drives
Networking	2 x SFP28 10/25 GbE LAN port 1 RJ45 1 GBASE-T Dedicated IPMI LAN port Other network options available, including 100 GbE
Power Consumption	17W or ~500W down to 1,5 W/Stream
Power Supply	2 x 800 W Redundant (1+1) Platinum Level (94%) power supplies
Transcoders	1-10 ASIC-based hardware encoders
Encoding Capacity	Transcode up to 20 x 8Kp30, 80 4Kp30, or 320 x 1080p30
Dimensions	W: 17.2" (437mm), H: 1.7" (43mm), D: 23.5" (597mm)
Weight	39 lbs (17.69 kg) (includes 10 ASIC accelerators)
Video Encoding Standards/Formats	AVC/H.264 Baseline, Main, High, High 10, HEVC/H.265 Main, Main 10, YUV 420 8 bit/10 bit decoding
Video Decoding Standards/Formats	AVC/H.264 Baseline, Main, High, High 10, HEVC/H.265 Main, Main 10 , YUV 420 8 bit/10 bit decoding
Audio Standards/Formats	AAC-LC, HE-AAC