Datasheet

NEO 10

appear.net
Version 1.0

SERVER BASED COMPRESSION SOLUTION

The availability and capacity of the internet is increasing, as is the prevalence of powerful computers, integrated TVs, tablets and cell phones.

These factors combined allow viewers to receive video content from broadcasters anywhere, in virtually any form and as content becomes a commodity, viewers begin to take it for granted. For content and network infrastructure providers, this same convenience presents a greater challenge: delivering the best possible live video experience across multiple formats, regardless of the distribution networks and viewing devices used.

With increasingly powerful servers and the advent of new graphics acceleration technologies, servers are now efficient not only for offline compression, but also for live compression.

However, live compression and distribution remains a demanding workload, and running servers at full capacity in a 24/7/365 environment remains a difficult task. To meet this challenge, Appear designed the NEO Series.

Our NEO 10 appliance offers unparalleled video and audio quality, and competes with the highest quality products on the market. Delivered ready-to-run with simple front-panel setup and easy-to-use web interface, you'll be transcoding and streaming in no time.

«The NEO 10 provides customers with the ultimate flexibility to deliver high quality video across any devices»

HIGHLIGHTS

The NEO 10 has been designed with broadcasters, operators and telcos in mind, addressing the every-day challenges involved in delivering premium IPTV and OTT services.

INPUT

The NEO 10, with its IP interfaces, can receive MPEG TS IP RTP/UDP and SRT streams.
For other sources like satellite or terrestrial, the XC5000 is an ideal companion as an input processing stage before the NEO 10.

OUTPUT

The NEO 10 can deliver both MPEG TS IP RTP/UDP output (e.g. for IPTV delivery) and most common HTTP push formats (e.g. for delivery to downstream ABR packagers). It can also transmit streams in SRT format.

RESCALING

In order to convert traditional broadcast resolutions to multiple OTT resolutions, a flexible rescaling engine is integrated. This engine also capable of converting interlaced content to progressive format.

MONITORING & CONTROL

The NEO 10 offers user friendly configuration through the in-built WEB interface and comprehensive health monitoring and logging through Prometheus, Grafana and Elastic engines. The NEO 10 is fully controllable through a REST/JSON API.

FRONT PANEL

An LCD front panel and keypad is available for easy access to configuration of control port IP address, and readout of top level alarm status.

SPECIFICATIONS - The NEO 10

Input & Output	Input	: MPEG TS over IP/UDP/RTP (SPTS/MPTS) : SRT
	Output	: MPEG-TS over IP/UDP/RTP (SPTS) : SRT : HLS (push) to Akamai (Akamai Media Services Live certified) : CMAF Ingest Interface 1 (push) : DASH Ingest Interface 2 (push)
	Input Redundancy	: Reception of SMPTE 2022-7 TS sources for seamless switching.
	Output Redundancy	: Delivery of cloned SMPTE 2022-7 TS outputs
Video Processing	Decoding	: MPEG-2 : AVC (H.264) : HEVC (H.265)
	Encoding	: AVC (H.264) up to HP@L4.2
	ABR resolutions	: Most common ABR resolutions
	Broadcast Resolutions	: SD: 720x576i25, 720x480i29.97 : HD: 1920x1080i25/29.97, 1280x720p50/59.94
	Rate Control	: CBR
	Rescaling	: Flexible rescaling : Deinterlacing (576i/480i/1080i to progressive) : Intra domain frame rate conversion
	GOP Control	: Key Frame Aligned ABR profiles : Dynamic GOP (Broadcast profiles)
	Colorimetry	: Pass through (no conversion)
	Ad-insertion	: SCTE35 passthrough with frame accurate IDR frame insertion at splice points
	Aspect ratio	: Pass through : Display aspect ratio is maintained even when pixel aspect ratio is changed in rescaling process.
Audio Processing	Decoding	: MPEG 1 Layer 2 (Stereo) : AAC LC (Stereo and 5.1) : HE-AACv1 (Stereo and 5.1) : HE-AACv2 (Stereo) : Dolby Digital (Stereo and 5.1) : Dolby Digital Plus (Stereo, 5.1 and 7.1)
	Encoding	: MPEG 1 Layer 2 (Stereo) : AAC LC (Stereo and 5.1) : HE-AACv1 (Stereo and 5.1) : HE-AACv2 (Stereo) : Dolby Digital (Stereo and 5.1 : Dolby Digital Plus (Stereo, 5.1and 7.
	Processing	: Level adjustment [-20,20] dB : Lip Sync Adjustment [-200, 500] ms
Transport Stream Processing	PTS Handling	: Transparent PTS maintained through Transcoder
	ETE Latency	: 7 Seconds
	Subt Pass Thru	: Subtitle Components (DVB Subt and EBU Subt) can be passed through. PTS is maintained, and latency is compen--sated for.
	Audio Pass Thru	: Audio components can be passed thru (component selec tion). PTS is maintained, and latency is compensated for
	SCTE 35 Pass Thru	: SCTE35 components can be passed through. PTS main tained, and latency compensated for.
	PSI/SI output	: PAT, PMT and SDT
System Features	Management & Monitoring	: Integrated UI (Web server) : RESTful API for external NMS integration : Prometheus : Grafana : SNMP v2 Traps
	Log aggregation	: Elastic
	Unit redundancy	: 1+1 redundancy handled by third party NMS
The NEO 10	Density	: 4 HD Services into 4 ABR profiles : 12 SD services into 4 ABR profiles
	Dimensions	: 1RU : Height: 42.8mm (1.68") : Width*: 434mm (17.08") : Depth*: 714.62mm (28.13") : Weight: 17.6kg (38.9lbs.) : *Dimensions do not include front panel.
	Power Consumption	: 550W
	Power Supply	: Dual hot-swappable : AC 120/230 V (50/60 Hz)

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