TITAN Live is a high video quality, high density software compression solution, designed for Cable, DTH, OTT Live delivery of SD, HD and Ultra HD content. TITAN Live is a True virtualized software based solution, pure CPU solution, hardware agnostic, running on any OS: Linux, Windows and Virtual Machine.

TITAN Live is based on ATEME 5th Generation STREAM compression engine, delivers the highest video quality at minimum bitrates with accelerated parallel processing.

Addressing main screens and multiscreen applications, from small resolutions up to UHDP60, TITAN Live addresses current and future requirements.

TITAN Live is a complete distribution solution: encoder, transcoder, multiplexer, Statmux, packager and origin.

With powerful user interface, management system and extensive set of APIs, TITAN Live can easily integrate with any ecosystem, reducing time-to-market and OPEX.

Key features
- High Video Quality – High Density
- Pure CPU solution, Linux, Windows, VM
- Ultra High Density with E3/VCA support
- Mobile to UHD resolutions
- HEVC, H264, MPEG2
- Low-Latency mode
- Channel branding – logo insertion
- Optimized statistical multiplexing over IP
- Flexible Redundancy Scheme 1+1, N+1, N+M

Benefits
- Increase QAM-network density with High Video quality at minimum bitrate
- OPEX savings, with complete integrated distribution solution
- Reduce data-center CAPEX with software only, high density solution
Video

**Video Compression**
- MPEG2 MP@HL, MP@ML
- HEVC Main10@L5.1 (UHD)

**Resolutions**
- UHD 3840 x 2160
- HD 1080 x (1920, 1440, 1280, 960), 720 x (1280, 960, 640)
- SD NTSC 480 x (720, 704, 640, 544, 528, 480, 352), PAL 576 x (720, 704, 544, 528, 480, 352)

**Frame rates**
- Progressive 59.94, 50, 29.97, 25
- Interlaced 29.97, 25

**Video Processing**
- Resizer, High quality de-interlacer
- 3:2 pulldown/inverse telecine, Frame rate conversion
- Contrast and chroma enhancement
- Image cropping/resizing, Logo insertion

**Video Quality**
- Psychovisual Filter Enhancements (Object tracking/ Motion masking/ HVS Quantization adaptation)
- Scene/Flash/Fade/Cross-fade/Stationary detection
- Fully adaptive GOP/reference pictures
- Natural motion tracking (Weighted hierarchical motion estimation)
- Triple-pass rate-control
- Statmux: any codec, any resolution
- Still picture mode

**Encoding bit rate**
- Up to 50Mbps

**Rate control**
- CBR, Capped VBR, Statmuxed VBR

**Aspect Ratio**
- AFD, WSS

**Subtitling/Teletext**
- WST, SCTE27, Closed Caption, DVB TELETEXT Vchip, OP47, WebVTT Teletext/OP47 to WebVTT/DVB-Subtitle conversion

**Metadata/VBI**
- VPS, VPI, VITC, ATC, SMPTE2031

**Digital Program Insertion**
- SCTE 35 passthrough
- SCTE35 insertion via SCTE104 triggers
- ESAM (SCC API)

**Audio**

**Compression formats**
- MPEG-1 Layer II
- AAC-LC, AAC-HEv1/v2
- Dolby® Digital, Dolby® Digital Plus
- Sampling frequency: 32, 44.1, 48 KHz
- Dolby® Digital, Dolby® Digital Plus, Dolby-E Passthru

**Audio preprocessing/editing**
- Any to Any downmix/upmix,
- Loudness control (ATSC A/85, EBU R128)

Packager

**UDP/RTP**
- MPEG-2 TS (SPTS & MPTS),
- Apple® HTTP Live Streaming,
- Microsoft® Smooth Streaming (fragmented MP4 PIFF format),
- RTMP
- DASH ISO Streaming format
- HDS
- Multibitrate TS (ATS with EBP)

**DRM**
- Scrambling with Fixed/Synchronized Rotative Keys Encryption
- DASH CENC, HLS AES 128 CBC, MSS: AES 128 CTR (Playready)

**CDN integration**
- Akamai certified
- Compatible with leading CDNs

**Multiplexer**
- Grooming and remultiplexing
- Stream routing any input – any output
- PID filtering / remapping

**Input Interfaces**

**TS/IP Input**
- UDP/RTP (IGMPv3 multicast, unicast)
- MPEG-2 TS (SPTS/MPTS)
- Video decoding: MPEG-2/MPEG-4 AVC
- Audio decoding: MPEG-1 Layer II, AAC-LC, AAC-HE v1/v2, Dolby Digital, Dolby Digital+, Dolby-E

**SDI Input**
- 8x 3G-SDI Mini BNC (SMPTE-424M and SMPTE 425, Level A or Level B)
- Audio embedded in SDI

**RTMP Input**

**Output Interfaces**
- 4 GbE ports, additional 1 GbE/10GbE ports can be added through extension cards

**Configuration and Management**
- HTML Web Graphic User Interface
- SNMP (MIB v2c) with remote SNMP supervisor
- Northbound REST API
- N+1 Redundancy management via ATEME Management System

**Virtualization**
- Compatible with Virtual Machines/Dockers

**Physical**
- Guaranteed performance on SMCI, DELL, HP 1RU/blade servers
- Run on any 1-RU COTS server
- Increased density through Intel VCA card