

TITAN Edge Enc

LOW LATENCY 4K PROFESSIONAL CONTRIBUTION ENCODER HEVC, MPEG4, MPEG2

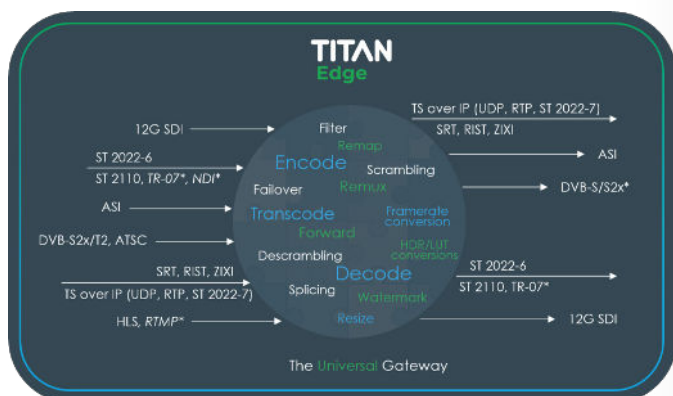
TITAN Edge Encoder is a multi-channels modular encoder, baseband as SDI over IP input, to any outputs, providing pristine video quality at low-latency profile.

TITAN Edge Encoder is the high-density contribution solution for 4K and HD in HEVC 4:2:2 12 bits as in H264 4:2:2 10 bits.

Based on TITAN's software modular suite and leveraging full COTS approach, TITAN Edge is a versatile solution for operations running on-premises, off-premises or a combination of the two: 4K, multi HD encode, Low Latency, IP/ASI/Modulator output.

Implementing state-of-the-art SMPTE 2022/2110 standards, TITAN Edge Encoder is the first professional cloud native low latency solution enabling full IP video operations in the cloud.

In addition, TITAN Edge Encoder features interfaces to standard PCIe boards to support any type of use-case and build the most adapted and efficient solution for on-premises contribution.



Key Features

- SD/HD/UHD HEVC, H264, MPEG2
- Scalability to UHD 12-bit 4:2:2 codec solution
- BISS-CA encryption system support
- Low latency mode
- Confidence Audio / Video input monitoring
- Encoded, transcoded & remuxed output
- SMPTE 2110 & JPEG-XS Input
- On-premises/off-premises solution
- Contribution over Internet support

Value-Added Benefits



Lower OPEX

High density with high quality of service



Modularity

Full flexibility and scalability



Software based

Future-proof and high ROI



Industry Grade

Smooth operations based on proven interoperabilities

Video

Video Compression

HEVC (Main 4:2:0/4:2:2 10/12-bits) 120 Mbps max
H.264 (Main/High 4:2:0/4:2:2 8/10-bit) 120 Mbps max
MPEG-2 (4:2:0/4:2:2 8-bit), 80 Mbps max
MPEG-4 AVC - I mode

Video Processing

CABAC, CAVLC, MBAFF, PAFF
Resize & Noise Reduction filters
Psychovisual Filter
Enhancements Interoperable Ultra Low latency mode
Input format detection**
Seamless Channel Insertion (SCI)
Logo insertion - Emulated video output
Multi-Protocol Encapsulation**

Ancillary data

AFD, WSS, VPS, VPI, VITC, ATC, CC, DVB Teletext,
SMPTE2031, OP47,
SCTE35 insertion via SCTE104 triggers

Audio

Audio Compression

MPEG1-L2, MPEG-2/MPEG-4 AAC-LC, AAC-HEv1/HEv2
encode
Dolby AC3/AC3+/AC4 encode, Dolby-E decode
Dolby AC3/AC3+/AC4, Dolby E, AES-302M pass-through

I/O

Inputs

Up to 12G-SDI input
SMPTE 2022-6 and SMPTE 2110 input
JPEG-XS input in SMPTE 2110-22 and TR-07
SDI & SMPTE 2022-6 failover & SMPTE 2022-7

Outputs

MPEG2-TS over UDP/RTP (Unicast/Multicast)
FEC ProMPEG CoP3r2
Mirroring for SMPTE 2022-7
ASI output
Zixi feeder - push and pull modes
SRT feeder - caller, listener & rendez-vous modes
RIST feeder (simple and main profile)

Scrambling

BISS 1/E (Tech 3292-rev.2 and EBU R139)
BISS-CA (Tech 3292-1)

System

Secured Web UI for system/channels management
Mosaic and dedicated monitoring Web UI
In-band and Out-Of-Band Management
Integrated Firewall per interface
NTP and PTP support, DNS resolution
HTTPS REST API (documented through Open API v3.0)
JSON Configuration export/import
SNMP (MIB v2c) to remote supervisor (alarms & traps)
64 Presets configurations memory
Remote Syslog, VPN support, IGMPv3 support
User Management/scopes and LDAP support
INTEL & AMD CPU supports
BIOS & UEFI boot system support

Modulation**

L-Band RF SMA 50 Ohms output (950-2150MHz)
IF Band RF SMA 50 Ohms output (50-180 MHz)
Symbol Rate: 0.05 to 80MBaud / Step 1Baud
Main output: -35/+3 dBm $\pm$ 1 dB
Main output step size: 0.1dB, stability: $\pm$ 0.1dB/10°C
Frequency step size 1 Hz, Accuracy 0.4 Hz
Spurious In-Band < -65dBc/4kHz
Shoulder rejection < -50dB
Monitoring output Main - 20dB
Ref External Input / Output 10 MHz
DVB-S (EN 300421)
DVB-S (DSNG EN 301210-1.1.1)
DVB-S2 (EN 302307-1) / DVB-S2x (EN 302307-2)

Front Panel

For Server DELL XR2, R640/R6515, T-RUG
Confidence Audio/video monitoring with LCD Menus
6-keys keyboard for input & navigation
TS capture download from USB slot *
First ISO install from USB
Serviceable Air Filters

Rear Panel

IP interface

2 x 10GE - Refer to the server used
2 x QSFP28 with Mellanox Connect-X5 board (25Gbps)

ASI interface

Up to 8 x DVB-ASI reversible (input or output) ***

SDI interface

Up to 8 x 3G-SDI (SMPTE-424M)
Up to 2 x 12G-SDI (SMPTE-2082) ***

RF interface

Main RF Output 1 L-Band / IF Monitoring RF Output
External 10Mhz Reference Input / Output

* Contact your sales representative for the detailed list of features

** Contact factory for availability

*** Refer to the PCIe board used