Advent DVE6100

ADVENT

4K UHD HEVC Multi-Format Exciter

The Advent DVE6100 is a compact 4K UHD multi-format, multi-channel exciter, ideally suited to flyaway and vehicle mounted applications, where size and weight is at a premium.

The Advent DVE6100 offers ultimate satellite bandwidth efficiency by utilising the latest HEVC video compression and DVB-S2X satellite modulation technology - allowing a 50% reduction in leased satellite bandwidth compared to MPEG-4, DVB-S2 technology—dramatically reducing satellite OPEX.

As a multi-format encoder the Advent DVE6100 has the ability to encode video of all resolutions from SD to highest quality 4K UHD, including High Dynamic Range. The unit's multi-channel capability means that up to 4 HD video services can be encoded by one unit—providing the user with a highly channel dense, flexible solution.

Key Features

- Flexible SFP based video inputs
- 4K UHD, HD, SD multi-format encoding
- HEVC, MPEG-4, MPEG-2 multi-standard compression
- High quality 4:2:0, 4:2:2, 8-bit/10-bit profiles
- 1x 4K or up to 4x HD/SD services encoded
- Very low latency encoding modes
- High Dynamic Range support
- Flexible audio encode with MPEG L1/2 and AAC encoding
- Linear PCM and Dolby E audio pass-through
- 8x stereo pairs of audio encoding
- Secure BISS 1 & BISS E encryption
- DVB-S2X, S2, S satellite modulation
- L-band RF output
- ASI input and output

Typical Applications

- High quality Events coverage
- Sports coverage
- Newsgathering
- Secure SatCom
- MilGov applications

Inputs
- 2 SFP+ module slots supporting electrical and optical interfaces carrying:
  - 4 x SDI SMPTE-259M
  - 4 x HD-SDI SMPTE-292M
  - 4 x 3G-SDI SMPTE-424M
  - 2 x 6G-SDI SMPTE ST-2081
  - 1 x 12G-SDI SMPTE ST-2082

Outputs
- L-band main output
- L-band monitor output
- 10MHz reference
- ASI TS output

Video Profiles
- H.265 HEVC Main, Main 10, Main 4:2:2 10
- H.265 HEVC 8/10 bit to 4K p60
- H.264 AVC Main, High, Baseline up to Level 5.2
- H.264 AVC High 10/4:2:2
- H.264 AVC 4:2:0/4:2:2 8/10 bit to HD p60
- MPEG-2 SD/HD 4:2:0

- 4K Native and UHD (1 Service)
- HD (Up to 4 Services)[5]
- 1.0-90 Mbps (per channel with maximum combined rate of 90 Mbps)
- SD (Up to 4 Services)
- 4.2.0 Main 0.5-90 Mbps
- 4.2.2 Main 2.0-90 Mbps

Video Encoder
- HEVC 4K UHD, HD, SD encode
- MPEG-4 HD, SD encode
- MPEG-2 HD, SD encode

Video Formats
- 480i@29.97
- 576i@25
- 720p@50/59.94/60
- 1080i@50/59.94/60
- 1080p@23.98/24/25/29.97/ 30/50/59.94/60
- 2160p@23.98/24/25/29.97/ 30/50/59.94/60

Service Encodes
- 1x 4K UHD service
- Up to 4x HD/SD services

Encryption
- BISS Mode 1 & E

Audio Encoder
- MPEG-1 Layer I encode
- MPEG-1 Layer II encode
- AAC-LC encode
- HE-AAC encode
- Linear PCM pass-through
- Dolby E Pass-through

Audio Channels
- Up to 8x stereo pairs

Ancillary Data
- Closed Captions
- Inuisidot

Satellite Modulation
- DVB-S QPSK
- DVB-S2 QPSK, 8PSK, 16APSK
- DVB-S2X QPSK, 8PSK, 16APSK, 32APSK, 64APSK, 128APSK, 256APSK

Modulation Parameters
- All FECs as applicable to modulation modes
- 5%, 10%, 15%, 20%, 25%, 30%
- Short Frames & Long Frames

Modulated Output
- 950 - 2150 MHz in 1khz Steps
- Output power –5 to +5dBm
- Monitor level –20dB relative to main

Unit Control
- Front panel control
- Web GUI
- SNMP

Control Interface
- Ethernet RJ45

HPA Control Interface
- Ethernet
- Serial

Software Upgrade
- USB Software upgrade

Power
- 100 to 240VAC
- DC PSU option

Dimensions
- 1RU Half rack width, 380mm deep
- Weight 2kg

Environmental
- Temperature:
  - 0° to 50°C
- Humidity:
  - 95% non-condensing

Note: SDI inputs are on HD-BNC mini connectors. Please order standard BNC conversion cables part number 9015307, if required.

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