

## DVE5100

### SD & HD Exciter with IP Streaming

Vislink's established lightweight, compact, 1U half rack electronics packages are ideally suited for flyaway or vehicle mounted solutions where weight and space are at a premium. The 5000 series of electronics can be packaged in different lightweight, ruggedized canvas flight cases, depending on units selected and system configuration.

- SD and HD Digital Video Exciter
- Multiplexer Router
- BUCS
- Antenna and Drive Control units
- System IRD / Redundancy controllers
- Protection Switches
- All units are field upgradeable
- All units have integral web browser facility (where applicable) for RC&M applications
- A comprehensive range of flight case solutions for half-rack and 19" rack units to suit system configuration, i.e. 3U, 4U, 5U
- All units can also be fixed together and mounted in a standard 19" flight case or rack within a vehicle
- DVB-S QPSK, 8PSK, 16QAM
- DVB-S2, QPSK, 8PSK, 16 & 32APSK
- 70MHz output option
- DVB-T/LMS-T COFDM option for IF output

### Key Features

- SD & HD MPEG encoder with integrated L Band modulator
- Integrated HPA controller supporting a wide range of TWTA/SSPA's
- HPA control via L Band cable or direct connection
- Compact half-width 19" x 1U rack mountable unit
- Quarter of the size and one sixth of the weight of competitor's equivalent products
- Designed for contribution flyaway and DSN vehicle applications where space and weight are critical



Digital Video Encoder with Integral Modulator

- 8-audio channels (two-pairs of analogue/AES)
- Dolby E auto aligner and pass through
- BISS1/E conditional access
- Low delay MPEG-2/H.264 Encoding (50 ms)
- ASI output only (Encoder) version available
- 19" 1U HD SHF solution available with AUC5000 series
- Remote control via web browser
- SNMP control
- IP Streaming output allowing encapsulation of up to two ASI signals
- IP input with de-capsulation of one of four ASI signals, for multiplexing and/or modulation
- Field upgrade by USB memory stick
- SD & HD MPEG-2, 4:2:0/4:2:2 encoding
- L Band monitor
- Integral L Band combiner for external L Band carrier addition
- Carrier Identification (CID) Confirmed operation with SES Zodiac Monitoring system

### Typical Applications

- Event Coverage
- Newsgathering
- Sports coverage
- Maritime Reconnaissance
- Secure SATCOM



# datasheet

at the heart of the action

## RF Parameters

### Output Frequency Range:

- L-Band 950 to 1750 MHz step size 1KHz
- 70MHz option

### Frequency Stability

- +/- 2 x 10 e - 8
- 10 MHz reference option

### Output Power Level

- L-Band -5/+5 dBm

### Gain Adjustments

- 40 dB min

### Gain Variation

- +/- 2 dB full band +/- 0.25 dB 24hr @ constant temperature

### Spurious

- -70 dBc/4 KHz

### L-Band Monitor

- Monitor Level -20 dBc

### L-Band Combiner

- Combining ratio 5 dB +/-2

## Video Parameters

### Inputs

- HD-SDI/SDI: SMPTE 292M SMPTE 259M/ TUR BT.656 with embedded audio
- SD version, composite PAL/ NTSC
- Video Encoding (MPEG-2)

### SD

- 420MP@ML 1.5 - 15Mbits
- 422MP@ML 2 - 50Mbits

### HD

- 420MP@HL 8 - 80Mbits
- 422MP@HL 8 - 80Mbits

### HD Resolutions

- 1080psf @ 30, 29, 25, 24, 23
- 1080p @ 30, 29, 25, 23
- 1080i @ 60, 59, 50
- 720p @ 60, 50

### SD Resolutions

- 480 x 720 NTSC
- 480 x 704 NTSC
- 576 x 720 PAL
- 576 x 704 PAL

## Power

### Frequency:

- 47 to 63 Hz @ <60W

### Operating voltage:

- 100 to 240 VAC +/- 10%

## Modulation

- QPSK 1 - 36Ms/s
- 8PSK, 16APSK, 32APSK options, 145Ms/s

## FEC

- DVB-S QPSK:
  - FEC rates: 1/2, 2/3, 3/4, 5/6, 7/8
- DVB-S 8PSK:
  - FEC rates: 2/3
- DVB-S 16QAM:
  - FEC rates: 3/4
- DVB-S2 QPSK:
  - FEC rates 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
- DVB-S2 8PSK:
  - FEC rates: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
- DVB-S2 16APSK/32APSK:
  - FEC rates: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10

## Delay (encoding)

- Typically, less than 50ms

## Scrambling

- BISS 1 & E Encryption

## Data Channel

- RS232 @ 9600/19200/38400 baud

## Audio Encoding

- MPEG-1, Layer 2 128kbs - 384kbs/channel (Audio A & B & C)
- SMPTE 302 2.4MB/s linear PCM/ Dolby pass through (Audios A, B, C & D)
- HPA Control Option
- Integrated HPA controller for RS485 serial controlled TWTA/ SSPA - Xicom, CPI, e2V, Paradise supported, others to order
- Control via L-Band using AUC5000 series converter or via direct cable connection

## Physical

### Size

- 210mm wide by 350mm deep (8.27" wide by 13.78" deep)
- 1U half-rack width

## IP Video Traffic Interface

### Type

- 10/100/1000 BaseT Ethernet

### Protocol

- IEEE 802.3 Ethernet
- Encapsulation for ASI - RTP (RFC 2250), ARP, IPv4, IGMPv2/3, TCP/UDP

### FEC

- Pro-MPEG Forum Code of Practice #3 release 2 (CoP3)/ SMPTE 2022-2007 (Columns and Rows)
- 1-7 TS packets per IP packet (configurable) with L&D following the range:
  - L\*D < 100
  - 1 < L < 20
  - 4 < D < 20

## Audio Parameters

### Inputs

- 2 analogue stereo pairs/4 mono
- 600Ω impedance plus 6 channels embedded in SDI/ Linear
- PCM, Dolby E pass through with Dolby E auto-align

## Performance

### THD

- <0.1% +18 dBm max input level

### S/N

- >66 dB RMS

### Frequency response

- =20 Hz-20 KHz +/- 0.5dB
- Crosstalk better than 60 dB

### Remote Control

- RS485, 2400 - 9600 baud
- Ethernet/Web browsers/SNMP

### Web Browser

- Supporting Internet Explorer 7 & 8, Firefox, Safari and Opera

## User Configurable Network & Multicast Parameters

### Source IP address:

- IP Subnet mask, Gateway

### Destination IP address:

- Unicast & Multicast

### UDP Ports:

- User definable

### Local MAC address:

- User definable

## Connectors

### CVBS

- 75Ω BNC female

### (HD) SDI

- 75Ω BNC female

### ASI IN

- 75Ω BNC female

### ASI/70MHz out

- 75Ω BNC female

### RF Output & Monitor

- 50Ω N-female

### Combiner-In

- 50Ω TNC female

### Audio Input

- 15W D type male breakout to 4x XLR provided

### Data/Remote/Status/HPA Control

- 15W D type female
- 2x USB for field upgrades

### Ethernet/Web Interface

- RJ45 10/100/1000 BaseT

## Environmental

### Temperature

- Operational:
  - 0°C to +50°C (32°F to 122°F)
- Storage:
  - -20°C to +70°C (-4°F to 158°F)