The AVP 3000 Voyager is the latest generation of the market leading Voyager product for live news, sports and entertainment, capable of multi-codec, multi-format and multi-channel operation. It is the most flexible and scalable news gathering system on the market, reflecting Ericsson’s technology leadership and unique heritage in this segment.

The AVP 3000 Voyager excels in providing maximum flexibility, performance and interoperability while delivering best return on investment to operators and service providers through the widest range of software upgrade paths and expansion options. To make it simpler to select the most popular options, a set of five AVP 3000 configuration packs are now available at very attractive fixed prices.

The configuration packs provide a hierarchy of functionality starting with the SD DSNG, moving to HD DSNG, then Events, then Premium Events, and finally World Events pack.

These packs have now been improved, the enhancements include the addition of an ASI I/O module to all packs, dual AC PSU for the top three packs and DVB-S2X support in the World Events pack.

It is possible to order an AVP 3000 with the specific combination of software and hardware options that you require. Also any hardware or software upgrades can be added once the unit has been delivered, refer to the AVP 3000 data sheet for details.

**PRODUCT OVERVIEW**

**The most Flexible Integrated DSNG**  
Based on two decades of encoder design experience, and a series of SNG firsts the AVP 3000 Voyager is a future proof modular platform capable of multi-codec, multi-format and multi-channel operation. It now supports DVB-CID and DVB-S2X.

**Highest Compression Performance**  
The AVP 3000 uses Ericsson’s in house video encoding algorithms and deliver best in class video compression performance from very low bit rate to high bit-rate operation.

**Multi-codec**  
The AVP 3000 can provide MPEG-2, MPEG-4 AVC or even JPEG 2000* encoding, 4:2:0 8 bit or 4:2:2 10 bit, SD or HD, even UHDTV is possible (using two AVP units).

**Multi-output**  
The AVP 3000 provides an L-Band or IF satellite output, as well as two IP output ports. It can upgraded to provide ASI output or G.703 output.

**Easy to Operate**  
The AVP 3000 provides a web user interface that has been designed in consultation with our customers to provide a clear, simple and intuitive for the SNG operator. It can also be controlled via a fully functional front panel, which includes a high resolution display for video confidence monitoring.

**Reassurance of World Wide Support**  
Ericsson can provide 24/7 global support.

* JPEG 2000 encoding requires the addition of a CE-al2X encoding module.
## SD DSNG
### AVP 3000 Voyager Configuration Pack

**AVP3000/CP/SD/DSNG/A FAZ 101 0196/144**

Entry level SNG Encoder capable of:
- SD MPEG-2 Encoding
- DVB-S/SNG/S2 Satellite Modulation
- 2 Stereo pairs of MPEG-1 Layer II audio encode.
- ASI Output (2 Outputs)

### Satellite Modulator Output
- Integrated DVB-S/S2 Modulator with IF and L-Band outputs.
- DVB-S
- DVB-DSNG 8 PSK and 16QAM (VOY/SWO/DSNG)
- DVB-S2 QPSK and 8PSK (VOY/SWO/DVBS2)

### ASI I/O Module (CE/HWO/ASI/2IN2OUT)
- 3G/HD/SD-SDI video input
- Composite video input
- Embedded (SDI) and AES digital audio input
- Analogue audio input
- SD MPEG-2 video encoding
- 2 stereo pairs of MPEG-1 Layer II audio encoding
- VANC data extraction an support for generic VANC (SMPTE 2038)

## HD DSNG
### AVP 3000 Voyager Configuration Pack

**AVP3000/CP/HD/DSNG/A FAZ 101 0196/145**

As SD DSNG but adds:
- HD MPEG-2 Encoding
- SD and HD MPEG-4 AVC Encoding
- Additional Stereo pair of MPEG-1 Layer II audio encode.

### Encoder Module (CE/HWO/CE-xa)
- 3G/HD/SD-SDI video input
- Composite video input
- Embedded (SDI) and AES digital audio input
- Analogue audio input
- SD MPEG-2 video encoding
- 2 stereo pairs of MPEG-1 Layer II audio encoding
- VANC data extraction an support for generic VANC (SMPTE 2038)

## EVENTS
### AVP 3000 Voyager Configuration Pack

**AVP3000/CP/EVENTS/A FAZ 101 0196/146**

As HD DSNG but adds:
- Dual AC PSU chassis
- 4:2:2 10 bit video encoding.
- BISS encryption.

### ASI I/O Module (CE/HWO/ASI/2IN2OUT)
- HD video encoding. (CE/SWO/CE-x/HDI)
- MPEG-4 AVC video encoding. (CE/SWO/CE-x/H264)
- additional stereo pair of MPEG-1 Layer II audio encoding (giving 3 in total) (CE/SWO/M1L2)

## PREMIUM EVENTS
### AVP 3000 Voyager Configuration Pack

**AVP3000/CP/PREM/EV/A FAZ 101 0196/147**

As Events but adds:
- DVB-S2 16 APSK and 32 APSK
- Ericsson’s Phase Aligned Audio.
- Additional Stereo pair of MPEG-1 Layer II audio encode.

### Encoder Module (CE/SWO/H422)
- 4:2:2 8 or 10 bit video encoding. (CE/SWO/CE-x/H422)
- BISS encryption. (CE/SWO/BISS)

## WORLD EVENTS
### AVP 3000 Voyager Configuration Pack

**AVP3000/CP/WORLD/EV/A FAZ 101 0196/148**

As Premium Events but adds:
- External sync. input
- DVB-S2X support
- 4 more stereo pairs of MPEG-1 Layer II audio encode.
- Additional Phase Aligned Audio license.

### External sync input module (CE/HWO/EXTSYNC)
- DVB-S2X support (AVP/SWO/DVBS2X)
- 4 additional stereo pair of MPEG-1 Layer II audio encoding (giving 8 in total) (5 x CE/SWO/M1L2)
- Additional Ericsson’s Phase Aligned Audio (5.1). (CE/SWO/PAA)
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*Optional breakout cables can be ordered separately:
- D-Type to balanced XLR breakout cable (AVP/UPH/CAB/BAL)
- D-Type to unbalanced BNC breakout cable (AVP/UPH/CAB/UNBAL)
## SPECIFICATIONS

### Inputs

**Video**
- 3G/HD/SD-SDI serial digital video with EDH error detection and health monitoring
- Analogue CVBS Input NTSC and PAL (PAL-M not supported)
- Input Level 800 mV p-p ±10 percent
- Return loss >15 dB, 10 MHz to 270 MHz

**Audio**
- Up to eight stereo pairs embedded on HD-SDI
- Up to four stereo pairs via AES EBU (Connector via D-Type to XLR)
- Supports both balanced (AES3) and unbalanced (AES6id) digital audio inputs
- 48 kHz sampling rate
- 2 x Stereo Analogue Audio inputs

### Video Encoder

- MPEG-4 AVC Main Profile @ Level 4.0 (1 Mbps to 20 Mbps) (CE/SWO/CE-x/H264)
- MPEG-4 AVC High Profile @ Level 4.0 (1 Mbps to 25 Mbps) (CE/SWO/CE-x/H264) + (CE/SWO/CE-x/HJD)
- MPEG-4 AVC 4:2:2 Profile @ Level 4.1 (1 Mbps to 80 Mbps) (CE/SWO/CE-x/H264) + (CE/SWO/CE-x/HJD)+(CE/SWO/CE-x/422)
- MPEG-2 Video Main Profile @ Main Level (Base Card)
- MPEG-2 Video Main Profile @ High Level (CE/SWO/CE-x/HJD)
- 1 Mbps to 80 Mbps bit-rate range (depends on profile/level supported)
- CABAC entropy encoding up to 62.5 Mbps
- Manual CABAC switching-point override
- Triple pass “Pixel Perfect” fully exhaustive motion estimation
- Multiple low latency modes supporting delays down to <100ms* end-to-end delay (when used in conjunction with a RoIP200 receiver.)
- *Configuration dependant.

### Audio Encoder

- Up to 8x stereo audio channel processing
- MPEG-1 Layer II encoding standard
- Encoding rates from 32 kbps to 384 kbps - up to 8 pairs
- Dolby® Digital (AC-3)
- Pass-through of pre-encoded Dolby Digital, up to 8 streams
- Dolby® E pass-through
- Up to four streams
- Linear PCM pass-through
- Up to four independent stereo pairs
- Phased Aligned Audio (PAAn)
- Encoding of 6 or 8 audio channels with time synchronous samples.

### Ancillary Data

- SMPTE 334-1 Closed Captions
- SMPTE 2016-3 AFD and Bar Data
- SMPTE 12-2 Time code extraction and carriage (ETSI TS101 154)
- SMPTE 2038 Generic VANC data extraction, up to 2 Mbps

### Transport Stream Interfaces

- **IP Output**
  - 2x Electrical Ethernet (100/1000BaseT)
  - Physical port redundancy with active-active and active-standby operation
  - Multicast streaming
  - ASI 2 x ASI Input 2 x ASI Output

### Satellite Modulator

- Base unit supports both 70 MHz IF output and L-band output.
- DVB-CID support.
- Signal conditioning: EN 300 210 (DVB-S2) and option for EN 301 210 (DVB-S2).
- Modulation: QPSK and option for 8PSK, 16QAM, DVB-S2 QPSK, 8PSK, 16APSK, 32APSK (Roll Off 0.05, 0.10, 0.15, 0.20, 0.25, 0.35)
- Symbol Rate: 1 Msym/s to 45 Msym/s (variable in 1 Sym/s increments ). Optional extension to 66 Msym/s
- FEC rates:
  - 1/2, 2/3, 3/4, 5/6 and 7/8 (DVB-S QPSK)
  - 2/3, 5/6 and 8/9 (DVB-DSNG 8PSK)
  - 3/4 and 7/8 (DVB-DSNG 16QAM)
  - 1/4, 1/3, 2/5, 1/2, 3/5, 3/4, 4/5, 5/6, 8/9 and 9/10 (DVB-S2 QPSK)
  - 3/5, 3/4, 5/6, 8/9 and 9/10 (DVB-S2 8PSK)
  - 2/3, 3/4, 4/5, 5/6, 8/9 and 9/10 (DVB-S2 16APSK)
  - 3/4, 4/5, 5/6, 8/9 and 9/10 (DVB-S2 32APSK)
  - 13/14, 9/20, 11/20 (DVB-S2 32APSK)
  - 23/36, 3/5, 13/18 (DVB-S2 8PSK)
  - 30/7 (DVB-S2 16APSK)
  - 5/9, 8/15, 1/2, 3/5, 2/3 (DVB-S2 16APSK-L)
  - 2/3 (DVB-S2 32 APSK-L)
  - 11/15 (DVB-S2X 64 APSK)
  - 32/45, 7/9, 4/5, 5/6 (DVB-S2X 64 APSK-L)
- IF Output Option
  - IF frequency: 50 MHz to 180 MHz (1 kHz steps)
  - Output power: -30 dBm to +5 dBm (0.1 dB steps)
  - Monitor output: -30 dB relative to main IF output
- L-band Output Option
  - Frequency: 950 MHz to 2150 MHz (1 kHz steps)
  - Output power: -40 dBm to +5 dBm (0.1 dB steps)
  - Monitor output: -30 dB relative to main output
  - Switchable up-converter power: +15 V and 24 VDC, 500 mA max.
  - Switchable 10 MHz reference

### Management

- 2x Electrical Ethereal (100/1000BaseT)
- SNMP v1/v2/v3, for alarm traps
- User management via Web browser
- Fully functional front panel control

### Physical and Power

- Dimensions (H x W x D):
  - 59.69 x 44.20 x 4.45 cm (23.50 x 17.40 x 1.75 inches)
- Weight:
  - 8.0 kg (17.6 lbs) unpopulated
- Input Voltage:
  - 100 VAC to 240 VAC 50/60 Hz
- Input Power:
  - 50 Watt (chassis only)
  - Up to 350 Watt (depending on option modules fitted)

### Environmental Conditions

- **Operating Temperature**
  - -10°C to +50°C (14°F to 122°F)
- **Storage Temperature**
  - -40°C to +85°C (-40°F to 185°F)
- **Relative Operating Humidity**
  - 10% to 90% (Non-condensing)

### Compliance

- CE marked in accordance with EU Low Voltage and EMC Directives
- EMC Compliance
  - EN55022, EN55024, AS/NZS3548, EN61000-3-2,EN61000-3-3 and FCC CFR47 Part 15B Class A
- Safety Compliance
  - EN60950-1, IE60950-1, UL60950-1 and NRTL listed

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