

AVP 3000 VOYAGER CONFIGURATION PACKS



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 be 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-aJ2K encoding module.

<p>SD DSNG AVP 3000 Voyager Configuration Pack (AVP3000/CP/SD/DSNG/A FAZ 101 0196/144) Entry level SNG Encoder capable of:</p> <ul style="list-style-type: none"> • SD MPEG-2 Encoding • DVB-S/SNG/S2 Satellite Modulation • 2 Stereo pairs of MPEG-1 Layer II audio encode. • ASI Output (2 Outputs) 	<p>Six slot single PSU chassis (AVP 3000/BAS/1AC)</p> <ul style="list-style-type: none"> • Integrated redundant IP outputs. • Fully functional front panel control including video confidence monitor. • Voyager web user interface. <p>Satellite Modulator Output</p> <ul style="list-style-type: none"> • 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) <p>ASI I/O Module (CE/HWO/ASI/2IN2OUT)</p> <p>Encoder Module (CE/HWO/CE-xa)</p> <ul style="list-style-type: none"> • 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 and support for generic VANC (SMPTE 2038)
<p>HD DSNG AVP 3000 Voyager Configuration Pack (AVP3000/CP/HD/DSNG/A FAZ 101 0196/145) As SD DSNG but adds:</p> <ul style="list-style-type: none"> • HD MPEG-2 Encoding • SD and HD MPEG-4 AVC Encoding • Additional Stereo pair of MPEG-1 Layer II audio encode. 	<p>As above plus:</p> <ul style="list-style-type: none"> • HD video encoding. (CE/SWO/CE-x/HD) • 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)
<p>EVENTS AVP 3000 Voyager Configuration Pack (AVP3000/CP/EVENTS/A FAZ 101 0196/146) As HD DSNG but adds:</p> <ul style="list-style-type: none"> • Dual AC PSU chassis • 4:2:2 10 bit video encoding. • BISS encryption. 	<p>As above plus:</p> <p>Six slot Dual PSU chassis (AVP 3000/BAS/2ACFL)</p> <ul style="list-style-type: none"> • 4:2:2 8 or 10 bit video encoding. (CE/SWO/CE-x/H422) • BISS encryption. (CE/SWO/BISS)
<p>PREMIUM EVENTS AVP 3000 Voyager Configuration Pack (AVP3000/CP/PREM/EV/A FAZ 101 0196/147) As Events but adds:</p> <ul style="list-style-type: none"> • DVB-S2 16 APSK and 32 APSK • Ericsson's Phase Aligned Audio. • Additional Stereo pair of MPEG-1 Layer II audio encode. 	<p>As above plus:</p> <ul style="list-style-type: none"> • DVB-S2 16 APSK and 32 APSK modulation. (VOY/SWO/DVBS2/HOMS) • Ericsson's Phase Aligned Audio (5.1). (CE/SWO/PAA) • additional stereo pair of MPEG-1 Layer II audio encoding (giving 4 in total) (CE/SWO/M1L2)
<p>WORLD EVENTS AVP 3000 Voyager Configuration Pack (AVP3000/CP/WORLD/EV/A FAZ 101 0196/148) As Premium Events but adds:</p> <ul style="list-style-type: none"> • External sync. input • DVB-S2X support • 4 more stereo pairs of MPEG-1 Layer II audio encode. • Additional Phase Aligned Audio license. 	<p>As above plus:</p> <p>External sync input module (CE/HWO/EXTSYNC)</p> <ul style="list-style-type: none"> • 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)



ERICSSON

	SD DSNG	HD DSNG	EVENTS	PREMIUM EVENTS	WORLD EVENTS
<input checked="" type="checkbox"/> = Included <input type="checkbox"/> = Field upgrade available					
CHASSIS					
Single AC Power Supply	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Dual AC Power Supply			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Hot-Swappable Modules	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Built-In Video Confidence Monitor	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
BASEBAND VIDEO AND AUDIO INPUTS					
Analogue Composite CVBS Interface	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SD-SDI Interface	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HD-SDI Interface	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3 Gbps Capable HD-SDI Interface	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Discrete Audio Inputs (Analogue or AES)*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Balanced Analogue Audio*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Balanced Digital Audio (AES-EBU)*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VIDEO ENCODING					
MPEG-2 SD 4:2:0 Encoding	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MPEG-2 HD 4:2:0 Encoding	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MPEG-2 SD 4:2:2 Encoding	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MPEG-2 HD 4:2:2 Encoding	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MPEG-4 (AVC) SD 4:2:0 Encoding	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MPEG-4 (AVC) HD 4:2:0 Encoding	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MPEG-4 (AVC) SD 4:2:2 Encoding	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MPEG-4 (AVC) HD 4:2:2 Encoding	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MPEG-4 (AVC) HD 4:2:2 10-bit Encoding	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MPEG-4 (AVC) HD 4:2:2 1080p 50/60 fps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
JPEG 2000 SD 4:2:2 Encoding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
JPEG 2000 HD 4:2:2 Encoding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AUDIO ENCODING					
MPEG-1 Layer II Encode (stereo pairs)	2 <input type="checkbox"/>	3 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	8
Dolby® Digital (AC3) Encode (2.0 or 5.1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AAC Encode (2.0 or 5.1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Phase Aligned Audio Encode	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 <input type="checkbox"/>	2
Linear PCM Pass-Through	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dolby® Digital (AC3) Pass-Through (2.0 or 5.1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dolby®E Pass-Through (Compressed)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ENCRYPTION					
BISS Encryption (Modes 1 and E)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
RAS Encryption (satellite output only)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TRANSPORT STREAM					
IP Output	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DVB-S/S2/DSNG Satellite Output	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DVB-S2 Higher Order Modulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DVB-S2X Modulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ASI Input (Re-multiplexing)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ASI Output	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G.703 Output	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SMPTE 2022 Forward Error Correction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CONTROL					
Web Browser Control	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Front Panel Control	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SNMP Traps and Alarms	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
nCompass Control	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

*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 ptp ±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 (AES3id) 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/264) +
(CE/SWO/CE-x/HD)

MPEG-4 AVC 4:2:2 Profile @ Level 4.1
(1 Mbps to 80 Mbps) (CE/SWO/CE-x/264) +
(CE/SWO/CE-x/HD)+(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/HD)

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 RX8200 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 (PAA)

(Patented Ericsson Technology)

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 300 421 (DVB-S) and option for EN 301 210 (DVB-DSNG) EN302-307 (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, 2/3, 3/4, 4/5, 5/6, 8/9 and 9/10 (DVB S2 QPSK)

3/5, 2/3, 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)

13/45, 9/20, 11/20 (DVB-S2X QPSK)

23/36, 25/36, 13/18 (DVB-S2X 8PSK)

5/9, 26/45 (DVB-S2X 8APSK-L)

26/45, 3/5, 28/45, 23/36, 25/36, 13/18, 7/9, 77/90 (DVB-S2X 16APSK)

5/9, 8/15, 1/2, 3/5, 2/3 (DVB-S2X 16APSK-L)

2/3 (DVB-S2X 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 Ethernet (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