



# Gryphon PVE-3 Contribution Video Encoder

High performance, low latency, 4:2:2 video encoder built to tackle the unique challenges of professional outside broadcasting.

## Purpose Built for Outside Broadcasting

More than 20 years of real world outside broadcasting experience went into the design of the **Gryphon PVE-3**. Earlier generations of DTVI's encoder family have been deployed in almost every country in the world, helping broadcast customers tackle the unique and demanding challenges of news and sports contribution. DTVI's **Gryphon PVE-3** Contribution Encoder builds upon those achievements while delivering new levels of performance including ultra-low latency (150 ms) and 4:2:2 10 bit compression.

## Breaking News Won't Wait, Why Should You

Setting up a video encoder can be challenging at the best of times. Errors made while configuring encoders with complex menu trees in the high-pressure environment of a major sports or news event can prevent live shots from getting through. **Gryphon PVE-3** has been designed to enable operators, who might not be experts in video compression, to set up contribution links quickly and easily – getting **on-the-air in less than 60 seconds**. Extremely intuitive menus and front panel controls allow operators to define and enable compression and modulation parameters with only minimal training. For users who prefer Web based control, the built-in Browser interface is equally intuitive and easy to use.

## Compatibility Tested Against Common Systems

Ensuring success in an outside broadcast transmission requires interoperability with both the content being sent, and the equipment used to receive it. The **Gryphon PVE-3** handles a very wide range of news and sports formats: including PAL or NTSC, resolutions of 480i, 576i, 720p or 1080i, in MPEG-2 or MPEG-4, 4:2:0 or 4:2:2, 8 or 10 bit encoding. Combined with DTVI's commitment to open standards and full interoperability testing with the world's leading decoder vendors, you can rest assured that the **Gryphon PVE-3** will work in any broadcast environment.

## Ready to Grow with Your Business

At DTVI we understand that your needs may change over time. **Gryphon PVE-3's** flexible, software license-based architecture allows you to purchase only those features required today, and upgrade to a more advanced feature set including High Definition (HD) and 10 bit compression as your requirements evolve. With a highly flexible and functional modulator, and the ability to add features such as an internal multiplexer, BISS encryption, and advanced audio and video formats, the **Gryphon PVE-3** is capable of changing to meet your business needs.

## Outstanding Compression Performance

While everything else is important, impressive audio and video quality is critical to successful broadcasting. Through its unique combination of ASIC and FPGA technologies, the **Gryphon PVE-3** delivers industry leading video and audio compression quality with compression optimized for low latency News and Sports applications. Advanced features such as dynamic GOP; scene change; fade; and skin tone detection, allow for optimal picture quality. The **Gryphon PVE-3** is inherently a low delay encoder supporting 4:2:2 and 4:2:0 compression for interview transmissions, and single camera feeds can take advantage of extended GOP structures to provide outstanding video quality at industry leading low bit rates.

## Reduce Bandwidth & Transmission Cost

The combination of DVB-S2 modulation and **Gryphon PVE-3's** advanced MPEG-4 AVC compression allows operators to deliver outstanding audio and video feeds at a much reduced satellite bandwidth cost. Most **Gryphon PVE-3** users report being able to provide HD contribution feeds in an equal or smaller bandwidth than they had previously used for SD transmissions.

## Applications

- ✓ Satellite Sport Contribution
- ✓ Satellite News Contribution
- ✓ IP News and Sports Contribution
- ✓ Fiber News and Sports Contribution
- ✓ Video Distribution

## Features

- ✓ Ultra-Low Latency (150 ms)
- ✓ Rapid boot up time
- ✓ Standard & High Definition
- ✓ Analog and Digital Video and Audio inputs
- ✓ Best-in-Class MPEG-2 and MPEG-4 4:2:0 & 4:2:2 Video Compression in 8 or 10 bits
- ✓ Advanced Audio Compression for up to 8 Stereo Pairs
- ✓ MPEG or AAC Audio Compression
- ✓ AC-3 and Uncompressed Audio Pass Through
- ✓ Internal DVB-S/S2 Modulator plus ASI and Ethernet Outputs
- ✓ BISS Encryption
- ✓ Internal Multiplexer
- ✓ User Interface designed specifically for outside broadcasting
- ✓ Feature set upgradable using software license keys
- ✓ DVB-CID compliant

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STANDARD FEATURES AND SOFTWARE LICENSABLE OPTIONS		HARDWARE OPTIONS	
<b>ASI Output standard</b>	<ul style="list-style-type: none"> <li>2 x DVB-ASI on BNC</li> </ul>	Satellite Modulator	<ul style="list-style-type: none"> <li>1 to 68 MSymbol/s in DVB-S</li> <li>1 to 45 MSymbol/s in DVB-S2</li> </ul>
<b>Ethernet Output standard</b>	<ul style="list-style-type: none"> <li>100/1000 Base-T (MPEG TS over IP)</li> </ul>	GRYPVE-HW-MOD option	<ul style="list-style-type: none"> <li>IF   70/140 MHz 0 to 25 dBm</li> <li>L-Band High Stability   950 to 2,050 MHz</li> <li>DVB-S (QPSK, 8PSK, 16QAM)</li> <li>DVB-S2 (QPSK, 8PSK, 16APSK, 32APSK)</li> <li>DVB-CID ETSI TS 103 129 (2013-05)</li> <li>10 MHz reference</li> </ul>
GRYPVE-3-SW-FEC option	<ul style="list-style-type: none"> <li>Pro MPEG Forum COP3 FEC (SMPTE 2022) supports column FEC only</li> </ul>	GRYPVE-HW-RMK option	<ul style="list-style-type: none"> <li>Rear rack mount support kit</li> </ul>
<b>Video Inputs standard</b>	<ul style="list-style-type: none"> <li>SD Analog – NTSC and PAL</li> <li>SD Digital – SDI (SMPTE 259M)</li> <li>HD Digital – HDSDI (SMPTE 292M)</li> </ul>	GRYPVE-C-AA option	<ul style="list-style-type: none"> <li>Analog audio cable – DB26HD female to XLR female. Supports 4 audio pairs</li> </ul>
<b>Video Latency standard</b>	<ul style="list-style-type: none"> <li>150 ms, 200 ms, 350 ms, or 650 ms</li> </ul>	<b>STATUS AND CONTROL INTERFACES</b>	
<b>Video Format standard</b>	<ul style="list-style-type: none"> <li>MPEG-2 4:2:0</li> </ul>	<ul style="list-style-type: none"> <li>Integrated web browser</li> <li>Front panel with full control</li> </ul>	
GRYPVE-3-SW-MPEG-4 option	<ul style="list-style-type: none"> <li>MPEG-4</li> </ul>	<b>POWER REQUIREMENTS</b>	
GRYPVE-3-VF-HD option	<ul style="list-style-type: none"> <li>High Definition (720P &amp; 1080i)</li> </ul>	<b>Supply Voltage</b>	100 to 240 VAC, 50 or 60 Hz
GRYPVE-3-VF-4:2:2 option	<ul style="list-style-type: none"> <li>4:2:2 8-bit Chroma</li> </ul>	<b>Power Consumption</b>	60 Watts maximum
GRYPVE-3-VF-10-BIT option	<ul style="list-style-type: none"> <li>10-bit Chroma</li> </ul>	<b>PHYSICAL PARAMETERS</b>	
<b>Video Compression</b>		<b>Chassis</b>	1 RU rack mount ears included
H.264 Profile		<b>Dimensions (H, W, D)</b>	4.5 cm x 48 cm x 45.7 cm
Hi422P	<ul style="list-style-type: none"> <li>L3.2 (0.5-80 Mb/s), L4.1 (4.5-80 Mb/s)</li> </ul>		(1.75" x 19" x 18")
Hi10P	<ul style="list-style-type: none"> <li>L3.2 (0.5-60 Mb/s), L4.1 (4.5-80 Mb/s)</li> </ul>	<b>Weight (including modulator)</b>	4.2 kg (9.0 lbs.)
HiP	<ul style="list-style-type: none"> <li>L3.2 (0.5-25 Mb/s), L4.1 (4.5-62.5 Mb/s)</li> </ul>	<b>ENVIRONMENTAL CONDITIONS</b>	
MP	<ul style="list-style-type: none"> <li>L3.2 (0.5-20 Mb/s), L4.1 (4.5-50 Mb/s)</li> </ul>	<b>Operating Temperature</b>	0 to 50 C (32 to 122 F)
AVC-I-50	<ul style="list-style-type: none"> <li>L3.2 (50 Mb/s), L4.1 (50 Mb/s)</li> </ul>	<b>Storage Temperature</b>	-20 to 70 C (-4 to 158 F)
AVC-I-100	<ul style="list-style-type: none"> <li>L4.1 (100 Mb/s)</li> </ul>	<b>Humidity</b>	Up to 90% humidity
MPEG-2 Profile			
422P/HP	<ul style="list-style-type: none"> <li>ML (0.5-20 Mb/s), HL (6-80 Mb/s)</li> </ul>		
MP	<ul style="list-style-type: none"> <li>ML (0.5-15 Mb/s), HL (5-20 Mb/s)</li> </ul>		
<b>VBI Support standard</b>	<ul style="list-style-type: none"> <li>Embedded Closed Captioning EIA608 and 708</li> </ul>		
<b>Audio Inputs standard</b>	<ul style="list-style-type: none"> <li>Analog (optional XLR breakout cable)</li> <li>Digital: AES/EBU on BNC</li> <li>Embedded: SMPTE 272M</li> </ul>		
<b>Audio Compression standard</b>	<ul style="list-style-type: none"> <li>MPEG-1 Layer II (32-384 kb/s)</li> <li>AC3 5.1 Pass Through (32-640 kb/s)</li> <li>SMPTE 302M Pass Through</li> </ul>		
GRYPVE-AAC option	<ul style="list-style-type: none"> <li>AAC-LC (16-576 kb/s)</li> <li>HE-AAC V1 and V2 (16-128 kb/s)</li> </ul>		
<b>Audio Channels standard</b>	<ul style="list-style-type: none"> <li>Two compressed audio pairs</li> </ul>		
<b>Additional Audio Channels</b>	<ul style="list-style-type: none"> <li>Additional compressed audio pairs up to 8 pairs total</li> </ul>		
GRYPVE-SW-AUD-2P option	<ul style="list-style-type: none"> <li>ASI input for internal multiplexing (200 kb/s – 80 Mb/s)</li> </ul>		
<b>Transport Stream Re-Multiplexer</b>			
GRYPVE-SW-MUX option			
<b>BISS Conditional Access</b>	<ul style="list-style-type: none"> <li>Basic Interoperable Scrambling System Conditional Access- Modes 0, 1, and E</li> </ul>		
GRYPVE-SW-BISS option			

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