



TRANSFORMING MISSION CRITICAL VIDEO SOLUTIONS



VIDEO STREAMING & SCAN
CONVERSION PRODUCTS



DATA ACQUISITION

VIDEO ENCODING



7840R




7805R



VIDEO DISTRIBUTION



5480E




9610




VHD986



[ACCESS BROCHURE](#)





Real-Time Video Streaming & Display.

Experience live encoding and decoding with flexible, low-latency performance.

A live video source is processed through the **Model 5480E Video Encoder**. The Encoder compresses the video using multiple algorithms, including H.264, H.265, and JPEG-XS, optimizing the video for both quality and latency based on network and datalink requirements.

Compressed video streams are then transmitted via Ethernet and received by the **Model 5480D Video Decoder**, which decompresses and outputs for direct connection to a monitor. The processed video outputs can be compared to the source video in real-time, showcasing the flexibility of the system in managing high compression for bandwidth-limited environments (H.264/H.265) or low-latency, visually lossless streaming (JPEG-XS).



Typical UAV Video Downlink Config



Typical UAV Video Downlink Config



Delivering Clarity in Every Frame.





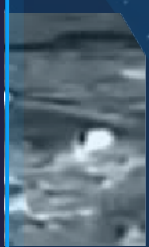
TRANSFORMING MISSION CRITICAL VIDEO SOLUTIONS

MISSION CRITICAL. STREAMING & SCAN CONVERSION PRODUCTS.

Delta Digital Video provides innovative, world class solutions for a variety of digital video applications and markets. As long-time designers and manufacturers of video compression and scan conversion products for the Mil/Aero, Homeland Security, Distance Learning, and Broadcast industries, our expertise comes from decades of supporting government and industry in developing standards for compressing, converting, transmitting, and exploiting video.



MARKETS



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Flight Test.

Delta's Rugged Video Encoders integrate compressed video with Chapter 10 and Chapter 7 data systems for seamless recording, downlink, and display. Our solutions also support ground-based range video distribution, delivering high-quality, low-latency video in tough industrial packaging for single or multi-channel needs.



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MARKETS

Homeland Security.

Delta Digital Video has been a long-time supplier to homeland security agencies. Whether airborne, fixed site, or mobile, Delta has a solution to meet the demanding requirements for important case work, border and coastal security, and high-profile events. Small form factor, low power, rugged design, and interoperability make our encoders ideal for 24/7 operation in the harshest environments.

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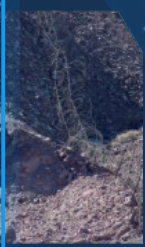
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MARKETS



Homeland Security, Delta Digital Video provides high-performance design, and integration in



OEM.

"Delta Inside". We provide custom video compression solutions for OEM integration, meeting strict requirements for format, compression, interfaces, and power. We offer standard and tailored form factors for seamless embedding into mission systems. Our OEM products are deployed worldwide, supporting critical operations with proven, high-performance video compression technology built to customer specifications.



IS

Our mission-critical solutions meet the demanding market for high-performance integration in





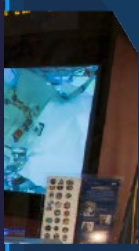
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MARKETS



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ISR.

Our evolving product line supports today's most critical ISR missions with rugged, reliable, and standards-compliant video solutions. ISR missions demand high-quality, low-latency full motion video, along with critical metadata for mission success. Delta has delivered thousands of rugged encoders for leading manned and unmanned ISR platforms, ensuring interoperability through rigid adherence to MISB/STANAG standards.



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TRANSFORMING MISSION CRITICAL VIDEO SOLUTIONS

BENEFITS

Proven Mission Experience

Trusted on programs for Class 3 and Class 4 UAVs, manned ISR missions, and shipboard video distribution modernization, DDV encoders and decoders deliver reliable video performance for airborne, shipboard, and ground-based missions worldwide.



Ruggedized for Any Environment

Built to operate in harsh conditions, DDV products support extended temperature operations, high shock/vibration, and demanding defense environments without sacrificing performance.

Pioneers in Standards Development

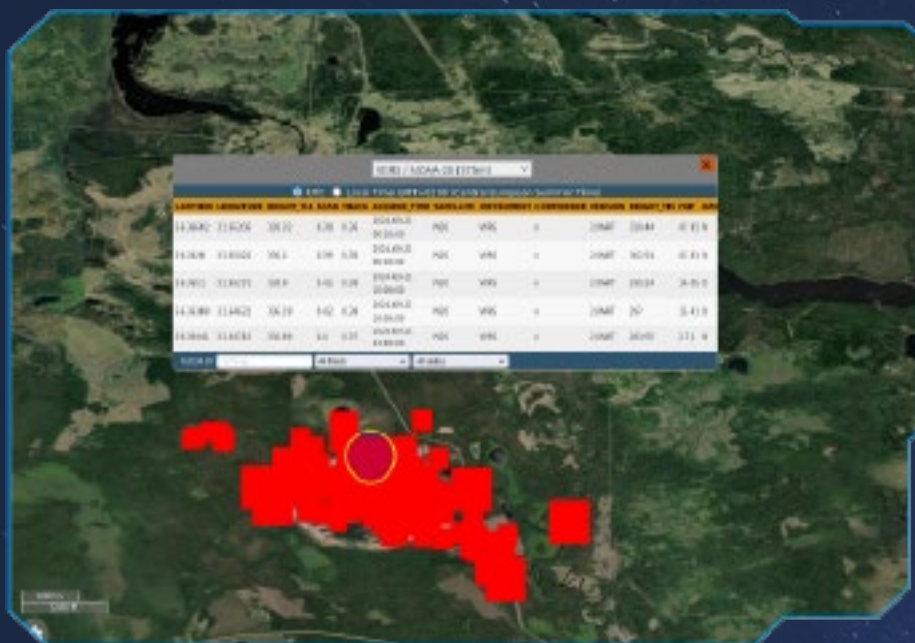
From the earliest days of digital video, DDV personnel helped shape global standards as contributors to CCITT and ITU committees. Their work on compression algorithms and transmission protocols laid the foundation for facsimile, video conferencing, and today's interactive communications, ensuring interoperability for mission-critical systems.





TRANSFORMING MISSION CRITICAL VIDEO SOLUTIONS

BENEFITS



Flexible Integration

Supporting multiple formats, resolutions, and network protocols, DDV solutions integrate seamlessly into existing infrastructures. Operators can tailor configurations for bandwidth-limited, high-capacity, or encrypted environments.

Secure & Compliant

With support for AES encryption, MISB compliance, and interoperability with defense network standards, DDV products ensure secure, standards-based video delivery across classified and unclassified domains.



Global Defense Partnerships

Selected by U.S. and allied forces, DDV technology is deployed across platforms including the U.S. Navy, Royal Australian Navy, and major defense primes, proving its reliability in real-world operations.



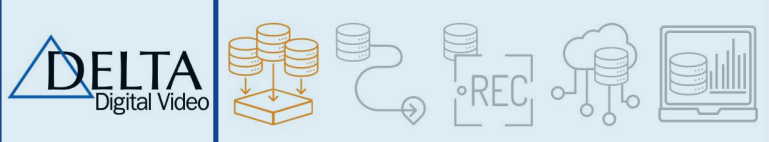


TRANSFORMING MISSION CRITICAL VIDEO SOLUTIONS

TOP PRODUCTS



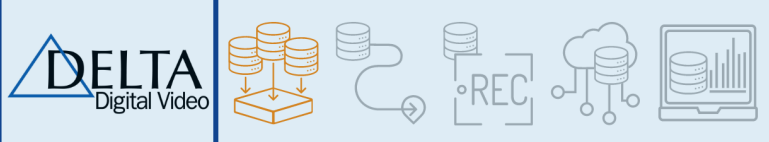
7840R



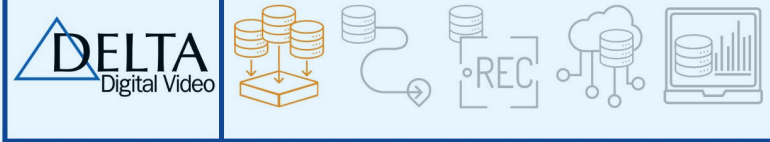
7805R



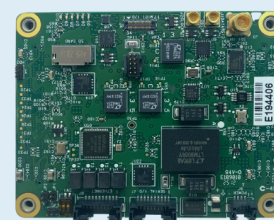
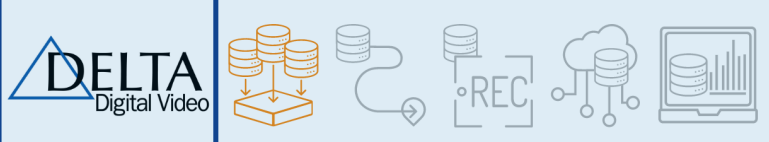
7825R



9610



5480E



VEC500





TRANSFORMING MISSION CRITICAL VIDEO SOLUTIONS

NEW PRODUCT!



5480E.

UHD/HD/SD Video Encoder

- Dual-Channel UHD/HD/SD Encoding
- Flexible, Standards-Based Design

ACCESS DATASHEET



The **Model 5480E UHD/HD/SD Video Encoder** is a multi-channel network appliance designed to compress Ultra High Definition (UHD), High Definition (HD), and Standard Definition (SD) video (UHD/HD/SD-SDI, HDMI, Composite) for transmission over IP networks. The unit converts cameras and A/V equipment to Ethernet compatible devices for any remote monitoring application including, security, surveillance, broadcast, and distance learning. In addition, the **5480E** is also capable of streaming uncompressed video.

Features

- ▶ Real-time, high-quality, low latency encoding of full motion video for video-over-IP applications
- ▶ Standards-based, H.264 and H.265 algorithms
- ▶ Ultra low-latency JPEG-XS or Uncompressed
- ▶ Resolutions up to 4K
- ▶ Supports UHD/HD/SD-SDI, HDMI, and Composite (NTSC/ PAL) Formats



Versatile Deployment

The **5480E** is engineered for use in demanding environments where real-time video performance is critical. Supporting operation in extended temperature ranges with secure AES encryption, the encoder is ideal for airborne, ground, and maritime missions. Its rugged build and standards-based interoperability make it mission-ready for a wide range of applications.



STATION
DEMO

COMPANY
OVERVIEW

BENEFITS

PRODUCTS



TECHNICAL SPECIFICATIONS



MODEL 5480E

UHD/HD/SD VIDEO ENCODER

FEATURES

- Real-time, high-quality, low-latency encoding of full motion video for video-over-IP applications
- Standards-based, H.264 and H.265 algorithms
- Ultra low-latency JPEG-XS or Uncompressed
- Resolutions up to 4K
- Supports UHD/HD/SD-SDI, HDMI, and Composite (NTSC/PAL) Formats
- Transmit video at rates as low as 64Kbps up to 12Gbps
- RTSP/RTP/UDP, TS/UDP, SMPTE-2110, SRT/RIST Protocols
- MISB-Compliant
- Fully configurable network interface
- AES Encryption
- Encode Latency as low as 20ms
- Stereo/dual-channel audio inputs
- MPEG-1 Layer II Audio Compression
- GPS/IRIG/PTP/NTP Time Sync
- Serial and Ethernet Metadata
- Serial or Ethernet port configurable
- Compact, rugged packaging, including extended temperature (-38°C to +74°C) version



The Model 5480E UHD/HD/SD Video Encoder is a multi-channel network appliance designed to compress Ultra High Definition (UHD), High Definition (HD), and Standard Definition (SD) video (UHD/HD/SD-SDI, HDMI, Composite) for transmission over IP networks. The unit converts cameras and A/V equipment to Ethernet compatible devices for any remote monitoring application including, security, surveillance, broadcast, and distance learning. In addition, the 5480E is also capable of streaming uncompressed video.

Utilizing industry-standard H.264/H.265, or low-latency JPEG-XS compression, along with flexible adjustments for video resolutions, compression parameters, and network settings, the 5480E can be optimized to deliver high-quality video over any network. The unit is easily configured via the Ethernet or serial port, with support for audio and metadata channel multiplexing. The 5480E is compliant with off-the-shelf video players and most decoding hardware, including Delta's companion Model 5480D video decoder.

This compact, rugged unit is capable of operation in harsh environments. Extended temperature operation, SRT/RIST support, and AES encryption makes it ideal for military, law enforcement, and traffic monitoring applications.

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MODEL 5480E

UHD/HD/SD VIDEO ENCODER

VIDEO INPUT

Format SMPTE/Composite/HDMI
Connector BNC (2x)/HDMI/SFP+

VIDEO COMPRESSION

Algorithms H.264/H.265/JPEG-XS
Format H.264: BP,MP,HP Level 5.1, 4:2:2, 8-Bit
 H.265: MP,M10P Level 5.1, 4:2:2, 8/10-Bit
 JPEG-XS: 4:2:2, 8/10-Bit
Resolutions 2160p/1080p/720p/1080i/480i/576i
Frame Rate 25/29.97/30/50/59.94/60
Scale/Crop HH/HV/CIF/ROI

STREAMING INTERFACE

Ports GbE & SFP+
Protocol MPEG-2 Transport Stream
 RTSP/RTP
 SMPTE-2110
 SRT/RIST
Data Rate 64Kbps to 12Gbps
Configuration DHCP or Static Address
 Selectable Ports
 Auto Sense Full/Half Duplex
 Unicast/Multicast
Connector RJ45/SFP+ (Copper or Fiber)

METADATA INTERFACE

Format SDI VANC/RS-232/Ethernet
Protocol KLV/Clear
Connector BNC (SDI)/RJ45/SFP+

CONTROL

Format Serial/Telnet/Web Browser
Protocol Delta's 3-character mnemonics/HTML/https/
 SSH/SNMPv3
Connector RJ45/USB/SFP+

TIME INPUT/OVERLAY

Protocol GPS/IRIG-B (DC)/PTP/NTP
Connector RJ45/SFP+

AUDIO INPUT

Format Analog/SDI/HDMI
Channels None, Left, Right, Stereo
Analog Format Single-Ended (Line Level)
Analog Level 1Vp-p (0.35Vrms)
Analog Impedance 10K Ohms
Connector 3.5mm

AUDIO COMPRESSION

Algorithms MPEG-1 Layer II
Sample Rate 48Ksps
Bit Rates 64Kbps/96Kbps/192Kbps
Sync Lip synchronized with video

ENCRYPTION

Algorithm AES-128/256

ENVIRONMENTAL

Temp (Op) Commercial (12Gb): 0°C to +74°C
 Industrial (10Gb): -38°C to +74°C
Temp (Storage) -55°C to +85°C
Humidity 5%-95% RH, non-condensing

POWER

Volts +9-36VDC
Watts 15W
Connector 2.5mm Center Positive
 (Locking Option)

SIZE

Dimensions 1.13"H x 5.50"W x 6.485"D
 28.7mm x 139.7mm x 164.7mm
Weight 1.1lbs. (0.493kg)

MTBF

Estimated ~55,000 hours (Airborne, Inhabited
 Cargo environment (+25°C))



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TRANSFORMING MISSION CRITICAL VIDEO SOLUTIONS



7805R.

H.265 HD/SD Video Encoder

- Compact, Rugged Encoder
- Low-Latency H.265 Streaming

[ACCESS DATASHEET](#)



The **Model 7805R** is a compact, rugged video encoder designed for mission-critical applications where space and reliability are at a premium. It delivers low-latency H.265/HD-SD encoding to ensure high-quality video transmission even in constrained bandwidth environments. With support for multiple inputs and AES encryption, the **7805R** is trusted across airborne, maritime, and ground platforms, providing secure, real-time video for ISR, surveillance, and tactical operations.

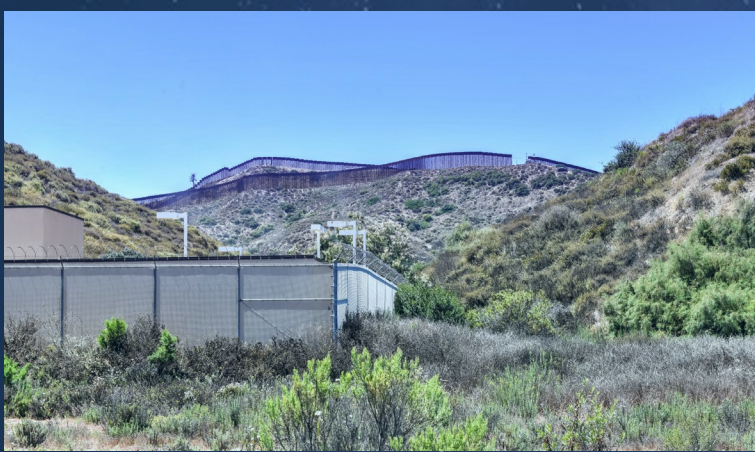
Features

- ▶ Real-time, HD or SD, Full-motion Video (FMV) compression up to 1080p resolution
- ▶ H.265/HEVC or H.264/AVC video compression even at low bit rates
- ▶ Primary/Secondary Channel Encoding including simultaneous H.265/H.264
- ▶ MISB/STANAG Compliant
- ▶ Ethernet or PCM Output Interfaces



Versatile Deployment

Built to perform in harsh, space-constrained environments, the **7805R** ensures reliable video compression for tactical missions. Its rugged design, extended temperature tolerance, and AES encryption support make it mission-ready across airborne, shipboard, and ground systems, where security and continuous operation are essential.





MODEL 7805R

H.265 HD/SD VIDEO ENCODER, COMPACT/RUGGED

TECHNICAL SPECIFICATIONS

FEATURES

- Real-time, HD or SD, Full-motion Video (FMV) compression up to 1080p resolution
- H.265/HEVC or H.264/AVC video compression even at low bit rates
- Primary/Secondary Channel Encoding including simultaneous H.265/H.264
- MISB/STANAG Compliant
- Ethernet or PCM Output Interfaces
- Metadata Support - VANC/Serial/Ethernet (optional KLV Encoding)
- <50ms Encode Latency
- Fully configurable network interface
- Data Rates from 64Kbps to 15Mbps
- Stereo/dual-channel audio inputs
- MPEG-1 Layer I/II Audio Compression
- RS-232 or Ethernet port configurable
- Compact, lightweight Chassis
- -40°C to +71°C Operation



Delta's Model 7805R H.265 HD/SD Video Encoder provides for the transmission of full-motion video for ISR applications. Designed for operation in harsh environments, the 7805R is a rugged, compact unit with all the features of Delta's MISB/JITC certified video encoder products. These include, standards-compliant video compression, KLV metadata processing, and transport stream multiplexing.

Utilizing H.265/HEVC encoding, the 7805R provides flexibility for optimizing video performance for any given bit rate. The H.265 algorithm is proven to provide 50% more bandwidth efficiency than H.264/AVC. User-configurable parameters permit the user to adjust the video/audio/data parameters in accordance with mission requirements.

The 7805R is built around an advanced, high-speed, multi-media processor working with fully optimized codecs. Despite the high-performance, the encoder power comes in at just under 10 Watts. Delta's technology has been integrated, tested, and operated in numerous airborne, ground, and shipboard applications and is compatible with MISB and STANAG standards. The 7805R can be easily integrated with standards-compliant processing, dissemination, and exploitation (PED) systems.

The unit has a fully-configurable network interface for transport stream transmission making it a "drop-in" for digital datalink applications. In addition, the 7805R offers a PCM interface for systems requiring a synchronous serial interface. The 7805R is easily configured via Ethernet (web GUI or Telnet) or serial connection.

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MODEL 7805R

H.265 HD/SD VIDEO ENCODER, COMPACT/RUGGED

VIDEO

Input SDI/Composite
Format SMPTE/NTSC/PAL
Resolutions 1080p29/30; 720p59/60; 1080i59/60;
 480i29/30; 576i25
Connector Circular MIL or BNC

VIDEO COMPRESSION

Algorithm H.265 HEVC/H.264 AVC
Format MP, M10P/MP, HP
GOP Structure Inter/Intra; I/IP, Variable Size

TRANSPORT STREAM

Ports Ethernet or RS-422
TS Protocol ISO/IEC 13818-1
 MPEG-2 Transport Stream containing
 Video/Audio/Data
Data Rate 128Kbps - 20Mbps
Enet Protocol Transport Stream over UDP, RTSP/
 RTP
 Unicast or Multicast
PCM Protocol Transport Stream over
 synchronous serial interface (RS-422)
Connector Circular Mil

METADATA INTERFACE

Protocol SDI-VANC/KLV/Clear
Format RS-232/Ethernet
Connector Circular Mil

CONTROL

Ports Two
Format RS-232: Terminal Emulation
Format TCP/IP: Web Browser/Telnet

AUDIO

Ports Two
Channels None, Left, Right, Stereo
Format Differential Line Level
Levels 2.8Vp-p (1Vrms)
Impedance 10K Ohms
Connector Circular MIL

AUDIO COMPRESSION

Algorithm MPEG-1 Layer I/II
Sample Rates 48Ksps
Bit Rate 64K/96K/192Kbps
Sync Lip synchronized with video

LATENCY

Encoder ~50ms

ENVIRONMENTAL

Temperature -40°C to +71°C
Altitude 35,000 Feet MSL
Humidity 95% RH, non-condensing
Vibration HALT Testing Profile
Shock 21.5g Peak, Half-sine, 8ms
Salt Fog MIL-STD-810 Method 509.4

Electromagnetic Environments

Radiated Emissions MIL-STD-461 RE102
Conducted Emissions MIL-STD-461 CE101
Conducted Power MIL-STD-461 CE102
Leads

POWER

Input 18-36VDC
Watts 10W
Connector Circular Mil

MECHANICAL

Size 3.84"D x 3.62"W x 1.18" (97.53 x 92.0 x 29.97)
Weight 8oz (.227kg)



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TRANSFORMING MISSION CRITICAL VIDEO SOLUTIONS



7840R.

4-CH H.265 Video Encoder

- 4-Channel, H.265 Encoding
- Rugged, Mission-Ready Design

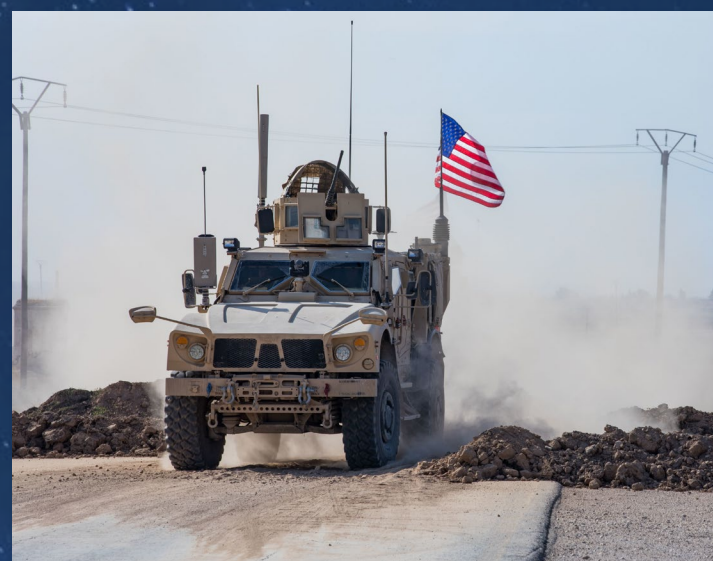
[ACCESS DATASHEET](#)



The **Model 7840R** is a rugged, four-channel H.265 video encoder designed for demanding ISR, surveillance, and mission-critical operations. Supporting simultaneous encoding of multiple HD/SD inputs, it ensures efficient bandwidth use while delivering high-quality video with low latency. Compact and durable, the **7840R** features AES encryption, flexible network outputs, and extended temperature support, making it a trusted solution across airborne, maritime, and ground environments.

Features

- ▶ Real-time digital transmission of HD/SD full motion imagery
- ▶ H.265 HEVC / H.264 AVC
- ▶ SD/HD/3G-SDI or Composite Video Input Interface
- ▶ 1080p/1080i/720p/480i/576i
- ▶ Primary/Secondary Video Encoding
- ▶ TS/UDP and RTSP/RTP/UDP Protocols
- ▶ MPEG-2 compliant TS multiplexing



Versatile Deployment

Engineered for harsh environments, the **7840R** delivers reliable performance in airborne, ground, and maritime operations. Its four-channel capability reduces system footprint while maintaining secure, real-time video streaming. Designed for interoperability, it adapts easily to multi-mission requirements.





MODEL 7840R

4-CH H.265 VIDEO ENCODER, RUGGED

FEATURES

TECHNICAL SPECIFICATIONS

- Real-time digital transmission of HD/SD full motion imagery
- H.265 HEVC / H.264 AVC
- SD/HD/3G-SDI or Composite Video Input Interface
- 1080p/1080i/720p/480i/576i
- Primary/Secondary Video Encoding
- TS/UDP and RTSP/RTP/UDP Protocols
- MPEG-2 compliant TS multiplexing
- Synchronous Serial or Ethernet TS Interfaces
- 10/100/1000 network interface
- Data Rates from 64Kbps to 20Mbps
- <50ms Encode Latency
- Stereo/dual-channel audio inputs per channel
- MPEG-1 Layer II Audio Compression
- Metadata Support
 - ◆ Synchronous VANC
 - ◆ Serial
 - ◆ Ethernet
 - ◆ KLV Encoding
- MISB/STANAG Compliant
- IRIG-B/1PPS Time Input
- Serial or Ethernet port configurable
- Rugged, MIL Qualified Package



The Model 7840R 4-Channel H.265 Video Encoder is an HD/SD video encoder that compresses video and audio signals, multiplexing them with metadata and other system information for real-time video transmission applications. The 7840R is capable of simultaneously encoding four channels of video with resolutions up to 1080p. Utilizing the H.265 (HEVC) video compression algorithm, the encoder provides high quality video transmission at various resolutions and a wide range of bandwidths. The H.265 compression algorithm utilizes highly bit-efficient coding to provide encoded streams at nearly half the bandwidth of its H.264 (AVC) predecessor. The unit is built on an advanced, low-power multimedia architecture that provides the horsepower for the computationally intensive H.265 algorithm, providing bandwidth efficiency for multi-channel applications. This increased efficiency allows for more channels to be transmitted over a given bandwidth, better quality video for constrained bandwidth applications, or lower bandwidth operation to extend the limits of ISR operation and reduce storage size requirements. The 7840R also provides an H.264 mode to support legacy infrastructures while providing a future growth path to H.265.

Designed for any rugged airborne, ground-mobile, or shipboard application, the 7840R is compliant with the full motion video standards developed by the US Government's Motion Imagery Standards Board (MISB). This includes compliance with the video compression, KLV metadata, and transport stream profiles required to ensure interoperability in US and Allied processing, dissemination, and exploitation (PED) systems. Full MIL-STD-810 environmental and MIL-STD-461/DO-160 EMI qualification ensures the 7840R meets project requirements.

The 7840R is easily integrated into any FMV system, providing for legacy composite and all SDI standards. The unit provides Ethernet and synchronous serial transport interfaces along with multi-format metadata interfaces. Serial or Telnet control, and an easy to use web-GUI are provided for encoder set-up.

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MODEL 7840R

4-CH H.265 VIDEO ENCODER, RUGGED

VIDEO INPUT

Ports 4 independent inputs
Format SD/HD-SDI (SMPTE) or Composite (2x), Auto-detect format, resolution, frame rate
Levels .3Vp-p; 75 Ohms/1Vp-p, 75 Ohms

VIDEO COMPRESSION

Algorithm H.265 HEVC / H.264 AVC
Profile CBP, MP, M10P / BP, MP, HP
Resolutions 1080p/1080i/720p/480i/576i
Frame Rate 1-60
GOP Structure Inter/Intra; Variable Size

TRANSPORT STREAM

Ports Ethernet or RS-422
Protocol ISO/IEC 13818-1
 MPEG-2 Transport Stream containing Video/Audio/Data
Data Rate 64Kbps - 20Mbps
Ethernet Protocol Transport Stream over UDP, unicast or multicast
 RTSP/RTP over UDP
RS-422 Protocol Transport Stream over synchronous serial interface

ETHERNET INTERFACE

Format 10/100/1000 Base-T, Auto Sense Bitrate, Auto Detect Full Duplex
Configuration DHCP or Static Address

METADATA INTERFACE

Ports Asynchronous serial, UDP, SDI-VANC (4)
Format KLV or unformatted data

TIME INTERFACE

Ports 1PPS/IRIG-B, SDI-VANC
1PPS Levels 0-10Vp-p; 50 Ohms

CONTROL

Ports Asynchronous Serial, Telnet/SSH, Web Browser (HTTP/HTTPS)
Serial Levels RS-232/RS-422

AUDIO INPUT

Ports Two independent stereo inputs
Format Balanced (Line Level)
Levels 2.8Vp-p (1Vrms)
Impedance 10K Ohms

AUDIO COMPRESSION

Channels None, Left, Right, Stereo
Algorithm MPEG-1 Layer I/II or ADPCM
Sample Rates 48Ksps

LATENCY

Encoder <50ms (per channel)

ENVIRONMENTAL (MIL-STD-810F)

Temp/High 501.4/Table 501.4-II +71°C
Temp/Low 501.4 - 55°C
Humidity 507.4 Proc II: 11-day Aggravated
Vibration 514.5 Category 13 Figure 514.5C-9
Mechanical Shock DO-160 Section 7 Category A 6G/11ms
Altitude 500.4 Proc I/II -2,000Ft to +50,000Ft
Alt Rapid Decomp 500.4 Proc III 8,000Ft to 50,000Ft in 15s

EMI

MIL-STD-461E CS101, CS114-116, RS103, RE102, CE-102

POWER

Volts +28VDC (IAW MIL-STD-704/1275)
Watts <20W

SIZE / WEIGHT

Chassis 2.62"H x 5.0"W x 7.06"D / 3.75lbs
 66.55mm x 127.0mm x 179.32mm/1.7Kg



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TRANSFORMING MISSION CRITICAL VIDEO SOLUTIONS



9610.

Video Distribution System

- 1U Rackmount Video Distribution
- Secure, Multi-Channel Switching

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The **Model 9610 Video Distribution System** is a 1U rackmount solution engineered to manage and distribute multiple video streams with precision and security. Supporting HD-SDI, HDMI, VGA, and composite video formats, it enables seamless routing, switching, and monitoring of mission-critical video signals. The **9610** is ideal for ISR, command centers, and tactical operations requiring reliable video management and flexible connectivity.

Features

- ▶ Multi-channel video processing chassis for Video-over-IP applications
- ▶ Support for diverse video formats: HD/SD-SDI, DVI (Digital & Analog), Composite
- ▶ Houses up to 8 Encoder/Decoder modules
- ▶ Fully configurable 10/100/1000 network interface module (VHC960)
- ▶ Copper or Fiber support via SFP



Versatile Deployment

The **9610** adapts easily across airborne, ground, and command environments, ensuring secure video routing. With flexible I/O and multi-format support, it reduces system footprint while maintaining high-fidelity distribution for real-time mission monitoring.





MODEL 9610 VDS

9610 SERIES VIDEO DISTRIBUTION SYSTEM

TECHNICAL SPECIFICATIONS

FEATURES

- Multi-channel video processing chassis for Video-over-IP applications
- Support for diverse video formats
 - HD/SD-SDI
 - DVI (Digital & Analog)
 - Composite
- Houses up to 8 Encoder/Decoder modules
- Fully configurable 10/100/1000 network interface module (VHC960)
- Copper or Fiber support via SFP
- Global Bus for IRIG-B Time and Audio via Switch/Controller Module
- 1U 19" Rack-mount Chassis
- 115/240 VAC Operation
 - Optional DC Operation
- Optional Recorder
- Optional +12VDC Aux Power
 - For camera power
- Optional Redundant Power



The 9610 Video Distribution System (VDS) is a modular product that provides scalability for video distribution and display applications. The VDS, and its companion video encoder and decoder modules, are designed to provide a cost-effective solution for encoding, streaming, and decoding diverse video formats such as those found in ground stations, operations centers, and classrooms. The VDS can support up to 8 channels of encoders and/or decoders and is compatible with other Delta, and competitive, encode/decode products.

The chassis features a Switch/Controller module that provides a single connection for transport stream inputs and outputs, channel configuration, and status. The module uses a Small Form-factor Pluggable (SFP) transceiver to support copper or fiber Ethernet connections. The integrated switch reduces, or saves, the expense of an external switch, while also using less space and power.

A switched 10/100 Ethernet interface is connected to all 8 channels via the backplane to the Switch/Controller module. IRIG-B time is distributed across the backplane to permit time stamping of each encoder channel. Audio can also be distributed from a selected channel and applied to all other encoder channels. An optional recorder module provides for debrief and archiving. The VDS can be configured to provide bussed auxiliary or redundant power.

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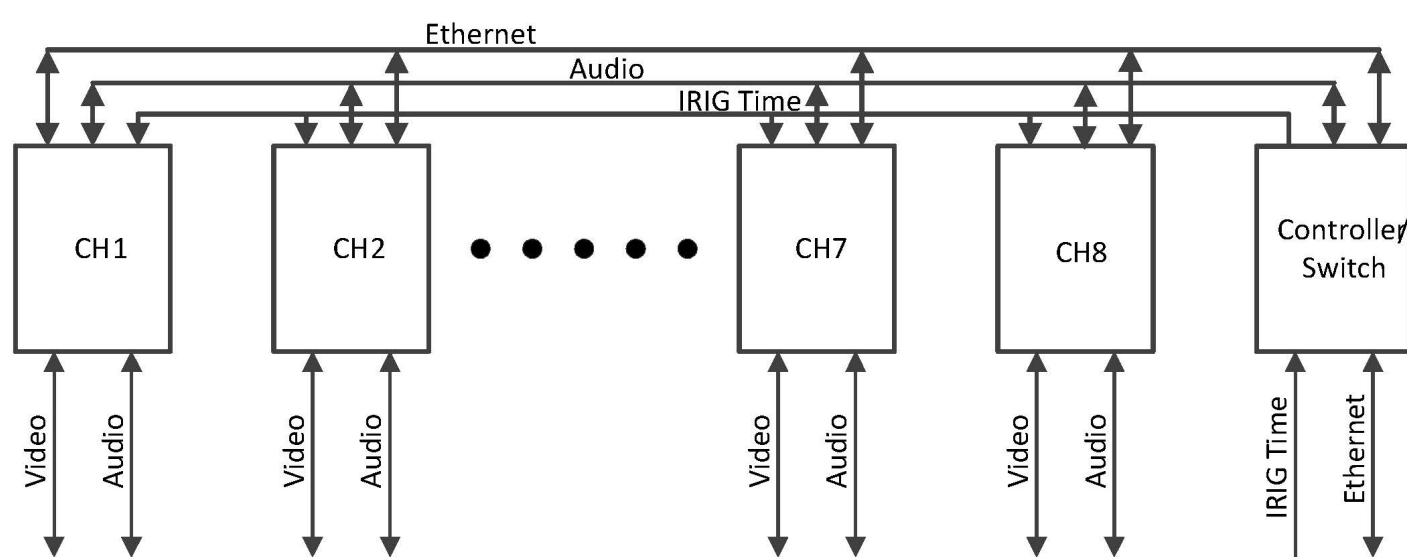
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MODEL 9610 VDS

9610 SERIES VIDEO DISTRIBUTION SYSTEM



SPECIFICATIONS

SIZE

19" x 10.5" x 1.75" 1U

SLOTS

Encoder/Decoder 8
 Switch/Controller 1
 Recorder 1

LEDs

Power

WEIGHT

Single AC Power Supply 9lbs.

POWER REQUIREMENT

100-240VAC, 1.5A, 50-60Hz, 440Hz

POWER CONSUMPTION

Chassis/Switch Module Only
 15 Watts
 w/ Encoder/Decoder Modules
 Add 7 Watts per Channel

OPERATING ENVIRONMENT

Temp (Op) -20°C to +60°C
 Temp (Storage) -55°C to +85°C
 Humidity 5% - 95% RH, non-condensing



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TRANSFORMING MISSION CRITICAL VIDEO SOLUTIONS

COMING SOON!



7825R.

UHD/HD/SD Video Encoder

- Rugged H.265/HEVC Video Encoder
- Something Short Here

[ACCESS DATASHEET](#)



The **Model 7825R Video Encoder** delivers high-performance, low-latency video compression in a SWaP-optimized package. Supporting H.265/HEVC, H.264, and optional JPEG-XS, it ensures efficient bandwidth use while maintaining image quality. Designed for airborne, ground, and naval environments, the **7825R** provides reliable, secure video distribution for mission-critical operations.

Features

- ▶ Real-time, high-quality, low latency encoding of full motion video for real-time applications
- ▶ Standards-based, H.264 and H.265 algorithms
- ▶ Optional Ultra low-latency JPEG-XS
- ▶ Resolutions up to 4Kp
- ▶ Supports UHD/HD/SD-SDI and Composite (NTSC/PAL) Formats
- ▶ Transmit compressed video at rates from 64Kbps to 25Mbps/Ch.



Versatile Deployment

The **7825R** adapts seamlessly across ISR, command centers, and tactical platforms, reducing system size while supporting multi-format video streams. Its rugged design and flexible I/O ensure dependable performance wherever missions demand.





MODEL 7825R

H.265 VIDEO ENCODER



TECHNICAL SPECIFICATIONS

FEATURES

- Real-time, high-quality, low-latency encoding of full motion video for real-time applications
- Standards-based, H.264 and H.265 algorithms
- Optional Ultra low-latency JPEG-XS
- Resolutions up to 4Kp
- Supports UHD/HD/SD-SDI and Composite (NTSC/PAL) Formats
- Transmit compressed video at rates from 64Kbps to 25Mbps/Channel
- RTSP/RTP/UDP, TS/UDP, SRT Protocols
- MISB/STANAG-Compliant
- Fully configurable network interface
- AES Encryption
- Stereo/dual-channel audio inputs
- MPEG-1 Layer II Audio Compression
- GPS/PTP/NTP Time Sync
- Metadata Support: VANC, Serial, and Ethernet
- Serial or Ethernet port configurable
- Compact, rugged MIL-packaging

Delta's Model 7825R H.265 Video Encoder provides for the transmission of two full-motion video signals for ISR applications. Designed for operation in harsh environments, the 7825R is a rugged, compact unit with all the features of Delta's MISB/JITC certified video encoder products. These include, standards-compliant video compression, KLV metadata processing, and transport stream multiplexing.

Utilizing H.265/HEVC encoding, the 7825R provides flexibility for optimizing video performance for any given bit rate. The H.265 algorithm is proven to provide 50% more bandwidth efficiency than H.264/AVC. User-configurable parameters permit the user to adjust the video/audio/data parameters in accordance with mission requirements. H.264 video compression is also supported to provide flexibility for integration with existing legacy infrastructures.

The 7825R is built around an advanced, high-speed, multi-media processor working with fully optimized codecs. Despite the high-performance, the encoder power comes in at just under 10 Watts. Delta's technology has been integrated, tested, and operated in numerous airborne, ground, and shipboard applications and is compatible with MISB and STANAG standards. The 7825R can be easily integrated with standards-compliant processing, dissemination, and exploitation (PED) systems.

The unit has a fully-configurable network interface for transport stream transmission making it a "drop-in" for digital datalink applications. In addition, the 7825R offers a PCM interface for systems requiring a synchronous serial interface and, is easily configured via Ethernet (web GUI or Telnet) or serial connection.

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MODEL 7825R

H.265 VIDEO ENCODER

VIDEO

Input SDI (2x)/Composite (1x)
Format SMPTE/NTSC/PAL
Resolutions 2160p30/60; 1080p25/29/30/50/60;
 720p50/59/60; 1080i59/60; 480i29/30;
 576i25
Connector HDBNC

VIDEO COMPRESSION

Algorithm H.265 HEVC/H.264 AVC
Format MP, M10P/MP, HP
GOP Structure Inter/Intra; I/P, Variable Size

TRANSPORT STREAM

Ports Ethernet or RS-422
TS Protocol ISO/IEC 13818-1
 MPEG-2 Transport Stream containing
 Video/Audio/Data
Data Rate 128Kbps - 25Mbps
Enet Protocol Transport Stream over UDP, RTSP/
 RTP, SRT
 Unicast or Multicast
PCM Protocol Transport Stream over
 synchronous serial interface (RS-422)
Connector Circular Mil

METADATA INTERFACE

Protocol SDI-VANC/KLV/Clear
Format RS-232/Ethernet
Connector Circular Mil

CONTROL

Ports Two
Format RS-232: Terminal Emulation
Format TCP/IP: Web Browser/Telnet

AUDIO

Ports Two
Channels None, Left, Right, Stereo
Format Differential Line Level
Levels 2.8Vp-p (1Vrms)
Impedance 10K Ohms
Connector Circular MIL

AUDIO COMPRESSION

Algorithm MPEG-1 Layer I/II
Sample Rates 48Ksps
Bit Rate 64K/96K/192Kbps
Sync Lip synchronized with video

ENVIRONMENTAL

Temperature -40°C to +71°C
Altitude 35,000 Feet MSL
Humidity 95% RH, non-condensing
Vibration HALT Testing Profile
Shock 21.5g Peak, Half-sine, 8ms
Salt Fog MIL-STD-810 Method 509.4

Electromagnetic Environments

Radiated Emissions MIL-STD-461 RE102
Conducted Emissions MIL-STD-461 CE101
Conducted Power MIL-STD-461 CE102
Leads

POWER

Input 18-36VDC
Watts 10W
Connector Circular Mil

MECHANICAL

Size 3.84"D x 3.62"W x 1.18"
 (97.53mm x 92.0mm x 29.97mm)
Weight 8oz (.227kg)



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TRANSFORMING MISSION CRITICAL VIDEO SOLUTIONS



VEC500.

VIDEO ENCODER OEM MODULE

- Compact OEM Video Encoder
- Ultra-Low Latency Performance

[ACCESS DATASHEET](#)



The **VEC500** is a compact, OEM video encoder module delivering advanced UHD/HD/SD encoding for embedded applications. Supporting H.264, H.265, and JPEG-XS compression, it balances image quality, bandwidth efficiency, and ultra-low latency performance. With resolutions up to 4K and flexible I/O support, the **VEC500** is mission-ready for integration into data acquisition bricks, cameras/sensors, datalinks, and any mission critical system that demand reliable, real-time video processing in a SWaP-C constrained package.

Features

- ▶ Real-time, high-quality, low latency encoding for VoIP applications
- ▶ Standards-based, H.264 and H.265 algorithms
- ▶ Optional Ultra low-latency, visually lossless JPEG-XS
- ▶ Resolutions up to 4K
- ▶ Transmit video at rates as low as 64Kbps up to 1Gbps
- ▶ RTSP/RTP/UDP, TS/UDP, SMPTE-2110, SRT/RIST Protocols





TECHNICAL SPECIFICATIONS



MODEL VEC500

UHD/HD/SD VIDEO ENCODER OEM MODULE

FEATURES

- Real-time, high-quality, low-latency encoding for video-over-IP applications
- Standards-based, H.264 and H.265 algorithms
- Optional Ultra low-latency, visually lossless JPEG-XS
- Resolutions up to 4K
- Supports UHD/HD/SD-SDI and MIPI CSI-2 Formats
- Transmit video at rates as low as 64Kbps up to 1Gbps
- RTSP/RTP/UDP, TS/UDP, SMPTE-2110, SRT/RIST Protocols
- MISB-Compliant
- Fully configurable network interface
- AES Encryption
- GPS/IRIG/PTP/NTP Time Sync
- Serial and Ethernet Metadata
- Serial or Ethernet port configurable
- Compact, rugged module, including extended temperature (-40°C to +71°C) version



The Model VEC500 UHD/HD/SD Video Encoder Module provides a modular solution for camera and sensor manufacturers to add video streaming to their devices. The module is a network appliance designed to compress Ultra High Definition (UHD), High Definition (HD), and Standard Definition (SD) video (UHD/HD/SD-SDI, MIPI CSI-2) for transmission over IP networks. The unit converts cameras and sensors to Ethernet compatible devices for any remote monitoring application including security, surveillance, broadcast, and distance learning.

Utilizing industry-standard H.264/H.265, or low-latency JPEG-XS compression, along with flexible adjustments for video resolutions, compression parameters, and network settings, the VEC500 can be optimized to deliver high-quality video over any network. The unit is easily configured via the Ethernet or serial port, with support for metadata channel multiplexing. The VEC500 is compliant with off-the-shelf video players and most decoding hardware, including Delta's decoders.

This compact, rugged module is capable of operation in harsh environments. Extended temperature operation, SRT/RIST support, and AES encryption makes it ideal for military, law enforcement, and traffic monitoring applications.

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MODEL VEC500

UHD/HD/SD VIDEO ENCODER OEM MODULE

VIDEO INPUT

Format SDI (SMPTE)/MIPI CSI-2
Connector MCX/Multi-pin Header

VIDEO COMPRESSION

Algorithms H.264/H.265/JPEG-XS (Option)
Format H.264: BP,MP,HP Level 5.1, 4:2:2, 8-Bit
H.265: MP,M10P Level 5.1, 4:2:2, 8/10-Bit
JPEG-XS: 4:2:2, 8/10-Bit
Resolutions 2160p/1080p/720p/1080i/480i/576i
Frame Rate 25/29.97/30/50/59.94/60
Scale/Crop HH/HV/CIF/ROI

STREAMING INTERFACE

Ports GbE
Protocol MPEG-2 Transport Stream
RTSP/RTP
SRT/RIST
Data Rate 64Kbps to 1Gbps
Configuration DHCP or Static Address
Selectable Ports
Auto Sense Full/Half Duplex
Unicast/Multicast
Connector 10-pin Header

METADATA INTERFACE

Format SDI VANC/RS-232/Ethernet
Protocol KLV/Clear
Connector MCX (SDI)/10-pin Header

CONTROL

Format Serial/Telnet/Web Browser
Protocol Delta's 3-character mnemonics/HTML/https/
SSH/SNMPv3
Connector 10-pin Header

TIME INPUT/OVERLAY

Protocol GPS/IRIG-B (DC)/PTP/NTP
Connector 10-pin Header

ENCRYPTION

Algorithm AES-128/256

ENVIRONMENTAL

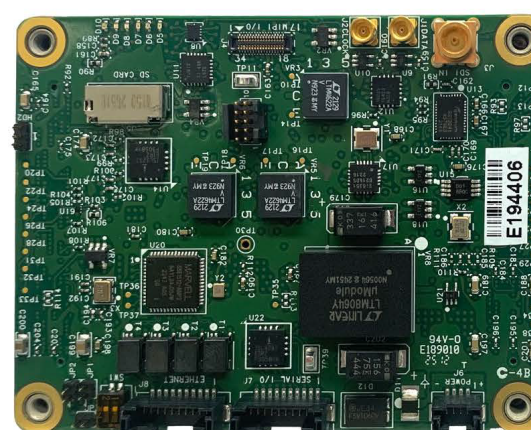
Temp (Op) Commercial (12Gb): 0°C to +71°C
Industrial (10Gb): -40°C to +71°C
Temp (Storage) -55°C to +85°C
Humidity 5%-95% RH, non-condensing

POWER

Volts +9-36VDC (12VDC Nominal)
Watts 10W
Connector 4-pin Header

SIZE

Dimensions 3.03"W x 2.36"D x .84"H
77.0mm x 60.0mm x 21.3mm
Weight 3.6oz (102g)



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TRANSFORMING MISSION CRITICAL VIDEO SOLUTIONS



Mission Critical
Video Compression, Recording, and Scan Conversion Products
for Intelligence, Surveillance, and Reconnaissance (ISR), Flight Test, Border Security, Training & Simulation, and Distance Learning

MISB COMPLIANT SMALL SWAP H.264/H.265 ENCODING LOW LATENCY MIL QUALIFIED HIGH-QUALITY



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TRANSFORMING MISSION CRITICAL VIDEO SOLUTIONS



High performance Video Encoding Enables Real-time Transmission For TODAY'S ADVANCED SENSOR Systems

Delta Digital Video has earned a reputation for delivering innovative, state-of-the-art solutions for digital video applications. Delta Digital Video remains at the forefront of advancing video compression technology to enable real-time delivery of high-quality, full motion video and data for critical missions and flight test.

RUGGED VIDEO ENCODERS

Designed for airborne, ground-mobile, and shipboard environments, our highly reliable Rugged Video Encoders compress and multiplex sensor video, audio, and metadata for real-time, low latency transmission to remote ground stations and downstream processing, exploitation, and dissemination (PED) systems.

- Easily integrated on manned and unmanned platforms supporting U.S. Air Force, Army and Navy programs
- MISB/STANAG/JITC and MIL-STD-810/DO-160/MIL-STD-461/ MIL-STD-704 compliant
- Support for synchronous/asynchronous KLV metadata and Cursor-on-Target (CoT) and can be configured to convert sensor telemetry into KLV encoded metadata
- Support for single, dual, or multi-channel, HD and SD video formats
- H.265/HEVC and H.264/AVC video compression algorithms



Model 7840R



Supporting New Zealand P-3 Orion Patrol Fleet Upgrade



Model 6880R



Model 7805R



Model VPX720

VIDEO ENCODERS & DECODERS

Built on the same architecture as our highly successful Rugged Encoders, our commercial/industrial Video Encoders ensure continuous operation in even the most difficult environments. These encoders are ideal for any Video-over-IP application. Our encoders can be easily integrated into any network and operate with SDI, Composite, HDMI, RGsB, and RGBHV video formats. Small and compact, the 4000 Series Video Encoders are scalable and affordable.

Delta Digital Video's Video Decoders are companion devices to our encoders and are designed specifically for low latency applications. These products also display decoded video for man-in-the-loop applications.

- Design is based on high-performance System-on-Chip (SoC), providing high-quality, low latency transmission for any remote monitoring application
- Available in OEM module, rack mount or half-rack mount configurations
- Flexible features to optimize video performance at any bandwidth
- H.265/HEVC and H.264/AVC video compression algorithms
- Easily integrated into any network

Included in Royal Australian Navy ANZAC Class Frigates



Model 4480E/D



Model 6850



Model 7841





VIDEO DISTRIBUTION SYSTEMS

The 9600 Series Video Distribution System (VDS) is a modular product that provides scalability for video distribution applications. The 9600 Series VDS and its companion video encoder and decoder modules are designed to provide a durable, cost-effective solution for encoding, transmitting, and decoding diverse video formats such as those found in ISR aircraft, ground stations, test ranges, operations centers, and classrooms.

- Compatible with 4000 Series Encoder/Decoder and competitive products
- Supported video formats: HD/SD-SDI / Composite / RGsB / RGBHV / HDMI
- The 9600 Series VDS is available in 1U (9610) and 2U (9600)
- Support for up to 15 channels of encoders and/or decoders

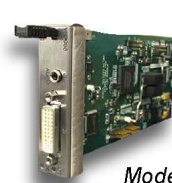


Model 9610

Included
in Surface Navy
Combat System
NPS MOD



Model 9600



Model VHD966



Model VHE965

VIDEO RECORDING / MANAGEMENT SYSTEM

Delta Digital Video's 9500 Series Video Management System is built around field-proven recording technology from our sister division, Ampex Data Systems, to deliver reliable recording and playback of streaming video. This scalable server, combined with COTS Video Management Software (VMS), is an excellent solution for managing both small and large video networks.

- Supports 10GBase-T and 1000Base-T Ethernet
- Support for multiple COTS VMS solutions
- Available in 2U rackmount chassis



Model 9500

VIDEO-TO-VIDEO SCAN CONVERTERS

Delta Digital Video's Video Scan Converter technology allows for the conversion between video signal formats in order to facilitate display or recording. Using an advanced scaling engine, multi-tap filtering, and horizontal and vertical interpolation, these products provide high-quality conversion to/from RS-343, RS-170, PAL, HD, SD and xVGA video formats.

- OEM modules, rackmount, rugged, and custom packages available
- Single and multi-channel units are available
- Legacy RS-343 formats supported



Model VSC/890H



Model VTV/875R

STROKE-TO-RASTER SCAN CONVERTERS

Delta Digital Video's SSC family of Stroke-to-Raster Scan Converters provide for the display, recording, and transmission of stroke video on standard COTS equipment. These products are compatible with most XYZ vector outputs generated by random deflection devices, such as radar, sonar, HUD or spectrum analyzer.

- Superior filtering techniques, high-resolution sampling, and an advanced scaling engine offers high-quality conversion of any stroke device
- Some units provide for mixing of stroke with other video inputs
- Flexible video output formats



Model SSC/300



Model VSC/900

Supporting
LMCO eCASS
Program

Delta Digital Video's team of expert engineers will work with you to develop customized products to meet the requirements of specialized applications. Contact us to learn how we can assist you in reaching your goals.



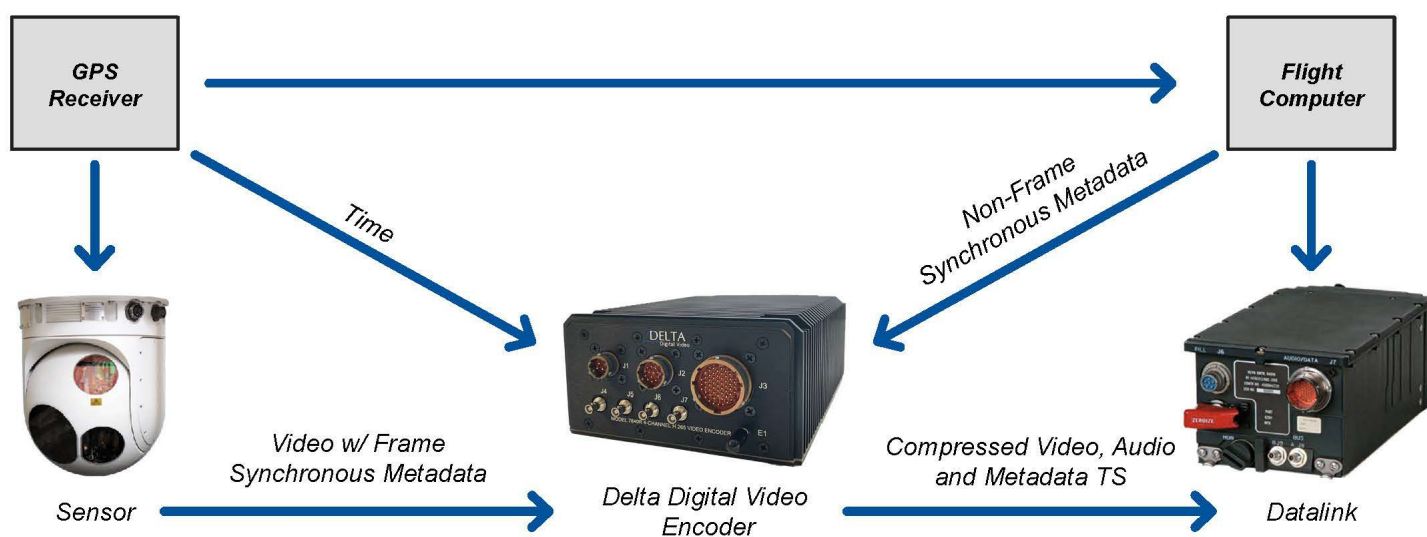


TRANSFORMING MISSION CRITICAL VIDEO SOLUTIONS

TYPICAL UAV VIDEO DOWNLINK CONFIGURATION



TYPICAL UAV ENCODER CONFIGURATION



DESIGNED AND BUILT IN THE USA
USED AND SUPPORTED WORLDWIDE



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