HARRIS®
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Intraplex® NetXpress™

Video Encoder with Optional Analytics
NX-AVC-1

Video Encoding and Transport

The Harris® Intraplex® NetXpress™ NX-AVC-1 video encoder module represents the latest standards-based technology for low-bit-rate video transport. The module can encode an incoming analog NTSC or PAL signal to H.264, MPEG-4, or Motion JPEG (M-JPEG) for distribution across IP networks. The highly efficient H.264 standard offers an excellent combination of video quality, bandwidth reduction and cost savings.

The NX-AVC-1 plug-in module is compatible with the Intraplex NetXpress IP multiplexer. This allows for integration of video streaming and analytics alarms into end-user video, audio, data and voice networks.

Compatibility with the NetXpress platform also provides a common management control interface, scalability, and application flexibility for a superior managed solution. The NX-AVC-1 module, used in conjunction with the NX-MIU-801 module interface unit, provides video and audio connections to external equipment.

Standards-based video encoding allows integration of NetXpress™ with compliant third-party software applications.

Optional Video Analytics

Video analytics capability is an option for the NX-AVC-1 module. Video analytics is an automated tool for monitoring activity in the camera view and generating alarms based on user-defined criteria. The ability of the analytics toolset to identify persons and vehicles and to recognize violations is an invaluable asset in surveillance applications. This capability transforms a passive surveillance monitoring activity into a proactive, efficient system.

Features

- **Video Stream Encoding**

  The NX-AVC-1 provides two channels of video encoding. NTSC or PAL signals can be encoded to H.264 Baseline Profile, MPEG-4 Simple Profile or M-JPEG video formats. The encoded channels may be unicast or multicast.

- **Compatible with PC Viewers**

  PC-based viewers can receive and display video that is encoded on the NX-AVC-1. Video encoding parameters, such as bit rate, frame rate and resolution, can be adjusted directly from the PC viewer using RTSP protocol or via the NetXpress browser-based management interface.

- **Video Analytics**

  With the addition of the optional video analytics feature, the NX-AVC-1 encodes a single video channel while simultaneously analyzing the video for user-defined security violations. Alarms are broadcast on the network and can be sent via e-mail for notification and response of security personnel. These alerts are logged for later evaluation.

- **Alarm-Driven Video**

  Alarms generated by the video analytics tool can temporarily adjust the video parameters to provide improved imaging for security personnel, while working within network bandwidth constraints.

Specifications

Specifications are subject to change without notice.

General

System Compatibility	NetXpress IP multiplexers via the channel access module interface

Encoding Standards

Video	2-channel simultaneous encoding or 1 channel of encoding with video analytics H.264/MPEG-4 Part 10 AVC baseline profile MPEG-4 simple profile M-JPEG
Audio	MPEG-1 layer 3
Data	RS-232 or RS-422 for Pelco P-compliant PTZ control

Analytics

Optional video analytics packages	NX-VA-200 or NX-VA-1000

Connections

Module Interface Unit	The NX-AVC-1 video module requires the NX-MIU-801 module interface unit for input/output connections
Inputs	Video: two composite BNC, selectable as NTSC or PAL Audio: one stereo/dual mono, 3.5 mm phone jack Data: 6-pin RJ-11 modular
Outputs	Video: one composite BNC

H.264 Video Encoding

Encoded Video Resolution	QCIF (NTSC: 176x120, PAL: 176x144) CIF (NTSC: 352x240, PAL: 352x288) 4CIF (NTSC: 704x480, PAL: 704x576)

Encoded Video Control Points (Varies by Encoding Algorithm)

User-selectable bit stream as constant bit rate (CBR), variable bit rate (VBR), or constant quality, typical applications from 64 kb/s to 3 Mb/s

User-selectable frame rate as 1-30 fps (NTSC) or 1-25 fps (PAL)

User-selectable Group of Pictures (GOP) frames

Key Features

Encoding delay as low as 150 ms depending on encoding settings.

Context-adaptive variable-length coding (CAVLC)

Encoded Video Stream	RTP/RTSP unicast or multicast
Management	NX-AVC-1 management is through the NetXpress Web browser and via RTSP message from the PC viewer

Physical and Environmental

Nominal Power Consumption	Less than 5 W typical
Temperature	32° to 122° F (0° to 50° C)
Humidity	0% to 90% non-condensing

For more information, please visit www.broadcast.harris.com

HARRIS®
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Broadcast Communications Division
4393 Digital Way | Mason, OH USA 45040 | Tel: (513) 459 3400
www.broadcast.harris.com

DS_NX-AVC-1_0109