SDVN™ Software Defined Video Networking

www.evertz.com
Overview

Evertz is leading the IP Revolution with its Software Defined Video Network (SDVN™) solution for the new media and broadcast industries. SDVN is an exciting new architecture developed around a 10/100GE core. SDVN offers broadcasters, content distributors and providers a flexible, format agnostic and scalable infrastructure for SD, HD, and Ultra HD (4K and 8K) video.

Evertz broad range of SDVN™ products includes the EXE and IPX 10/100GE high capacity switch fabrics, a series of Media/Video/Audio Gateway devices, the DreamCatcher 10GE enabled instant replay system and the VIP10G multi-image display processor. SDVN™ is powered by MAGNUM, Evertz’ award winning control system, which enables operators to use the same familiar work surfaces while taking advantage of video over IP.

Through its intelligent utilization of extreme bandwidth switching, the SDVN solution allows media organizations to harness the true potential of a 10/100GE IP-Ethernet network. Evertz’ SDVN™ solution provides unprecedented scalability, highly efficient workflows, and a reduction in capital and operational costs.

Key Features

Software Defined Network
Leading the IP Revolution

Evertz utilizes an SDN architecture which provides all the flexibility of a network based solution with all the reliability of baseband video routing.

10/100 Gigabit Ethernet
Scalable Architecture

SDVN™ takes full advantage of 10/100 Gigabit Ethernet, with unprecedented scalability.

Orchestration & Control
Flexible Reliable Control

SDVN™ can be controlled from virtually any surface, offering a variety of options from hardware control panels to third party touch surfaces.

Deterministic Routing
Simple SRC to DST Philosophy

SDVN™ is powered by Evertz’ MAGNUM unified control system which takes the most complex configuration and makes it very easy to use.

Format Agnostic
Compressed & Uncompressed

The unique scalable architecture of SDVN™ allows for any resolution and format to be routed and visualized.

Pooled Resources
Quick & Efficient Deployment

SDVN™ allows resources to be shared more efficiently thereby reducing the overall cost of ownership in projects.
**Orchestration & Management**

**MAGNUM**

Evertz’ MAGNUM unified facility control system is at the orchestration and control layer of the SDVN™ solution. MAGNUM manages the signal flow of video, audio and data packets over a network consisting of Evertz 10/100GE EXE and 3080IPX switch fabrics, a series of IP media gateways including 570IPG and 3000REM, and Evertz traditional SDI products such as EQX and 7812 series.

MAGNUM gives the operator full control over the switching and routing of signal flows. MAGNUM bridges the control between legacy SDI and next generation IP systems to provide seamless control across all platforms. Leveraging existing physical router control surfaces and/or VUE (Evertz customizable control interface), MAGNUM enables operators to interact with SDI/IP hybrid infrastructures or exclusively IP solutions to execute the source to destination operations performed in traditional baseband environments. MAGNUM is truly the heart and brains of Evertz SDVN™ solution.

**VistaLINK PRO**

All of the SDVN™ hardware elements are SNMP enabled and monitored through Evertz VistaLINK® SNMP networked monitoring software. VistaLINK® is an enterprise grade SNMP management solution that monitors, controls and automatically analyzes failures in the system. VistaLINK® PRO’s graphical web client allows for intuitive visualization of a system with intuitive fault notification. The SDVN™ components report their status to VistaLINK® PRO where from a single workstation the health of the entire system can be monitored and observed.

**ASPEN**

ASPEN (Adaptive Sample Picture ENcapsulation) was developed to meet the real world requirements of an IP-centric facility while leveraging proven MPEG2-TS standards. ASPEN offers a robust format for encapsulating uncompressed Ultra HD/3G/HD/SD over MPEG-2 transport streams (TS). When combined with existing SMPTE standards such as SMPTE ST 302 (audio over TS), SMPTE ST 2038 (ancillary data over TS) and the SMPTE 2022 family of IP standards, ASPEN provides broadcasters with a framework for transporting video, audio, and data over scalable IP networks. Ultra low latency with independent video, audio and ancillary data flows also makes ASPEN ideal for use in production environments and work flows. ASPEN is an open framework that has been submitted to SMPTE and is being supported by a number of vendors.
**High Capacity Switch Fabrics**

**EXE40-VSR / EXE28-VSR**

The EXE provides unmatched flexibility and scalability for video transport over IP. The EXE40-VSR features up to 46Tb/s of switching capacity and supports 2304 10GE ports in a single 48RU chassis. Using SMPTPE 2022-6 and/or ASKIP, the EXE non-blocking switch fabric supports up to 13,860 uncompressed HD-SDI and or MPEG-2, which number of video streams can reach in the millions. The EXE40-VSR features over 23TB/s of switching capacity and 1152 ports of 10GE signal processing in a single 28RU chassis.

**3080IPX-64/32/16-10G**

The 3080IPX is built with 1/10GE ports and offers 16, 32 and 64 port options from 320Gb/s to 1.2Tb/s bandwidth configurations. It performs low latency fast switching which makes it an ideal solution for video environments.

**Media IP Gateways**

**7880PG-10GE2**

The 7880PG-10GE2 is the optimal Media Gateway video interface access card for video transport applications. With direct conversion of up to 6 signals to direct mezzanine compression via JPEG2000, the 7880PG-10GE2 series delivers unparalleled processing densities. 7880PG-10GE2 port 7 & 8 also support up to 2 dedicated signal paths which could carry ASI.

**IP to HDMI**

**2430RX2-J2K-IP**

The 2430RX2-J2K-IP is a versatile video over IP to HDMI/DVI gateway. This self contained module accepts up to two JPEG2000 over IP streaming inputs. It decodes, processes, color corrects and converts the output to a DVI / HDMI signal. With integrated auto scaling the 2430RX2-J2K-IP device can drive resolutions up to WUXGA (1920x1200).

**Audio IP Gateways**

**7880AES-8-IP**

The 7880AES-8-IP provides eight input/output ports that transport balanced / unbalanced AES signals over dual Gigabit Ethernet trunks. These modules facilitate connection to redundant IP trunks and provide automatic switching between a pair of IP links.

**Video/Media IP Gateways**

**7880PG-10GE2**

The 7880PG-10GE2 is the optimal Media Gateway video interface access card for video transport applications. With direct conversion of up to 6 signals to direct mezzanine compression via JPEG2000, the 7880PG-10GE2 series delivers unparalleled processing densities. 7880PG-10GE2 port 7 & 8 also support up to 2 dedicated signal paths which could carry ASI.

**Multilayer Ethernet Switch**

**3080IPSR**

The 3080IPSR is a hybrid layer 2 / layer 3 Ethernet switch that facilitates control and file based workflows. It can be used for building IP device management LANs or deployed alongside other packet based Evertz products, in context of multimedia delivery applications.

**Video IP Gateways**

**7890IPG**

The 7890IPG-3G18-SFPP12 is a high density, multi-port, multi-flow hardware Network Address Translation (NAT) engine with enhanced features allowing service providers to seamlessly bridge across networks in multi-tenant environments. The 7880PG-NAT-6-10GE is conceptually organized as 6 WAN-side ports + 6 LAN-side ports, with a packet processing core between each WAN-LAN pair.

**Multiviewer**

**3067VIP10G-J2K-HW / 3067VIP10G-3G-HW**

The 3067VIP10G-J2K-HW / 3067VIP10G-3G-HW form the optimal MADI interface access points for next generation Hybrid Baseband / IP broadcast infrastructures. Features direct easy to follow mapping of 9 MADI signals to/from 144 TS output streams over 10GE.
### Ordering Information

**SDVN Orchestration & Control**
- **MAGNUM-SDVN**
  - Unified Facility Control

**High Capacity Switch Fabrics**
- **EXE40-VSR**
  - 46Tb/s EXE Video Service Routing Platform
- **EXE28-VSR**
  - 23Tb/s EXE Video Service Routing Platform
- **3080IPX-16-1OG**
  - Integrated Switching Fabric, 16 10GE port with 600Gb/s fabric bandwidth
- **3080IPX-32-10G**
  - Integrated Switching Fabric, 32 10GE port with 600Gb/s fabric bandwidth
- **3080IPX-64-10G**
  - Integrated Switching Fabric, 64 10GE port with 1.5Tb/s fabric bandwidth

**Ethernet Switch**
- **3080IPSR**
  - Multi-layer Ethernet Switch

**Audio IP Gateways**
- **7890AESM-8-IP**
  - Eight Channel AES Encapsulating IP Gateway
- **7890AESD-8-IP**
  - Eight Channel AES De-Encapsulating IP Gateway
- **7820P-MADI**
  - Dual Channel MADI from TS and dual MADI to TS Adapter
- **3080MADIB-TS-10GE-2**
  - Hybrid Baseband/Ethernet Infrastructure – Top of Rack MADI Interface module
- **3080TS-MADIB-10GE-2**
  - Hybrid Baseband/Ethernet Infrastructure – Top of Rack MADI Interface module

**Media IP Gateways**
- **3080IPG-AS16-IPGE**
  - IP En/De-Capsulator with 16 ASI I/O and 4x SFP 1GE
- **3080IPG-AS24-IPGE**
  - IP En/De-Capsulator with 24 ASI I/O and 4x SFP 1GE
- **3080IPG-AS32-IPGE**
  - IP En/De-Capsulator with 32 ASI I/O and 4x SFP 1GE
- **7890M-10GE2**
  - Universal Media over IP Gateway for up to 10x Bidirectional ASI/SDI/HD/3G/1GE
- **7890IP-AS1IP**
  - ASI/HD/SD IP Encapsulator
- **7880IP-10GE2**
  - Hybrid Baseband/Ethernet Infrastructure – Media Gateway

**Video IP Gateways**
- **570IPG-3G18-IPGE**
  - 18 3G/HD/SD IP Media Gateway
- **EQX-IP18-IPGE**
  - IP Input and IP Gateway Module
- **EXQ-OP18-IPGE**
  - Output and IP Gateway Module
- **7880IPG-10GE2**
  - Hybrid Baseband/Ethernet Infrastructure – Media Gateway

**Network Address Translation**
- **7880IPG-10GE2**
  - High Density Network Address Translator

**Multiviewer**
- **3067VIP-10GE-2K-HW**
  - 10GE J2K Multi-Image Display Processor Hardware
- **3067VIP-3G-10GE**
  - 10GE Multi-Image Display Processor Hardware

**Monitoring**
- **MVIP-II**
  - IP Based Multi-Image Display & Monitoring Solution
- **TSMIP-10GE-2RU**
  - IP Transport Stream Monitor

**IP to HDMI**
- **2430RX-2K-IP**
  - Dual J2K 2Kx2K 1.0 to HDMI Converter
- **2430RX-3G-10GE**
  - SMPTE 2022-6 / ASIP to HDMI Converter

**Remote Interfacing**
- **3000REM-TX9-10GE2**
  - 9 Baseband Input REmote Hybrid Interface Processing Module
- **3000REM-RX9-10GE2**
  - 9 Baseband Output REmote Hybrid Interface Processing Module

**Universal Ingest Transcoding**
- **3080ITXE-HW-P60-UDC**
  - Multiformat Integrated Transcoding Encoder

**IP Playout**
- **OVRT-LIVE-2U**
  - Integrated Playout Engine with IP input/output

**Main & Multi-Screen Transcoding & Compression**
- **3480TXE**
  - Software Defined Accelerated Transcoding Platform
- **3480XPA-FRG**
  - Multiscreen Bulk Packager, Integrated Transcoder Packager
- **7880SLKE-H264HD**
  - HD/SD-SDI Streamingink™ H.264/MPEG Encoder

**Contribution Encoding**
- **7880IPG-10GE2**
  - Hybrid Baseband/Ethernet Infrastructure – Media Gateway
- **7880ENC-H264HD-IPASI**
  - Professional HD/SDI H.264 and MPEG-2 Encoding Platform
- **3480TXE**
  - Software Defined Accelerated Transcoding Platform
- **3080UEP**
  - OUTBOUND Contribution Universal Encoding Platform
- **5782ENC-H264HD-IPASI**
  - Professional Contribution H.264 and MPEG-2 Encoder

**IP Clean Switch**
- **7880R2x1-IP-CS**
  - MPEG TS over IP Clean Switch Module with Single Clean Switch

**Network Management System**
- **VistaLINK Enterprise NMS**
  - Network Management System for Enterprise

**Content Management and Automation**
- **Mediator**
  - Content Management and Workflow Platform

**Production Playout and Replay**
- **DC-400**
  - DreamCatcher Live Production Replay System
- **DC-100**
  - DreamCatcher Content Playout

---

For product ordering information please contact the appropriate sales office listed below.