

DENSITÉ 3+ XIP-3901-ASI

High-density ASI/IP Gateway Application for XIP-3911 and XIP-3901



ASI/IP gateway application for the software-defined platforms Densité 3+ XIP-3911 and XIP-3901.

The XIP-3901-ASI application from Grass Valley® facilitates cable, satellite and IPTV operators' migration towards IP infrastructures by offering a flexible, highly integrated DVB-ASI/IP bidirectional gateway that can bridge any type of MPEG transport stream to/from IP networks. The high density allows 192 (96 ASI->IP and 96 IP->ASI) gateways per 4 RU Densité 3+ FR4 frame, saving substantial rack space in high channel count environments. Its scalability through modularity is the ideal solution to address increasing TV channel lineups.

The dual Ethernet SFP sockets allow fiber or electrical connectivity to the main and backup video backbone to provide complete redundancy of MPEG transport streams using the SMPTE ST 2022-7 Seamless Protection Switching. Each DVB-ASI I/O can also be paired in redundant mode. Combined together the IP and DVB-ASI redundant ports offer a robust solution to ensure uninterrupted services.

The XIP-3911 and XIP-3901 Agile Processing Platforms also provide long-term value by protecting a customer's CAPEX investment in

current HD and UHD SDI and now IP infrastructure. The application-based licensing model adapts these platforms to new workflows with different software applications resulting in a truly virtualized hardware environment.

The XIP-3901-ASI is configured, controlled and monitored by GV Orbit® from Grass Valley, taking advantage of many features and functions specifically crafted to make IP easy. It can also be configured using the on-board HTML5 web interface and documented Rest API, and controlled via NMOS IS-04/05.

Densité 3+ FR4



12 XIP-3911 = 24 4K UHD Channels

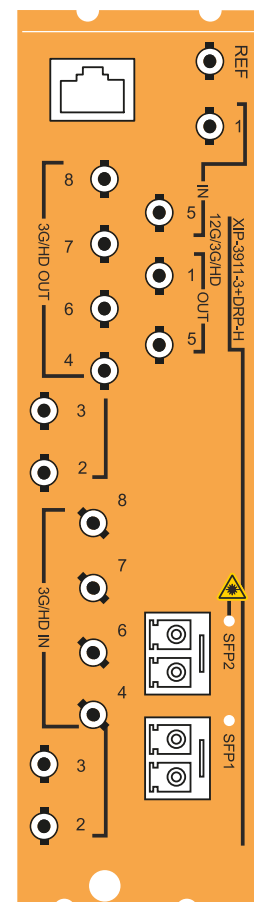
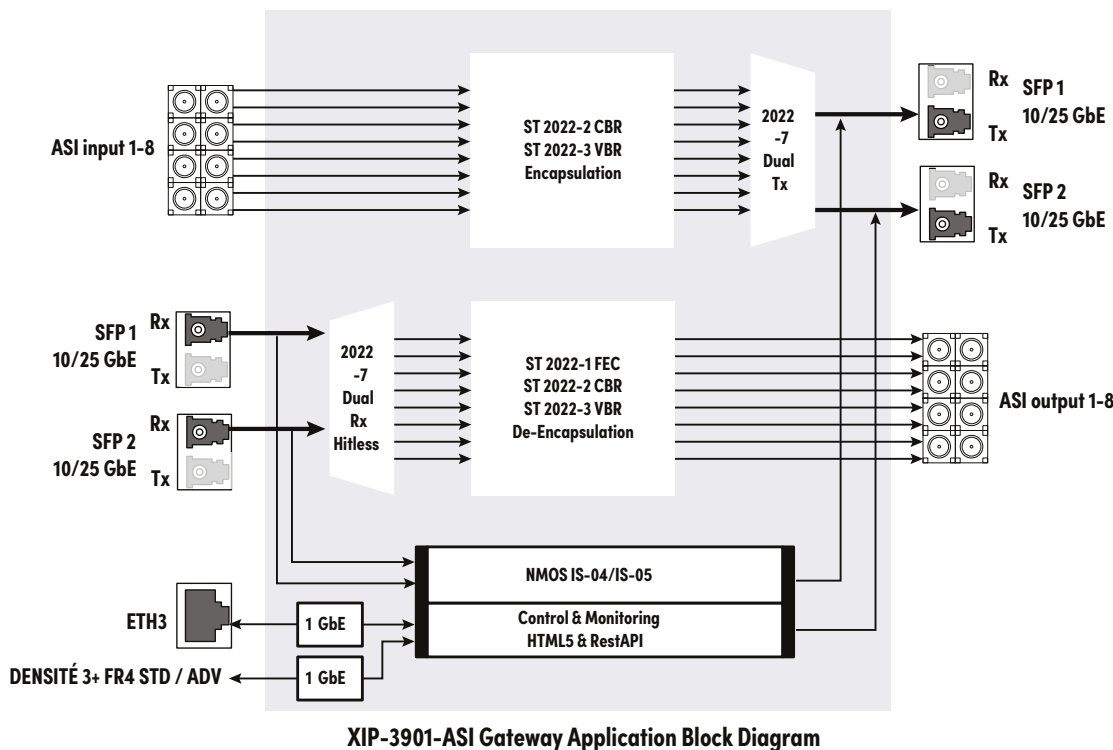
Densité 3+ FR1



2 XIP-3911 = 4 4K UHD Channels

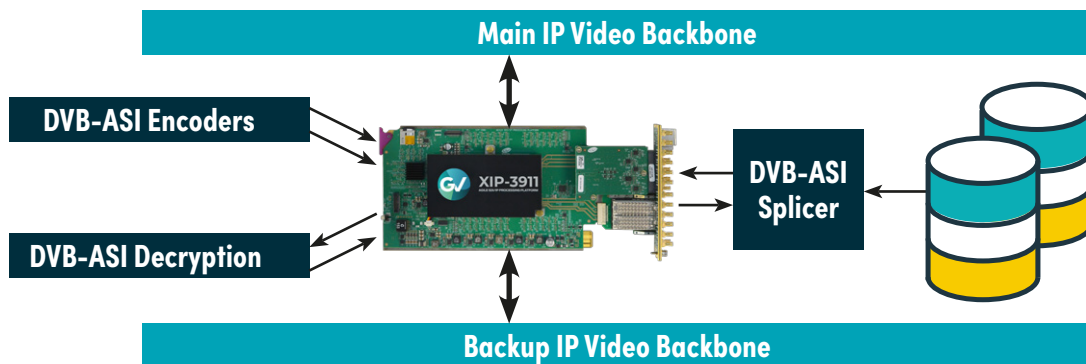
Key Features

- Very high density with 16 gateways per card/192 gateways per 4 RU Densité 3+ FR4 frame
- Support up to 8 DVB-ASI inputs and 8 DVB-ASI outputs
- Handle most demanding streams:
 - Up to 213 Mb/s per DVB-ASI
 - Total of 1.7 Gb/s maximum on 10/25 GbE Ethernet device
- Convert legacy ASI devices to IP and IP to ASI conversions
- Ability to pair DVB-ASI I/O as main and backup with automatic change-over switch
- Flexible IP connectivity through two distinct SFP ports for optical or electrical modules:
 - 10 GbE AOC and Optical SFP
 - 25 GbE AOC and Optical SFP
 - Both FEC74 (CL74 Fire Code) and FEC108 (Reed Solomon IEEE) Forward Error Correction are supported on 25 GbE interfaces
- SMPTE ST 2022-7 Class A seamless protection switching of IP streams
- SMPTE ST 2022-1 FEC for real-time video/audio transport over IP networks on the transmit side only
- SMPTE ST 2022-2 unidirectional transport of constant bit rate MPEG-2 Transport Streams over IP networks
- SMPTE ST 2022-3 unidirectional transport of variable bit rate MPEG-2 Transport Streams on IP networks
- UDP/RTP encapsulation 1 to 7 TS/IP packet
- Support of multicast traffic control using IGMPv3 MSM/SSM
- Network jitter removal
- NMOS IS-04 discovery and registration (limited supported in AMWA)
- NMOS IS-05 device connection management (limited supported in AMWA)
- Support for DHCP, LLDP and DNS-SD for easy IP configuration
- In-band or out-of-band control of NMOS, web interface and Rest API
- Dynamic endpoint control (multicast join/leave) and monitoring by GV Orbit
- Complete integration with GV Orbit for configuration, control, monitoring and routing
- HTML5 web-based configuration interface
- Open configuration management & monitoring with the Rest API
- Individual XIP-3911 and XIP-3901 applications licensed, purchased as needed
- Rapid switching between XIP-3911 applications

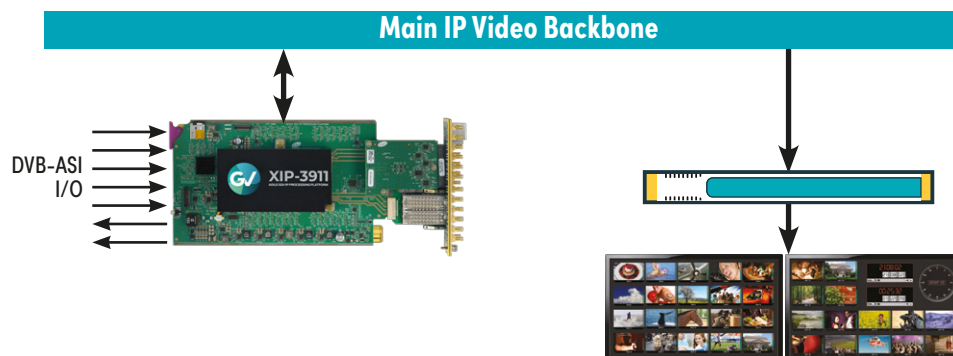


Typical Applications

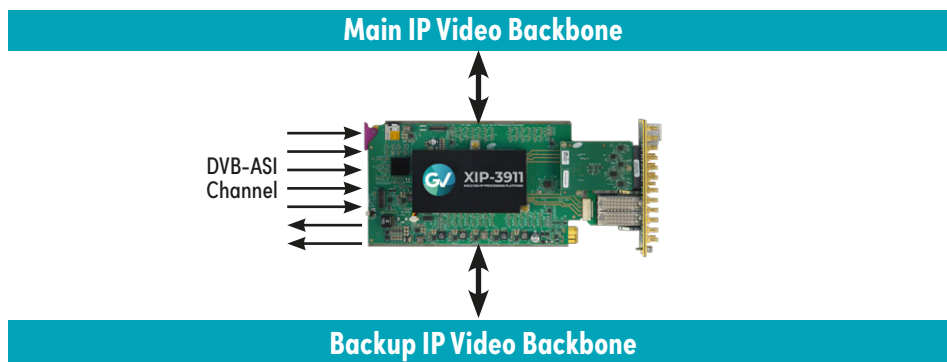
Connect any legacy DVB-ASI equipment to an IP video network.



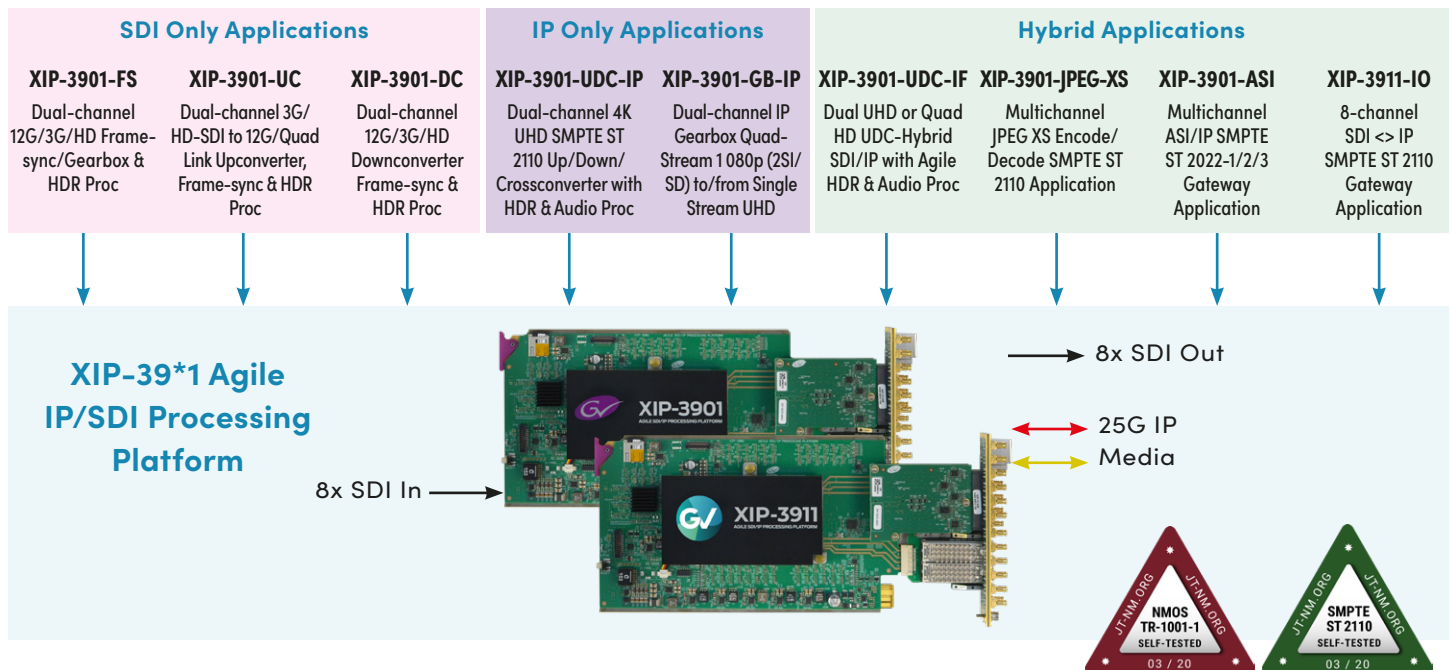
DVB-ASI interface to IP-only devices.



Aggregate/distribute DVB-ASI TV channels to/from the IP video backbone.



XIP Application Agility Evolution



Specifications

ASI (Inputs/Outputs)

Physical: 16 HD-BNC connectors configured as 8 inputs and 8 outputs

Standards: EN50083-9 (V2:3/98) DVB ASI

Cable length (Belden 1694A): 300m (984 ft.) Belden 1694A at 270 Mb/s

Data bit rate: Each I/O up to 213 Mb/s

TS packet size: 188/204 bytes

Return loss: >15 dB up to 270 MHz

Output jitter: <0.2 UI (0.74 ns) pp

Ethernet Ports for Media

Physical: Two SFP+ sockets for active optical cable, short- and long-reach fiber

Standard: IEEE 802.3-2008 for 10 GbE and 25 GbE

Performance: Up to 1.7 Gb/s of streaming per direction depending on the physical interface

Transport: SMPTE ST 2022-2/3 IP Unicast or Multicast with IGMPv3 & SMPTE ST 2022-7 Class A

Ethernet Ports for Control

Physical: One electrical RJ45 port

Standard: IEEE 802.3 1000 Mb/s

Electrical

Power: 60W maximum

Ordering

Application Software

XIP-3901-ASI

High Density ASI/IP Gateway application

Densité 3+ Frame

XIP-3911

Agile SDI/IP processing platform

XIP-3911-3+DRP-H

Double rear panel for Densité 3+ with HD-BNC

SFP+ Options (one or two SFP are needed to run this application)

SFP-ETH10G-RT-S13-LC

Optical 10 GigE cartridge, single-mode 1310 nm, LC/PC connector, 10 km

SFP-ETH10G-RT-M85-LC

Optical 10 GigE cartridge, multimode 850 nm, LC/PC connector, 300m

SFP-25G-SR

SFP28 25GBASE optical transceiver MMF

SFP-25G-LR

SFP28 25GBASE optical transceiver SMF

This product may be protected by one or more patents. For further information, please visit: www.grassvalley.com/patents

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