Selenio™ Network Processor

IP gateway, synchronizer, processor for hybrid/all-IP HD/3G/UHD

Selenio™ Network Processor (SNP) is the industry's first pure-IP processor. With its introduction, Imagine Communications continues to forge ahead with the delivery of innovative solutions for the new broadcast reality of IT-based infrastructures. The high-density SNP platform offers IP-to-IP processing capabilities, handling uncompressed UHD signals based on the SMPTE 2110 specification for transporting media over IP networks.

Along with powerful IP-enabled video processing, the SNP offers advanced audio processing, as well as timing, synchronization, and conversion capabilities, including HD-UHD upconversion, UHD-HD downconversion, HD-3G upconversion and 3G-HD downconversion. It also manages the High Dynamic Range (HDR) adaptations and conversions required for integrating UHD and HD signals. Building on the award-winning legacy of Imagine's globally deployed 1RU processors, the SNP also features an edge synchronizer for processing streams before they enter the core router, reducing complexity in signal routing.

As a next-gen, FPGA-based processor, the SNP seamlessly bridges SDI and IP networks, while easily meeting UHD requirements in live production. It interoperates with Imagine's other UHD- and IP-ready solutions, including the EPIC™ MV monitoring and control system, and Versio™ cloud-native integrated playout platform, for a seamless end-to-end production workflow.

The compact and versatile standards-centered SNP is ideal for media companies looking to reduce costs and complexity associated with supporting SDI and hybrid SDI-IP workflows in their studio and mobile facilities, while optimizing the agility and efficiency of their IT-based environments.

Benefits

- Deliver standards-based uncompressed video over IP in any production environment
- Reduce operational complexity with multiple processing functions in one compact frame
- Transition smoothly from a hybrid to full-IP network
- Access agile and flexible processing capabilities for different events and applications
- Incorporate UHD in end-to-end IP production workflows

Features

- Video over IP compliant to ST 2110
- Dual QSFP28 flexible Ethernet up to 100GbE at ST 2022-7
- 4 independent processing blocks for various operations (synchronization, conversion, processing)
- Redundant power supplies and control interfaces
- Front-serviceable main module and power supply assembly

- 32 HD-BNC connectors for SDI I/O (8 are 12G-capable)
- SFP+ sockets for flexible signal I/O interfaces

Details

The SNP is optimized for UHD production via redundant 100-Gigabit Ethernet network connections, capable of delivering eight uncompressed UHD signals in each direction. Support for these high-capacity network connections eliminates the requirement to compress UHD signals, improving overall efficiency, and contributing to space and power-consumption savings, while preserving picture quality and system latency.

The SNP provides critical synchronization and timing functions, overseeing the integration of new signals into the production environment and helping to ensure the optimal timing of SMPTE 2110 signals for interoperability with all other compliant equipment.

Along with powerful, IP-enabled video processing, the SNP will offer all the capabilities required in today's complex production environments, including audio processing, color space adjustments and HD-UHD and HD-3G up- and down-conversion, as well as the High Dynamic Range (HDR) adaptations and conversions required for integrating UHD and HD signals.

Ideal for the fast-paced mobile production industry, the SNP features four integral processing blocks, each of which can be assigned a separate application and reprogrammed on the fly. The multipurpose nature and quick-configuration capabilities of the SNP significantly reduces equipment requirements and enables production companies to respond to the demands of the current job, and then quickly reconfigure to tackle future assignments.

The standards-based SNP easily integrates with commercial off-the-shelf (COTS) IP routing and switching equipment, providing media companies with the flexibility to work with a variety of technology suppliers for signal routing and management. SNP also interoperates with Imagine's other UHD- and IP-ready solutions, including the Versio™ cloud-native integrated playout platform and EPIC™ MV monitoring and control system, for a seamless end-to-end production workflow.

Ordering Information

HARDWARE		
SNP-GW-3GX32		Selenio Network Processor 1RU Base IP Gateway unit supporting 32 x HD/3G-SDI with Two (2) QSFP28, Four (4) SFP+ interfaces, field-replaceable redundant AC power assembly and main processing board. (Order supported QSFP/SFP modules separately)

100G QSFP		
OP+QSFP+TRMM+100G		100GB/S QSFP28 SR4, MTP/MPO OPTICAL CONNECTOR, 70M WITH OM3 AND 100M WITH OM4
AQSFP-100G-SR4		ARISTA 100GB/S QSFP28 SR4, MTP/MPO OPTICAL CONNECTOR, 70M WITH OM3 AND 100M WITH OM4
AQSFP-100G-PSM4		ARISTA 100GBASE-PSM4 QSFP TRANSCEIVER, UP TO 500M OVER PARALLEL SINGLE MODE FIBER
OP+QSFP+100G+10K		100GB/S QSFP28 LR4, LC OPTICAL CONNECTOR, 10KM WITH SMF

100G AOC		
AAOC-Q-Q-100G-5M		ARISTA QSFP100 TO QSFP100 100GBE ACTIVE OPTICAL CABLE 5 METER

FIELD-REPLACEABLE SPARES	
SNP-MAIN-PCB-ASSY	SNP FIELD-REPLACEABLE SPARE MAIN PCB ASSEMBLY
SNP-350W-ACPS-ASSY	SNP FIELD-REPLACEABLE SPARE REDUNDANT 350W AC POWER SUPPLY ASSEMBLY
SNP-FPNL-ASSY	SNP FIELD-REPLACEABLE SPARE FRONT PANEL ASSEMBLY