

Selenio™ Network Processor IP Gateway Application Note



Make the SDI to IP Transformation with Ease

The Challenge:

As traditional SDI production facilities are fast becoming legacy systems, next-generation IP systems are the development baseline for all forward-looking standards, technologies, infrastructure, and workflows. However, the transformation of an entire facility to a SMPTE ST 2110 architecture may seem like a sea change in terms of technology, cost, training, and workflow upgrades.

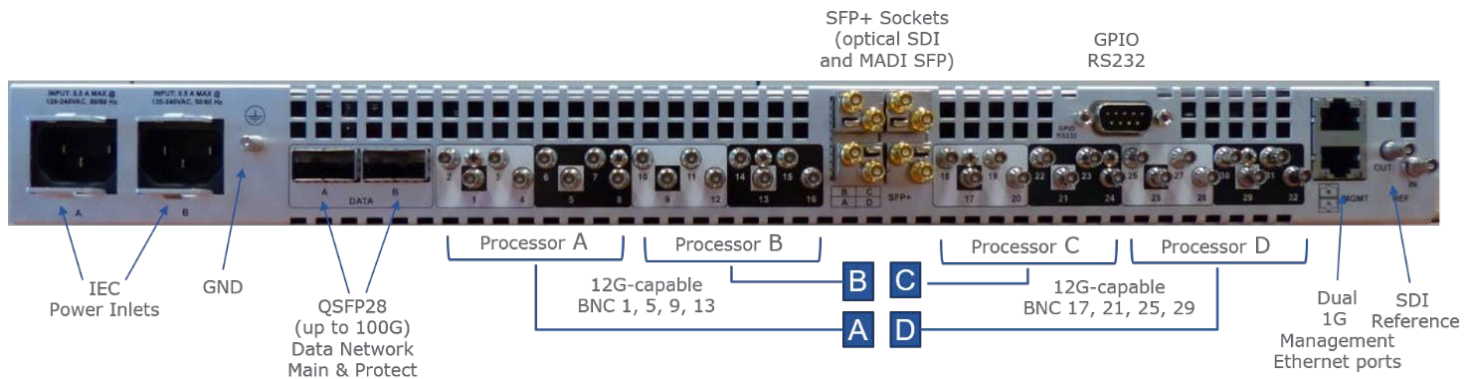
The rapidly evolving media landscape is challenging SDI facility owners and operators to consider “when to jump.” Beyond considerations of flexibility and scale, concerns include the cost of migration, risk of leaving SDI-based equipment as redundant door stops, and retraining facility staff.



The Solution:

Imagine Communications has the solution in the Selenio Network Processor (SNP). SNP allows you to reap the benefits of a hybrid SDI/IP facility today — capitalizing on a phased, less costly, and less disruptive IP implementation, while leveraging your existing SDI plant and SNP IP Gateways. Coupled with the Magellan™ SDNO control system, training becomes less of an issue as the IP routing / orchestration system utilizes traditional, familiar routing panels. For the operator, the new system behaves like an SDI router, with Destination > Source > Take behavior. As the transition moves closer to a full IP architecture, SNP units can be redeployed for a multitude of other processing and multiview display tasks, remaining an efficient resource on the media network.

With one of the highest-density processors, SNP provides 32 1080p HD, or 8 Ultra High-Definition (UHD) gateways. These ultra-low latency gateways can be configured as inputs or outputs in groups of four. In-band PTP or external reference signals will ensure signals are locked and timed appropriately for fast and clean switching within the routing network. Optional SFP+ expansion cages allow for greater flexibility in combining existing audio infrastructure into the SMPTE ST 2110 network.



The SNP offers support for both SMPTE ST 2022 and SMPTE ST 2110.

Features and Benefits:

- High-density processing
- SMPTE 259M, 292M, 424M, ST 2082 support
- SMPTE ST 2110-20,22,30,31,40 support
- SMPTE ST 2022-6,7 support
- Ability to fully construct or deconstruct video signal and rebuild to PTP sync
- Economic placement of gateways in a geo-dispersed topology
- Local reference signal
- MADI to ST 2110-30 Audio Bridge
- NMOS IS 04/05 Compliant
- Video and Audio Processing handles
- 100Gb QSFP Interconnect for primary and redundant networks
- Front to back cooling tested to meet the toughest requirements

Ready for the Future:

The Selenio Network Processor truly is modular without the hardware modules. Along with being a first-in-class IP gateway, the Selenio Network Processor offers a host of other personalities that can be easily activated via software licensing.

As a video processor, SNP can handle production signals as baseband SDI or via IP as ST 2110. Other SNP personalities include Frame Synchronizer, Up/Down/Cross Conversion, UHD (21S,SQD) to 12G SDI, HDR Conversion, Multiviewer, and a host of other processing features.

As technology advances and devices are cycled out for new ST 2110-enabled systems, SNP continues returning on customers' investments and serving facilities well into the future.