

# Selenio™ Network Processor Applications in Houses of Worship

Selenio™ Network Processor's enhanced capabilities support the growing needs of House of Worship Campuses

## The Challenge:

Houses of Worship are expanding their services and congregations, often resulting in multiple campuses sporting large production displays sharing media sources and services between locations. The production methodology includes ministers leading multi-site services from any given campus.

Presenting the message effectively and serving communities are key to the mission. The multiple campus design goal utilizes immersive production techniques and stage designs, while location-dispersed staff collaborate on a polished production.



Multi-site production delivery presents certain technology challenges -- delivering high-quality, low-latency video, audio and metadata between campuses within a solution that is simple and easy to operate.

## The Solution:

The Selenio Network Processor (SNP) simplifies and streamlines delivery by aggregating and distributing the House of Worship video, audio and metadata flows into a single uncompressed, high-speed, low-latency IP delivery stream.

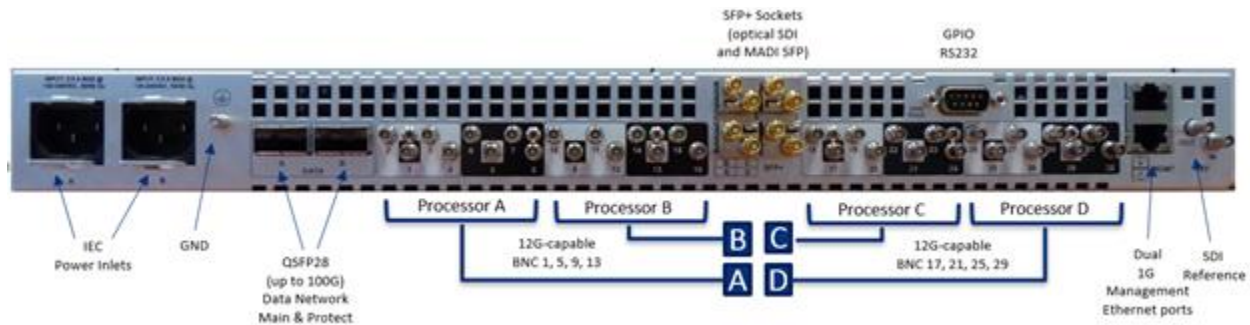


The SNP can integrate SDI and SMPTE ST 2110 SD, HD & UHD video and audio, including High Dynamic Range (HDR) processing, bringing a new level of video clarity and definition to the production.

A single SNP provides SDI Inputs / Outputs. Multiple SNPs can be connected via Fiber or Commercial-off-the-Shelf (COTS) 100G switches across a multi-campus network.

## Features and Benefits

Each SNP channel includes frame synchronization plus a broad range of processing controls. The SNP consolidates signals from HD and UHD cameras, production switchers, projectors, router and multiviewers at each location and provides timing synchronization and conversion at each site – transforming the individual campus SDI routing systems into a multi-campus ST 2110 IP routing network.



This routing network may be integrated under the Imagine Communications Magellan™ SDN Orchestrator control layer, enabling operators to easily route any signal to any campus from any location via standard and easy-to-operate hardware or software router control panels.

### THE BENEFITS OF SMPTE ST 2110

- NATIVE SUPPORT FOR SD, HD AND UHD VIDEO SERVICES, INCLUDING SDR AND HDR COLOR SPACE INFORMATION.
- VIDEO, AUDIO AND META DATA HAVE SEPARATE AND FLEXIBLE ROUTING CAPABILITIES ACROSS THE IP FABRIC, REMOVING THE NEED FOR EMBEDDERS AND DE-EMBEDDERS.
- ENABLES VIRTUAL WORKFLOWS TO PROVIDE SIGNAL PROTECTION & SELF-HEALING FUNCTIONALITY, PROVIDING DYNAMIC PRODUCTION WORKFLOWS.
- ALLOWS FOR EXPANDABLE ROUTER SYSTEM MATRIXES, ELIMINATING WASTE INHERENT IN FIXED SDI MATRIXES.

## Ready for the Future

The SNP is an SDI and IP media processing platform designed for use in facilities with SDI and/or COTS IP technology.

The SNP supports uncompressed SD, HD and UHD based upon SMPTE ST 2110 and the ST 2022-6 IP “hitless merge” redundancy standards. This enables interoperability with solutions from manufacturers supporting these standards.

The SNP supports up to 8 UHD channels, or 16 HD channels, or a combination of each via SDI to SDI connections inside a single rack unit.

Built upon Field Programmable Gate Array (FPGA) technology, SNP can be easily upgraded to add new functionality. An SNP unit keyed as a Converter and IP Gateway may be upgraded to include multiviewer or JPEG XS encoder / decoder functionality.

The SMPTE ST 2110 standard and the Selenio Network Processor – including its upgradeability and support for SD, HD, and UHD via SDI and IP – can deliver the technology goals for many years to come. All of these features provide the forward-looking House of Worship with a solid investment in their current operation, along with a future adaptive plan that has room to grow and the flexibility to expand.

By effectively engaging the audience across multiple campuses and online, Houses of Worship meet the need for connectivity, serving worshippers locally, around the globe, in their homes and on their mobile devices.