

IQEDGE

Powerful, Reliable IP Processing Solution

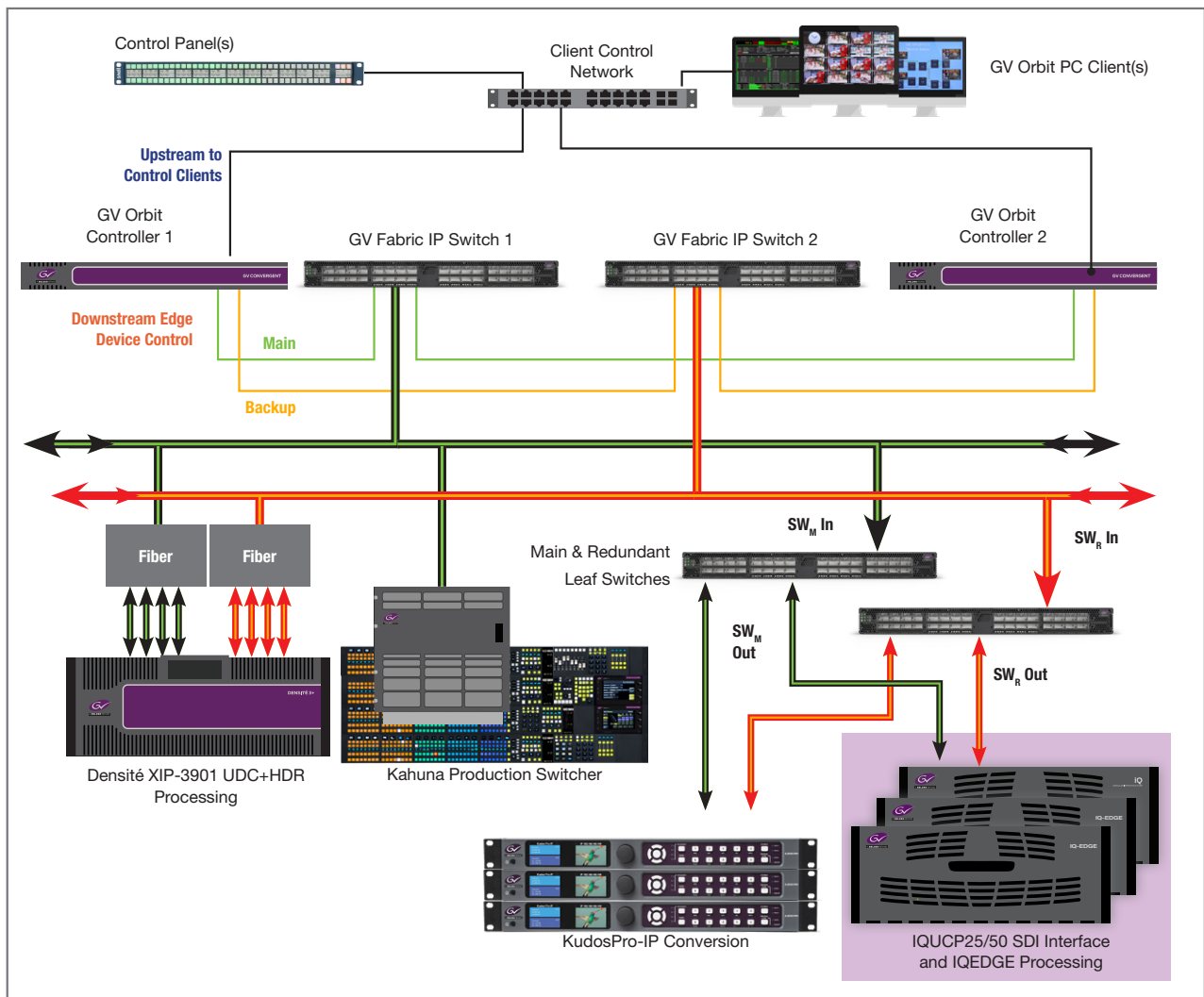


Meeting the challenge of processing broadcast signals in an IP environment.

Transitioning a facility from a tried and tested point-to-point SDI system into a more flexible IP networked operation is a challenge faced by many broadcasters today.

Converting signals to and from an IP workflow is now broadly understood, but how do you continue to perform the common broadcast processing tasks once there?

IQEDGE from Grass Valley provides the answer by packaging multiple channels of video and audio processing into a compact 3 RU or 4 RU box enabled with 25 or 40 GbE IP interfaces.



KEY FEATURES

Video Features

- Gain, offset and hue control, horizontal and vertical picture enhancement, delay, RGB gamut legalization, aspect ratio conversion with preset ARC maps, and including selectable pan, tilt, aspect, size, and output crop adjustments
- High-quality up/down/crossconversion, including conversion aperture control
- Options for noise reduction (adaptive spatial and recursive), frame rate conversion and color correction

Audio Features

- Processing for 16 channels of embedded audio present on each video channel, with audio proc features including: channel routing (shuffling), gain, invert, delay and mixing

Ancillary Features

- Aspect ratio control (signaling reading and writing) using ETSI WSS and AFD Video Index signaling (RP186, SMPTE ST 2016), closed caption passing or processing for CEA608/708, and WST/OP42 and OP47 teletext captions, and VITC or SMPTE ST 12 timecode translation
- Built-in test pattern and audio tone generators along with 19 character scrolling caption generator for signal path testing or keep-alive applications
- Dual 25 or 40 GbE IP links with multiple transport types available for including:
 - Compressed IP transport using SMPTE ST 2042 (VC2) low latency high quality encoding profile
 - Uncompressed video transport using either TR-03, TR-04 RTP (SMPTE ST 2110) or SMPTE ST 2022-6 encapsulation
 - PCM audio using TR-03 & AES67
 - SMPTE ST 291 metadata support via IETF standard “RTP Payload for Ancillary Data”

- Timing and synchronization provided by IEEE-1588v2 (PTP), compliant with SMPTE ST 2059-2, or via the frame analog reference bus
- Full RollCall and SNMP compatibility allows easy integration with Grass Valley or third-party management systems
- Up to 8 processing channels per EDGE, dual PSUs, cooling fans and control card as standard, plus full chassis monitoring for PSUs, temperature, fans and signal status

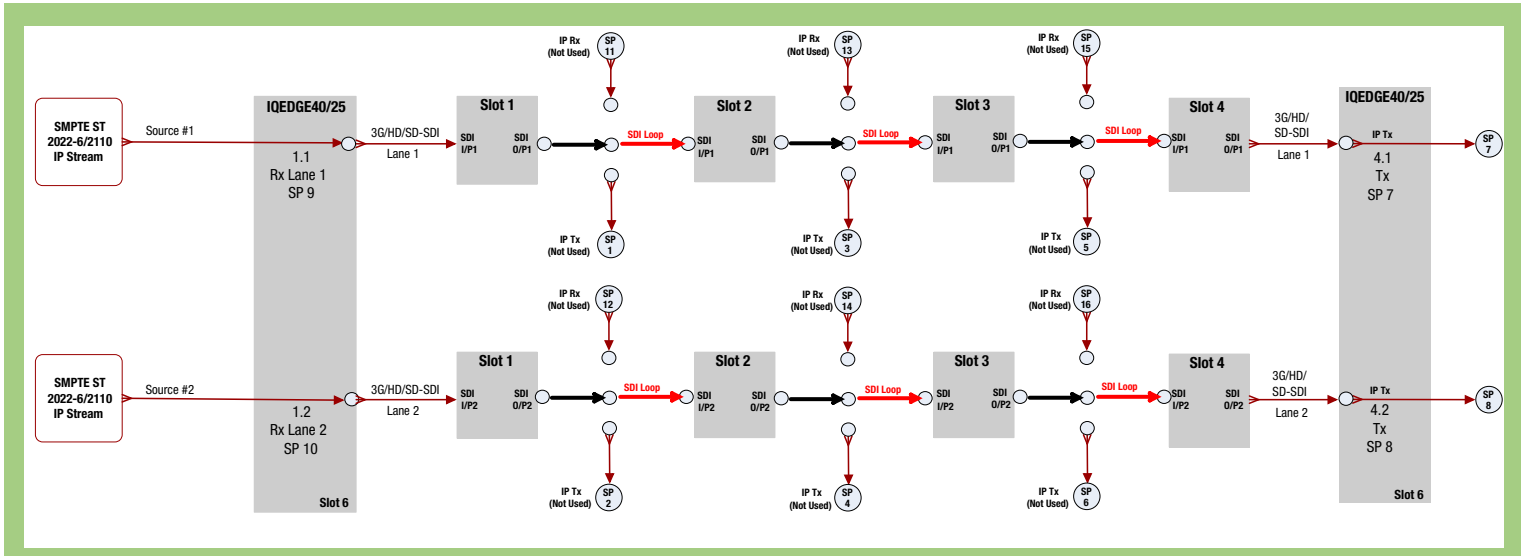
Applications

- Handle common video and audio processing tasks in an IP networked environment, with up to 8 channels in 3 RU or 24 channels in 4 RU
- Provide high-quality content across multiple regions and services with simulcast format and frame rate conversion processing

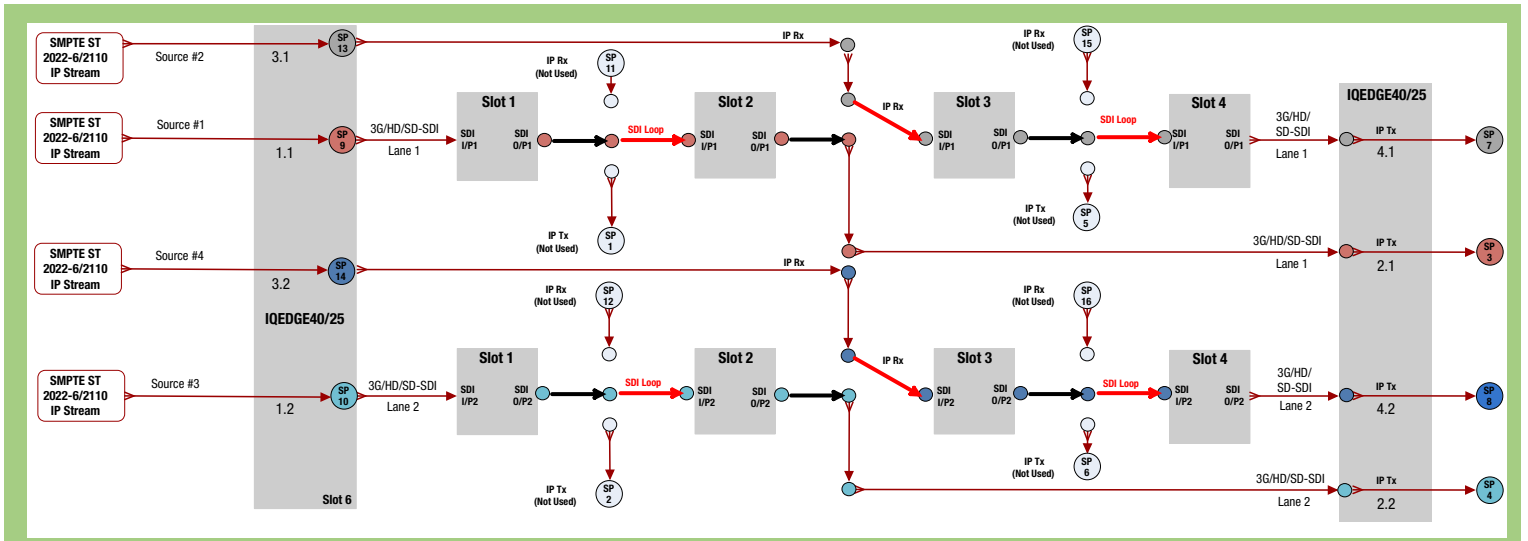
EXAMPLE IQEDGE CONFIGURATIONS

With two independent processing lanes, the IQEDGE provides increased throughput and efficient and flexible utilization of all eight possible processing channels. The IQEDGE also allows daisy chain configuration, which combines available processing blocks to meet every application requirement.

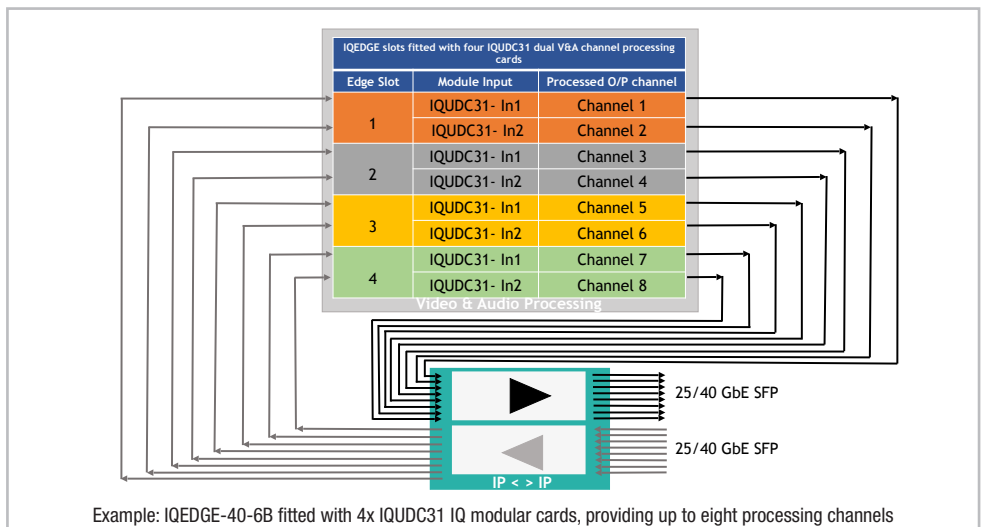
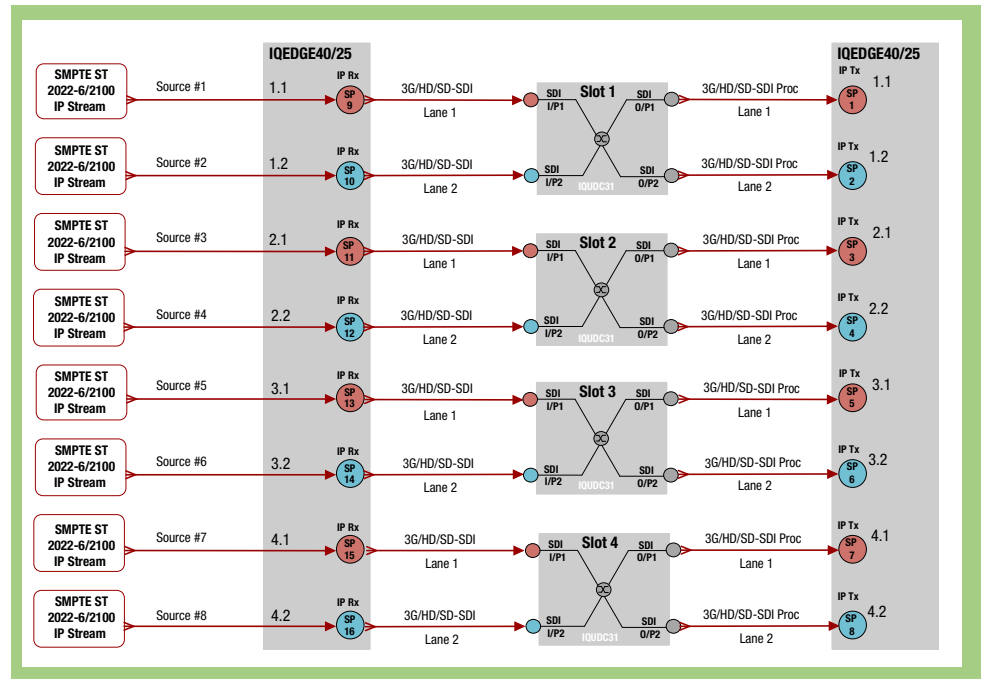
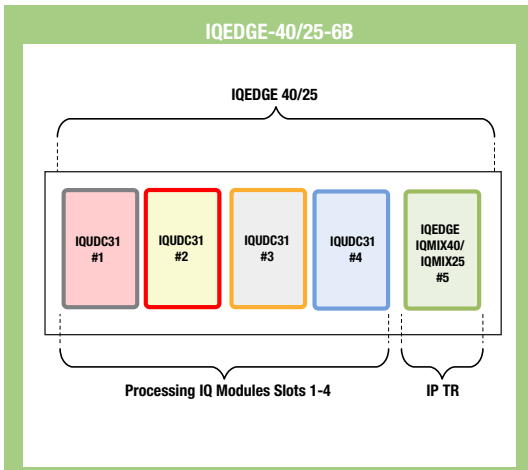
Example: Daisy chain of all four processing blocks available in each processing lane



Example: Two sets of processing blocks combined in each lane



Example: One-to-One processing of eight channels with flexible source routing



Example: IQEDGE-40-6B fitted with 4x IQDC31 IQ modular cards, providing up to eight processing channels

ORDERING

IQEDGE Systems

IQEDGE-6

IQEDGE-25-6B

IQEDGE 3 RU IP processing system with dual 25 GbE IP connections. Up to 8 channels of processing available using 4 dual channel cards. Includes dual PSUs, dual fans, Ethernet/SNMP compatible RollNet Gateway and reference distribution. Processing cards compatible with IQEDGE are listed below. (Note: Includes IQFAN00-RP for additional cooling)

IQEDGE-40-6B

IQEDGE 3 RU IP processing system with dual 40 GbE IP connections. Up to 8 channels of processing available using 4 dual channel cards. Includes dual PSUs, dual fans, Ethernet/SNMP compatible RollNet Gateway and reference distribution. Processing cards compatible with IQEDGE are listed below. (Note: Includes IQFAN00-RP for additional cooling)

IQEDGE-18

IQEDGE-25-18B

IQEDGE 18-slot 4 RU IP processing system with six 25 GbE IP connections. Up to 24 channels of processing available using 12 dual channel cards. Includes dual PSUs, dual fans, Ethernet/SNMP compatible RollNet Gateway and reference distribution. Processing cards compatible with IQEDGE are listed below.

IQEDGE-40-18B

IQEDGE 18-slot 4 RU IP processing system with six 40 GbE IP connections. Up to 24 channels of processing available using 12 dual channel cards. Includes dual PSUs, dual fans, Ethernet/SNMP compatible RollNet Gateway and reference distribution. Processing cards compatible with IQEDGE are listed below.

IQEDGE Modules

IQUDC31-NR

IQUDC31 — Dual-channel up-, down- and crossconverter with video and audio processing and optional linear frame rate conversion and noise reduction features. IQOPTM software options apply.

IQUDC30-NR

IQUDC30 — Single-channel up-, down- and crossconverter with video and audio processing and optional linear frame rate conversion and noise reduction features. IQOPTM software options apply.

IQMCC30-NR

IQMCC30 — Single-channel Motion Compensated Frame Rate Converter and optional noise reduction features. IQOPTM software options apply.

IQSYN51-NR

IQSYN51 — Single-channel frame synchronizer with audio processing, failover input rules engine and optional color correction features. IQOPTS5 software options apply

IQOPT Software Options

IQOPTM-NR

Software option to add noise reduction

IQOPTM-LC

Software option to upgrade with linear frame rate conversion

IQOPTM-2NR

Software option to add noise reduction on two processing channels

IQOPTM-2LC

Software option to add linear frame rate conversion on two processing channels

IQOPTS5-CC

Software option to add color correction



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