

ATSC 3.0 Broadcast Gateway

Introduction

The Triveni Digital Broadcast Gateway is a state-of-the-art ATSC 3 gateway/scheduler that encapsulates and sends STLTP output to ATSC 3 exciter. Using the Broadcast Gateway, TV stations can easily implement and manage revenue-enhancing ATSC 3 services in a variety of network configurations. Integrated with Triveni Digital's GuideBuilder XM encoder, the Broadcast Gateway ensures an easy transition to Next Gen TV broadcasting.

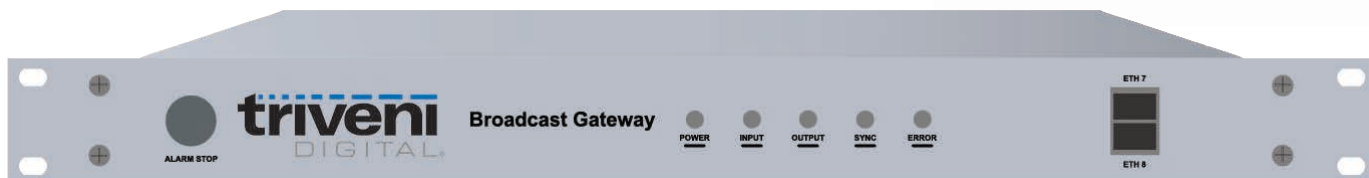
Multiple IP streams can be received from broadcast encoders such as GuideBuilder XM to generate the appropriate L1 and L2 signals for the transmitter. Easy configuration allows multi-subframe and multi-PLP delivery. The Broadcast Gateway optionally supports an external clock (NTP, GPS, etc.) for ATSC 3 SFN networks.

ATSC 3.0

Benefits

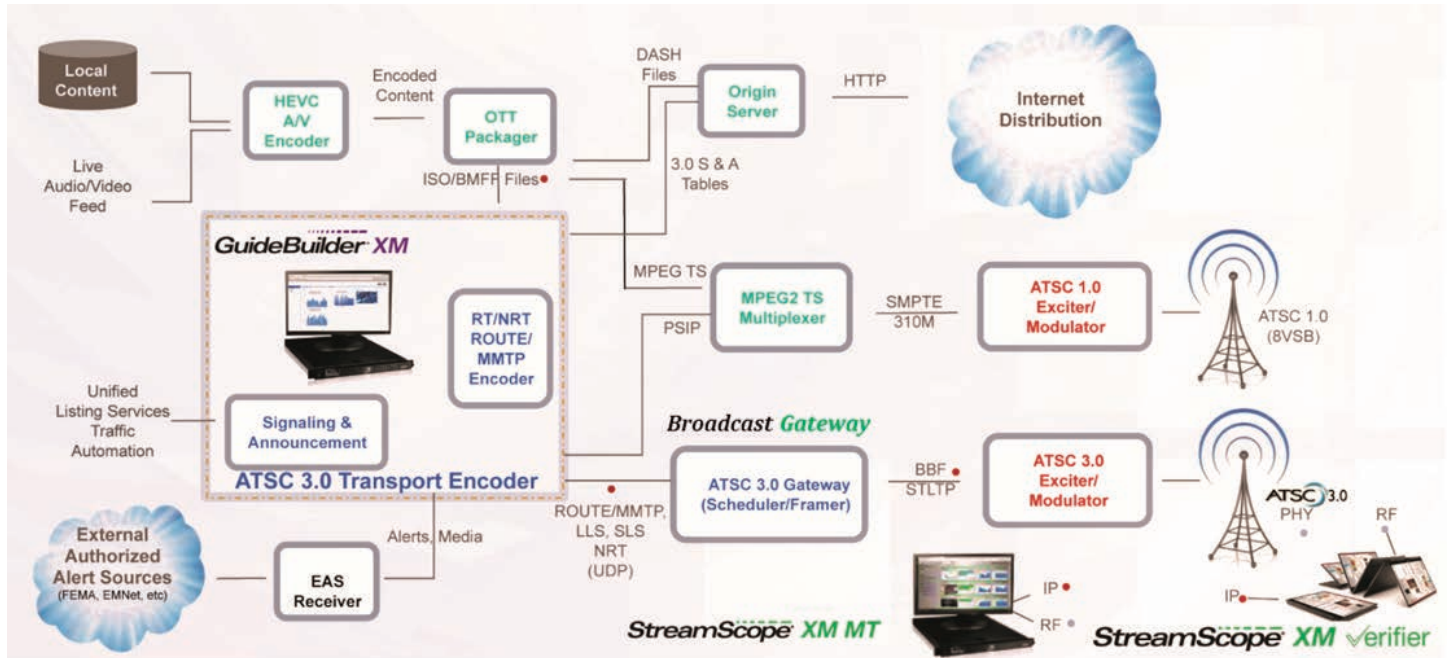
- Enables ATSC 3 HD/UHD broadcasting
- Encapsulates ROUTE and MMTP inputs
- Outputs STLTP packets with L1/L2 signals
- Generates signaling from user parameters
- Manages multiple subframes and PLPs
- Synchronizes SFN broadcasts
- Corrects STLTP transmission errors
- Handles Advanced Emergency Alerting
- Provides a security layer
- Integrates with GuideBuilder XM encoder
- Includes US-based service and support

The screenshot shows the ATSC3 Broadcast Gateway web interface. The top navigation bar includes tabs for Main, Subframe/PLP, Studio to Link, Network, Date/Time, Preset, Logs, and System. The main content area displays configuration for two subframes, Sub #0 and Sub #1. Sub #0 is configured with FFT 16k, GI 6,1536, Symb 31, and Patt 4,2. Sub #1 is configured with FFT 32k, GI 6,1536, Symb 34, and Patt 16,2. The interface also shows a Bootstrap section with parameters like Emission Time Offset, System Bandwidth, and Preamble Guard Interval. A detailed L1-Details section is visible at the bottom, showing parameters like L1-Basic Version, MIMO Pilot, LLS Flag, Time Info, Return Channel, PAPR, Frame Length Mode, Excess Samples, L1-Detail Version, FEC Type, Additional Parity Mode, L1 Detail Size Bytes, MIMO, MISO, FFT Size, Reduced Carriers, Guard Interval, Number of OFDM Symbols, Scattered Pilot Pattern, Scattered Pilot Boost, SBS First, SBS Last, Frequency Interleaver, Duration(T), and Cell Number.



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Broadcast Gateway Network Topology



Key Features

- 1RU 19-inch hot swap, dual power server
- 8 GIGE ports: 6 inputs and 2 outputs
- Multi subframe and PLP (TDM/FDM/LDM) signaling
- STLTP with L1/L2 (LMT) signal generation
- ALP packetizing for general IP data inputs
- Transmitter emission time offset for SFN control
- DTSP/ALPTP input stream support
- IGMPv3 SSM support
- Input stream bitrate monitoring and alarms
- External clock (PTS, GPS, etc.)
- SNMP support
- STLTP ECC (SMPTE 2022-1) transmission error correction
- Easy user configuration (save/load)
- Userfriendly web-based UI

Server Specifications

- Input: 6 flexible Gigabit Ethernet (GIGE) ports
- Output: 2 control port changeable GIGE ports
- Power: AC 100-240V, 50/60Hz, hot swap, dual power
- Power consumption: Less than 100W
- Operating temperature: 10-40 °C
- Operating humidity: 20-85% RH (no condensation)
- Operating environment: Indoor
- Dimensions: 19" (482.6mm) W x 18.5" (470 mm) D x 1.75" (44.4mm) H



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