SmartGate ATSC

Broadcast gateway for ATSC 3.0

TERRESTRIAL MARKET

Software based & virtualized broadcast gateway to deliver any Linear & NRT contents over ATSC 3.0 network.

Located at the broadcast playout center or studio side, the SmartGate gateway encapsulates multiple IP Streams coming from live HEVC encoders and Non-Real Time servers - EPG, interactive applications...- using ROUTE or MMTP protocols; Ensuring the ALP (ATSC Layer Protocol) encapsulation, the BBFrame real time allocation, it outputs the resulting ATSC-compliant STL (Studio to Transmitter Link) stream protocol over IP.

Mastering the ATSC3.0 signaling

SmartGate is able to interface with an unlimited number of ATSC3.0 signaling servers & packagers, and manages automatically the ATSC3.0 signaling from the different LLS (Low Layer Signaling), including the automatic generation and delivery of the SLT (Service List Table) to ensure the exact description of the on-air services.

Managing all types of modulation

SmartGate supports all ATSC 3.0 modulation profiles - all modulation's capabilities - from simple subframe and single PLP, to multiple subframe and multiple PLPs, including the advanced management of LDM (Layer Division Multiplex) to ensure the Single Frequency Network implementation. It allows Broadcasters to have the entire possibility to choose its signal coverage and robustness, targeting simultaneously multiple receivers' capabilities within one RF channel; offering different business models for a network.

Virtualized & scalable

By moving the legacy ATSCheduler hardware based platform towards a new software based & virtualized appliance (SmartGate), ENENSYS enable broadcasters to install & manage their ATSC3.0 Core Network infrastructure directly into a public or private cloud and then to win in scalability, enhance the ATSC3.0 Core Network speedy recovery time and save cost & spaces.

Secured & Innovative

ENENSYS has developed a patented technology ensuring a seamless 1+1 redundancy of 2 ATSC 3.0 SmartGate broadcast gateways providing the capability to switch from main to backup unit without any perturbation at the transmitter site – no desynchronization - even in SFN mode.

Applications

- Linear & NRT contents delivery
- Network synchronization & SFN broadcasting
- QoS class scenario with multiple PLP

Benefits

- Central - Heart of the ATSC 3.0 network
- Interoperable -Validated w/all major ATSC3.0 transmitter manufacturers
- Scalable - Virtualized appliance able to handle current & future broadcaster needs
- Secure - Avoid TV blackout during switch-over operation
- Intuitive - Easy to setup & to monitor

ENENSYS Technologies

SmartGate ATSC

TERRESTRIAL MARKET

INPUT

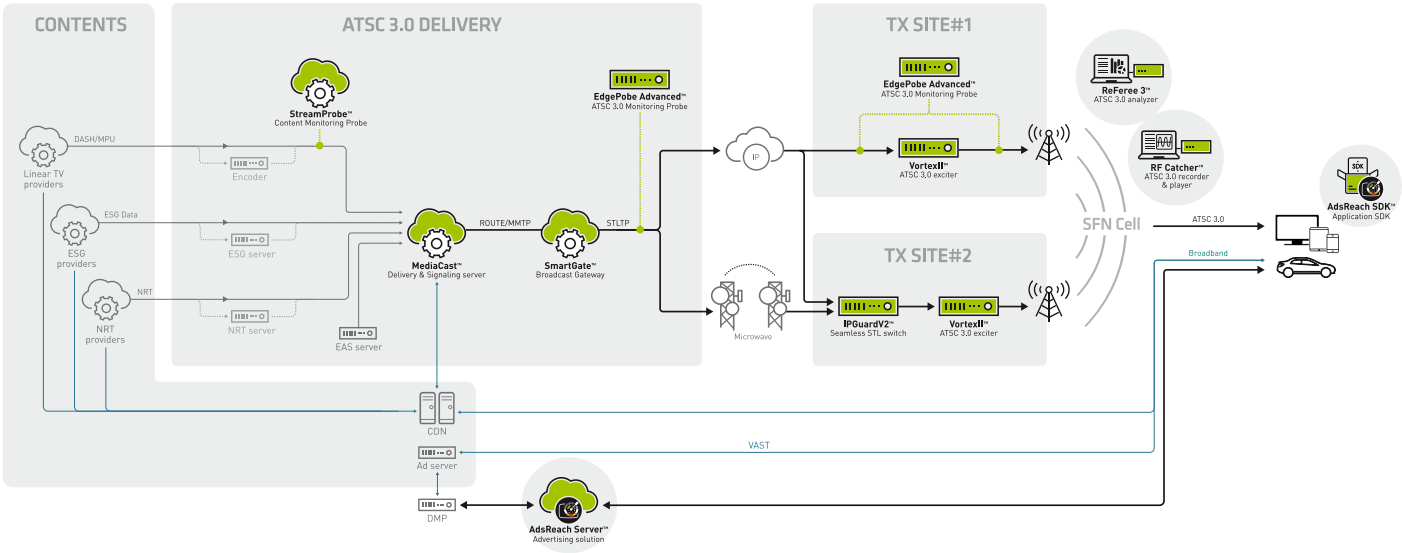
Control **SNMP supervision** **PTP & NTP synchronization**	1x Virtual Network Interface to access SmartGate GUI, send SNMP traps and synchronize with a PTP or NTP server
ROUTE/MMTP streams	1x Virtual Network Interface for incoming ROUTE/MMTP streams

OUTPUT

STLTP streams	Up to 2x Virtual Network Interface for RTP/UDP output streams (Main / Backup)

FEATURING

STLTP encapsulation	Encapsulation of ROUTE and MMTP streams over unicast or multicast STLTP streams SMPTE 2022-1 FEC management to secure services distribution towards modulators
Network configuration	Automatic configuration of ATSC 3.0 modulators & individual addressing
SFN Adaptation	Synchronization of ATSC 3.0 modulators for SFN broadcasting
Physical Layer Pipe (PLP)	Multiple subframes management Multiple PLP management
Signaling	Multiple LLS tables management SLT management and delivery
Synchronisation	NTP or PTP based
Redundancy	Seamless redundancy in combination with ENENSYS IPGuardV2 switch



ORDERING CODES

SmartGate-ATSC

Encapsulation of ROUTE or MMT IP streams into STLTP
LMT tables generation and LLS tables delivery
ALP and BBFrame encapsulation of incoming IP stream
MultiPLP: management of up to 4 Physical Layer Pipes
Single subframe management
Timing information generation for SFN broadcasting
PTP reference clock
Real-time monitoring of incoming streams

SmartGate-ATSC-AdvSignaling	Multi SLT aggregation & broadcasting
SmartGate-ATSC-MultipleSTL	Multi STL outputs (up to 6) FEC management
SmartGate-ATSC-AdvPhysLayer	MultiPLP: management of up to 8 Physical Layer Pipes MultiSubframe: management of up to 8 Sub Frames

ENENSYS Technologies

ENENSYS Technologies | 6 rue de la Carrière
CS 37734 | 35577 CESSON-SÉVIGNÉ | FRANCE
Tel: +33 (0)1 70 61 76 30 | Fax: +33 (0)2 99 36 03 84

RoHS