

SmartGate ISDB

ISDB-T/Tb Gateway



SmartGate ISDB operates at the head-end to generate a BTS stream for SFN broadcasting or ISDB-T/Tb multiplex over MFN or SFN networks

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BTS GENERATOR FOR SFN BROADCASTING

Operating at the head-end after the multiplexer, SmartGate aims at generating a BTS stream from an MPEG-2 Transport Stream (SPTS/MPTS). It can receive the incoming TS over ASI or IP, generates IIP packet with TMCC data and output a BTS stream so that ISDB-T/Tb transmitters can broadcast over SFN.

1+1 SEAMLESS REDUNDANCY - TBGUARD

ENENSYS' patented technology, TbGuard, is the unique 1+1 redundancy mechanism that guarantees a seamless switch-over in SFN and MFN modes to avoid any TV black-out during switch-over operation between two redundant SmartGate ISDB. The TbGuard applies with two SmartGate that are redundant either with ASIIPGuard seamless ASI switch, or with IPGuard seamless IP switch.

ONEBEAM - SATELLITE BANDWIDTH OPTIMIZATION

With OneBeam option, the SmartGate ISDB allows a standard (MPEG-2) transport stream to be used within the satellite delivery network, removing the need for proprietary equipment to access or monitor the content stream. But also, it optimizes the satellite bandwidth by delivering only useful information providing significant cost savings. With OneBeam option, the SmartGate outputs the incoming MPTS with some additional information (TbMarkers) so that a standard and optimized MPEG-2 TS is distributed over satellite. At the transmission sites, the TxEdge ISDB generates the BTS stream based on TbMarkers for MFN or SFN broadcasting. With OneBeam, the SmartGate and TxEdge allow to combine DTH and DTT services as well as the broadcasting of regional content in SFN environment.

BTS Compression

Enensys SmartGate can operate as a BTS compressor, receiving a standard BTS, the SmartGate outputs the incoming stream into a compressed BTS stream with MPEG-2 TS packets of 188 bytes length. In compression mode, the SmartGate will remove the null packets and 16 last bytes from the BTS' packets to obtain a standard TS.

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Applications

- ISDB-T/Tb broadcasting
- SFN broadcasting support
- Regionalization support
- Use existing DTH services to build ISDB multiplex
- Backup DTT transmission site with DTH stream

Other benefits

- ISDB-T/Tb standard based
- BTS generation for MFN/SFN broadcasting
- Multi-layer support
- IIP and TMCC information generation
- Services and PID filtering
- PSI/SI automatic update
- MPEG-2 TS output with OneBeam option
- IP input and output support
- Easy-to-use web based GUI
- Full SNMPv2 support

Technical specifications

INPUTS

Control

1x Gigabit Ethernet (RJ45)
for GUI/SNMP

GPS

1x PPS input
1x TNC GPS antenna input - Option

MPEG-2 TS

Up to 2x ASI inputs (BNC)
1x Gigabit Ethernet (RJ45) - Option for TS over IP input stream

OUTPUTS

BTS or MPEG-2 TS

2x mirrored ASI outputs (BNC)
1x Gigabit Ethernet (RJ45) - Option for BTS or TS over IP output

FEATURING

Standards

ISDB-T/ISDB-Tb

ISDB-T/Tb

Modulation DQPSK, QPSK, 16QAM, 64QAM
Code Rate 1/2, 2/3, 3/4, 5/6, 7/8
Bandwidth 6 MHz
FFT 2K, 4K, 8K
GI 1/4, 1/8, 1/16, 1/32

PSI/SI Management

Services/PID filtering
Services/PID allocation per layer

OneBeam

MPEG-2 TS output with TbMarkers for optimizing satellite bandwidth and analysing satellite distribution

BTS generation

BTS Output from an MPEG-2 TS input
for SFN broadcasting
ASI or IP output (option)

Multi-Layer support

Layer-A, B and C management
1-seg support

TbGuard

Patented 1+1 seamless switch-over
between two TbGateways

Monitoring and Supervision

Easy-to-use web based GUI
User management
Full SNMPv2 support

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PHYSICAL

HDc

Width

443,7 mm / 17.46 in.

Format

1 RU, width 19"

Power supply

100-240V 50/60Hz or 48V DC

Data IP Ports

2x Gigabit Ethernet (RJ45) data port

Operating temperature

0 to 50°C / 0 to 122°F with 3 modules - 0 to 45°C / 0 to 113°F with 6 modules

Height

43 mm / 1.69 in.

Depth

322,8 mm / 12,70 in.

Front Panel

LCD Display and controls

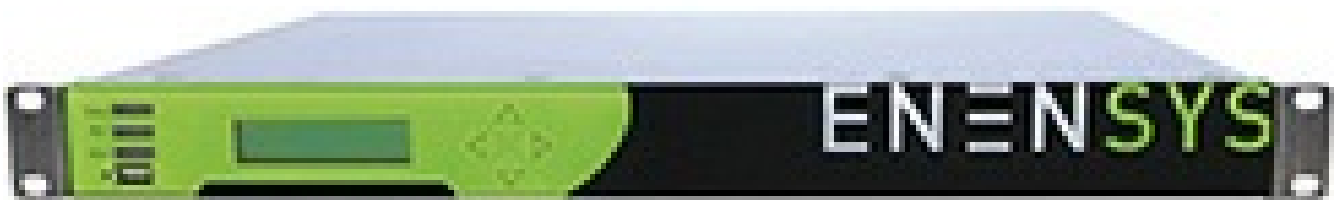
Control IP Port

1x Gigabit Ethernet (RJ45) control port

Power consumption

20W/module

Front

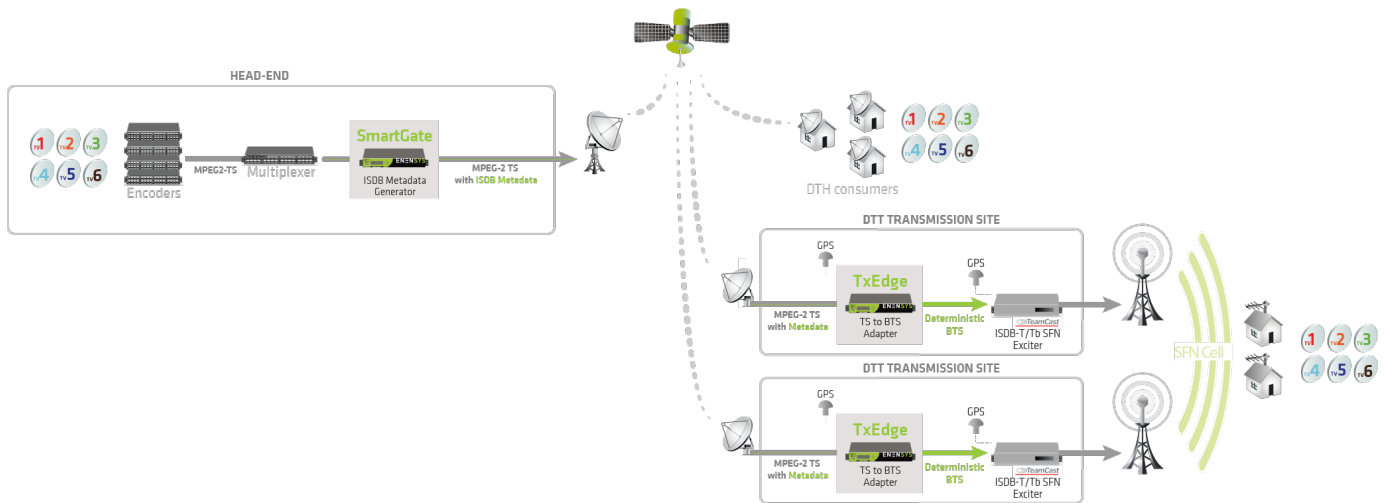


Back



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Ordering codes

HDc-Multi-220VRedundant

1RU HDc chassis with 2x 220V AC Power Supplies

HDm-SmartGate-ISDB

SmartGate for ISDB-T (2xASI In/2xASI Out)

Ordering options

SG-ISDB-4ASI+

Add 4x ASI ports to the module (not compatible with SG-ISDB-IP option) - Hardware option using one more slot

TbGuard

1+1 seamless redundancy between 2x HDm-SG-ISDB

NN6-GPSV2

Internal GPS receiver

HDc-Multi-48VRedundant

1RU HDc chassis with 2x 48V DC Power Supplies

SG-ISDB-IP

Add 2x IP data ports (RJ45) to the module to support IP input/output(not compatible with SG-ISDB-4ASI+ option) - Hardware option using one more slot

SG-ISDB-OneBeam

Output MPTS with Tb markers and in-band configuration to enable remote TbEdge delivering BTS for SFN/MFN broadcasting