



## TbEdge

Local BTS generation for ISDB-T/Tb

**TBEDGE IS DESIGNED TO GENERATE A BTS STREAM AT THE TRANSMISSION SITE FOR THE DELIVERY OF ISDB-T/T<sub>b</sub> MULTIPLEX OVER MFN OR SFN NETWORKS.**

### BTS GENERATOR

Operating at the transmission site prior the ISDB-T/Tb transmitter, the **TbEdge** aims at generating a BTS stream from an MPEG-2 Transport Stream (SPTS/MPTS). It can receive the incoming TS over ASI, IP or directly from a DVB-S/S2 satellite input. It generates IIP packet with TMCC data and output a BTS stream for the ISDB-T/Tb transmitter.

### MFN AND SFN COMPLIANT

By default, The **TbEdge** is designed to deliver a local BTS stream for Multiple Frequency Networks (MFN) operation. It can support Single Frequency Network (SFN) broadcasting with **OneBeam** option. The system's deterministic approach allows it to handle the usual constraints of having the same content on the same frequency at the same time, vital with the predominance of SFN networks.

### SERVICES FILTERING AND PSI/SI UPDATE

The **TbEdge** supports multi-layer ISDB-Tb applications. It allows the filtering of incoming services and enable to allocate the filtered services to the different layers. It can even filter and allocate to layers at PID level. Optionnally, it can support BISS-1 descrambling .

### ONEBEAM - SATELLITE BANDWIDTH OPTIMIZATION

With **OneBeam** option, the **TbEdge** 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. Locally, the **TbEdge** generates the BTS stream based on TbMarkers generated by the **TbGateway** prior the satellite distribution. **OneBeam** allows to combine DTH and DTT services as well as the broadcasting of regional content in SFN environment

## APPLICATIONS

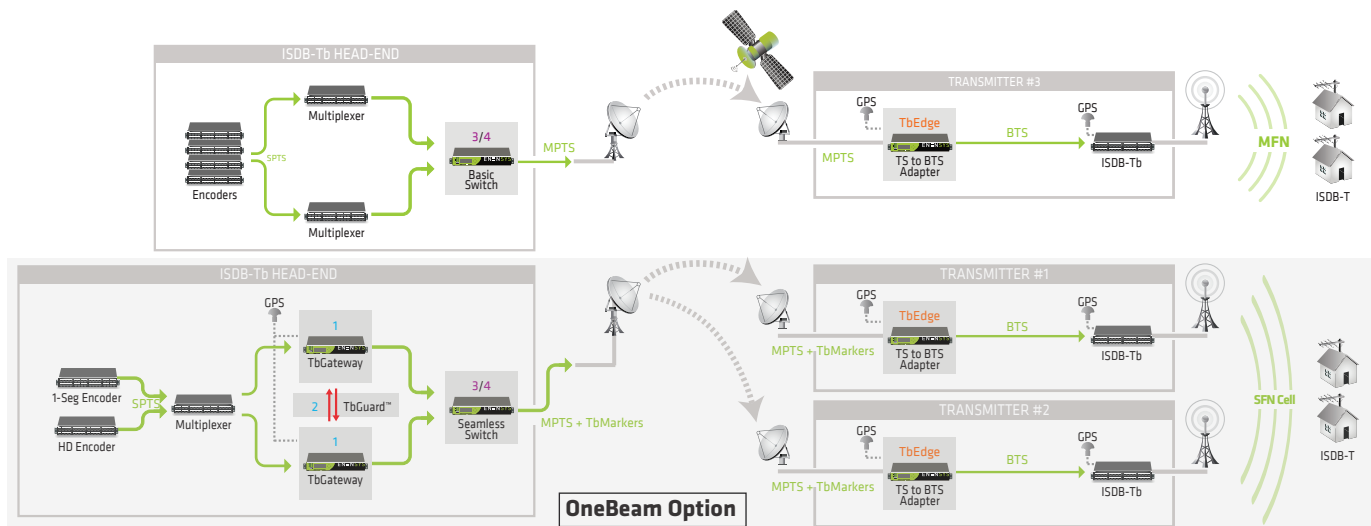
- ISDB-T/Tb broadcasting
- SFN broadcasting support
- Regionalization support
- Use existing DTH services to build ISDB multiplex
- Backup DTT transmission site with DTH stream

## BENEFITS

- Satellite bandwidth optimization with OneBeam
- Reduce CAPEX : Satellite input integrated
- Full support of ISDB-T/Tb standard
- Running in High Density chassis (Hdc):
  - to allow multiple TbEdge in 1U
  - to combine with AdsEdge, ASIIPGuard, ...
  - to enable future-proof technology
- Broadcast-grade product

## CHARACTERISTICS

- DVB-S/S2 and ISDB-T/Tb standard based
- BISS-1 descrambling support
- Multi-layer support
- IIP and TMCC information generation
- Services and PID filtering
- PSI/SI automatic update
- Built-in DVB-S/S2 reception as an option
- IP input and output support
- Easy-to-use web based GUI
- Full SNMPv2 support





## INPUTS

Control	1x Gigabit Ethernet (RJ45) for GUI/SNMP
MPEG-2 TS	Up to 2x ASI inputs (BNC) 1x Gigabit Ethernet (RJ45) - Option for TS over IP input stream Up to 2x DVB-S/S2 inputs (F-type) with HDmSat-TbEdge (one active)
GPS	1x PPS input 1x TNC GPS antenna input - Option

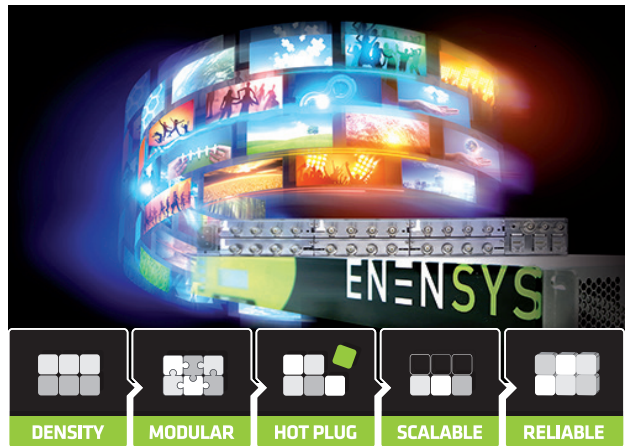
## OUTPUTS

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

Standards	ISDB-T/ISDB-Tb DVB-S/DVB-S2										
BTS generation	BTS Output from an MPEG-2 TS input for MFN or SFN broadcasting ASI or IP output (option)										
ISDB-T/Tb	<table border="0"> <tr> <td>Modulation</td> <td>DQPSK, QPSK, 16QAM, 64QAM</td> </tr> <tr> <td>Code Rate</td> <td>1/2, 2/3, 3/4, 5/6, 7/8</td> </tr> <tr> <td>Bandwidth</td> <td>6 MHz</td> </tr> <tr> <td>FFT</td> <td>2K, 4K, 8K</td> </tr> <tr> <td>Code Rate</td> <td>1/4, 1/8, 1/16, 1/32</td> </tr> </table>	Modulation	DQPSK, QPSK, 16QAM, 64QAM	Code Rate	1/2, 2/3, 3/4, 5/6, 7/8	Bandwidth	6 MHz	FFT	2K, 4K, 8K	Code Rate	1/4, 1/8, 1/16, 1/32
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Multi-Layer support	Layer-A, B and C management 1-seg support										
PSI/SI Management	Services/PID filtering Services/PID allocation per layer										
SFN compliant	Deterministic BTS generation to enable SFN broadcasting Requires OneBeam option										
DVB-S/S2 inputs	QPSK, 8PSK, 16 APSK, 32APSK DVB-S2 multistream (ISI) support BISS-1 descrambling - Option										
Monitoring and Supervision	Easy-to-use web based GUI User management Full SNMPv2 support										

## HDc MULTI



## PHYSICAL

Height	43 mm / 1.69 in.
Width	443,7 mm / 17.46 in.
Depth	322,8 mm / 12,70 in.
Format	1 RU, width 19"
Front Panel	LCD Display and controls
Power supply	100-240V 50/60Hz - 48V DC (option)
Power consumption	20W/module



## ORDERING CODES

<b>HDc-Multi-220V</b>	High Density chassis with 220V input
<b>HDc-Multi-48V</b>	High Density chassis with 48V input

### Chassis Options

<b>HDcMulti-In220VRedundant</b>	110V/220V redundant power supply
<b>HDcMulti-In48VRedundant</b>	48V DC redundant power supply

<b>HDm-TbEdge</b>	Local BTS generation (2xASI In/2xASI Out)
<b>HDmSat-TbEdge</b>	Local BTS generation (2xASI/2x DVB-S/S2)

### Module Options

<b>TbEdge-IP</b>	IP input and output support
<b>TbEdge-BISS</b>	BISS-1 descrambling
<b>TbEdge-OneBeam</b>	Enabling deterministic BTS output
<b>NN6-GPSv2</b>	Built-in GPS receiver