



## MIPDVB for HDc SFN Adapter for DVB-T

**MIPDVB FOR HDc IS ENENSYS' SFN ADAPTER MODULE FOR DVB-T THAT INSERTS SYNCHRONIZATION DATA TO ENABLE SINGLE FREQUENCY NETWORK BROADCASTING.**

Running at the head-end after DVB multiplexer, the **MIPDVB** for HDc runs in the HDc chassis to embed up to 6x **MIPDVB** modules in 1U so that the same chassis can output up to 6 TS with MIP packets over ASI or IP.

### MIP INSERTER WITH IP INPUTS/OUTPUTS

The **MIPDVB** receives at the input a MPEG-2 TS over ASI or IP, inserts MIP packet to synchronize all the DVB-T transmitters to broadcast the DVB-T multiplex over Single Frequency Networks and performs bit rate adaptation and PCR restamping to match with DVB-T transmission parameters. It outputs the new MPEG-2 TS with MIP packet over ASI or IP

### T2 READY

The **MIPDVB** is running in a new generation platform to provide higher density, to operate with other ENENSYS module in the same chassis and to provide high reliability features with redundant power supplies. The product can migrate to a DVB-T2 Gateway (**T2Gateway** for HDc) without changing the hardware by only a firmware update.

### 1+1 SEAMLESS REDUNDANCY - SFNGUARD

ENENSYS' patented technology, **SFNgard**, is the unique 1+1 redundancy mechanism that guarantees seamless switch-over between two redundant **MIPDVB** modules to avoid any TV black-out. The **SFNgard** applies with two **MIPDVB** modules that operate in 1+1 redundancy either with **ASIIPGuard**, ENENSYS' seamless ASI switch, or with **IPGuardV2**, ENENSYS' seamless IP switch.

## APPLICATIONS

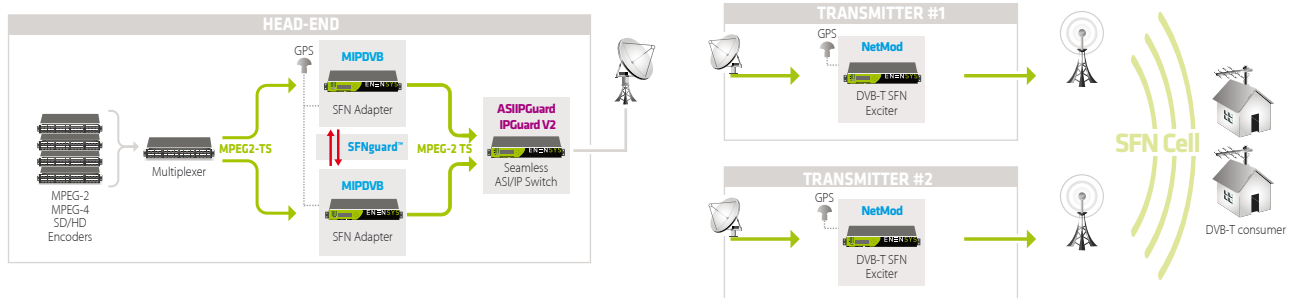
- DVB-T SFN broadcasting
- DVB-T2 ready

## BENEFITS

- Spectrum bandwidth optimization
- Embedded in High Density chassis (HDc):
  - to allow up to 6x MIPDVB in 1U
  - to combine with ASIIPGuard, ...
- Central body of the DVB-T network
- Future-proof (DVB-T2 Gateway ready)
- Avoid TV black-out during 1+1 redundancy
- Interoperability proven with transmitters

## CHARACTERISTICS

- MIP packet insertion
- Bit rate adaption and PCR restamping
- NIT update support
- Optional parameters insertion
- Several redundancy levels
- Flexible ASI/IP inputs/outputs management
- Individual addressing of DVB-T transmitters
- 1+1 seamless redundancy (SFNgard option)
- T2 ready (only firmware update required)
- Full SNMPv2 support





## HDc MULTI



### INPUTS

Control	1x Gigabit Ethernet (RJ45) for GUI/SNMP
MPEG-2 TS	2x ASI (BNC) inputs Up to 2x Gigabit Ethernet (RJ45) for RTP/IP input streams - Option
GPS	1x PPS (BNC 50 Ω) 1x TNC for internal GPS - Option

### OUTPUTS

MPEG-2 TS	2x mirrored ASI (BNC) outputs Up to 2x Gigabit Ethernet (RJ45) for RTP/IP output streams - Option
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### FEATURING

SFN Adaptation	MegaFrame Initialization Packet insertion according to TS 101 191 All optional functions: up to 128 transmitters at the same time
DVB modes	5,6,7,8 MHz bandwidth 2K and 8K FFT QPSK, 16 QAM, 64 QAM constellation 1/2, 2/3, 3/4, 5/6, 7/8 code rate
TS processing	Bit rate adaption to DVB parameters PCR restamping MIP packet insertion NIT update
T2 ready	Future-proof platform that can migrate to DVB-T2 Gateway (option)
Redundancy	SFNguard, patented 1+1 seamless switch-over between two MIPDVB Redundant ASI or IP (option) inputs Mirrored ASI and IP (option) outputs
IP management	ProMPEG CoP#3/SMPTE 2022-1 Up to 4x Gigabit ports - Option IP added to the module (MIPDVB-IP) IP from the chassis (MIPDVB-IPc)
Monitoring and Supervision	Easy-to-use web GUI Full SNMP v2 support

### CHASSIS

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 or 48V DC
Power consumption	20W/module

### ORDERING CODES

**HDc-Multi-220V** High Density chassis with 220V input

**HDc-Multi-48V** High Density chassis with 48V input

#### Chassis Options

**HDcMulti-In220VRedundant** 110V/220V redundant power supply

**HDcMulti-In48VRedundant** 48V DC redundant power supply

**HDm-MIPDVB** SFN Adapter for DVB-T module

#### Module Options

**MIPDVB-IP** IP input/output from the module

**MIPDVB-IPc** IP input/output from the chassis

**SFNGuard** 1+1 seamless redundancy

**MIPDVB-T2Gateway** Migration to T2Gateway

**MIPDVB-T2Guard** Updating SFNguard to T2Guard

**NN6-GPSV2** Built-in GPS receiver

