AdvancedDigital Inc.

ENENSYS technologies

# NN6-T2Gateway

## DVB-T2 Gateway

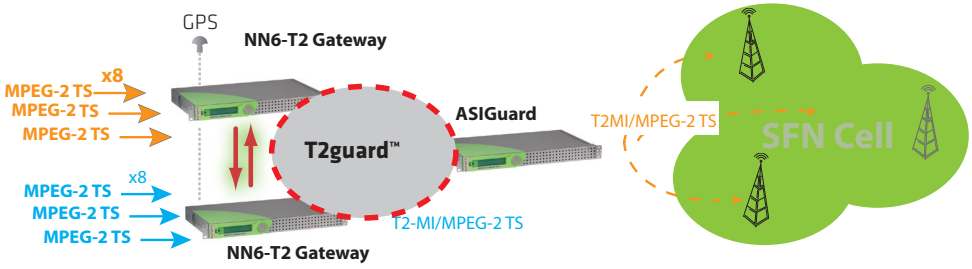

**NN6-T2 Gateway is ENENSYS' DVB-T2 Gateway that encapsulates a DVB/MPEG-2 Transport Stream into a DVB-T2 multiplex, inserts synchronization data to allow Single Frequency Network broadcasting, allocate data into the different Physical Layer Pipes and generates T2-MI packets over ASI and IP.**

Running at the head-end, the **NN6-T2 Gateway** encapsulates the MPEG-2 TS stemming from a typical DVB-T multiplexer into DVB-T2 Base Band frames. It outputs the resulting DVB-T2 multiplex using the T2-MI (Modulator Interface) protocol through ASI and IP.

The **NN6-T2 Gateway** is the central body of the operational DVB-T2 network as it provides in-band control and signaling to all the DVB-T2 modulators. When using Multiple PLP (Physical Layer Pipes) to provide service-specific robustness, the **NN6-T2 Gateway** enables all the modulators to generate the same data in a deterministic manner.

Also the **NN6-T2 gateway** enables **SFN broadcasting** over DVB-T2. It provides in-band and out-of-band synchronization information to all modulators to generate the same data at the very same time over the same frequency. It also supports **MISO broadcasting** to increase SFN performance.

ENENSYS' patented technology, **T2Guard**, 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 T2 Gateways. The **T2Guard** applies with two T2Gateways that are redundant with **ASIGuard**, ENENSYS' seamless ASI switch.




## Applications

- DVB-T2 SFN/MISO build-up
- DVB-T2 Network control
- DVB-T2 Multi-PLP management
- Seamless 1+1 redundancy (patented technology)
- DVB-T2 regionalisation

## Benefits

- Broadcast-grade equipment
- Central body of the DVB-T2 network
- Quick handling of the DVB-T2 complexity
- Improve coverage when broadcasting over SFN
- Avoid TV black-out during 1+1 redundancy
- Interoperability proven with major DVB-T2 transmitters
- Straight integration into any NMS
- Reuse existing network equipment

## Characteristics

- Encapsulation into DVB-T2 baseband frame
- Configuration of DVB-T2 modulators
- DVB-T2 SFN Adaption wih MISO support
- Single and Multiple PLP management
- Individual addressing of T2 transmitters
- Future Extension Frame (FEF) broadcasting
- Generation of T2-MI packets over ASI and IP
- Validation of DVB-T2 transmission parameters
- Easy-to-use web based GUI
- Full SNMPv2 support



DVB ID 3781

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## DVB-T2 Gateway

### Inputs Interface

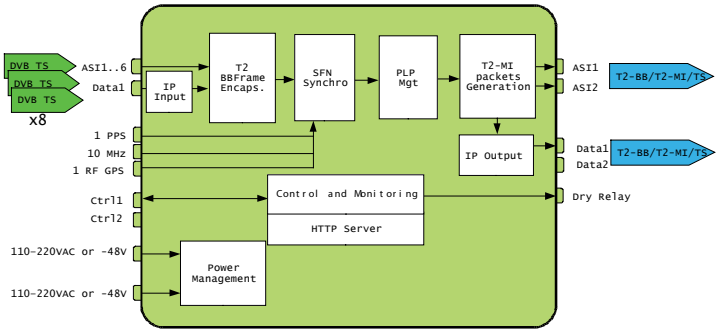
| | |
|---|---|
| Control | 2x Fast Ethernet for GUI and SNMP |
| MPEG2-TS | 6x ASI inputs<br>1x Gigabit Ethernet IP input |
| GPS | 1x TNC input for internal GPS<br>1x PPS and 1x 10 Mhz inputs<br>1x PPS and 1x 10 Mhz outputs |

### Outputs Interface

| | |
|---|---|
| T2-MI/MPEG2-TS | 1x Gigabit Ehternet IP output<br>2x Mirrored ASI outputs |
| GPS | 1xPPS and 1x10MHz outputs |

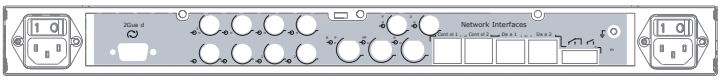
### Featuring

| | |
|---|---|
| DVB-T2 encapsulation | Encapsulation into baseband frames<br>Full support of BB frame modes |
| DVB-T2 network configuration | In-band control of T2 modulators<br>Individual addressing<br>FEF management |
| SFN Adaptation | Integrated SFN adapter<br>MISO Support<br>T2-MIP generation |
| PLP management | Single and Multi-PLP handling<br>Type1 and type2 management<br>Static and dynamic PLP allocation |
| T2-MI output | Generation of T2-MI packets<br>IP output featuring Pro MPEG Forum CoP#3/SMPTE 2022<br>Optimized bandwidth output |
| T2Guard | Patented 1+1 seamless switch-over between two T2 Gateways<br>One-click configuration |
| Monitoring and Supervision | Validation of DVB-T2 parameters<br>Easy-to-use web based GUI<br>User management<br>Full SNMPv2 support |




### Physical

| | |
|---|---|
| Height | 44 mm / 1.7 in. |
| Width | 444 mm / 17.48 in. |
| Depth | 274 mm / 10.79 in. |
| Format | 1 RU, width 19" |
| Power supply | 100-240VAC/48V DC (option) |
| Power consumption | 20W |



### Ordering

**NN6-T2Gateway** : Encapsulation of MPEG-2 TS into DVB-T2 Stream

**Options**

- Multi-PLP-2 : Management of 2 PLP
- Multi-PLP-8 : Management of 8 PLP
- NN6-T2G-IPInput : Up to 8 TS IP input
- T2guard : 1+1 seamless redundancy
- NN6-In48V : 48 V input instead of 110V/220V
- NN6-DualPower : Redundant power supply
- NN6-GPSv2 : Built-in GPS

RoHS 2002/95/EC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DVB T2