NN6-MIP DVB provides a cost effective and highly reliable solution for setting up Single Frequency Network (SFN).

Frequency allocation is one of the main issues broadcasters and network operators have to face. NN6-MIP DVB enables spectrum bandwidth optimization by synchronizing the transmission of any transmitter within one SFN cell.

Besides MIP insertion, NN6-MIP DVB possibilities are further enhanced thanks to the full implementation of DVB optional functions: any transmitter can be addressed individually, enabling time offset, and/or frequency offset... thus refining RF coverage.

In Single Frequency Networks, a single de-synchronization or wrong SFN signaling can disturb transmission and cause a complete TV black-out. To prevent any SFN error, NN6-MIP DVB provides 1+1 redundancy mechanism through its patented technology SFNguard. Combined with ASIGuard, ENENSYS solution enables a unique and secured SFN seamless switch-over in case of input failure, GPS or unit failure.

Applications
- SFN network build up
- SFN DVB-T broadcast
- SFN DVB-H Mobile TV broadcast
- SFN DVB-T/H Hierarchical broadcasting

Benefits
- Spectrum bandwidth optimization
- RF coverage refinement
- High grade SFN Adapter
- Proven interoperability with SFN transmitters
- Avoid TV blackout during switch-over
- Easy integration into any NMS

Characteristics
- 2 redundant ASI inputs
- 2 mirrored ASI outputs
- MIP packet insertion
- PCR restamping
- NIT update
- TPS signalling for DVB-H transmission
- Optional parameters management
- Several redundancy levels
- 1+1 seamless redundancy (SFNguard option)
- Real-time monitoring of incoming streams
- Easy to use web-based GUI
- Full SNMP v2 support
NN6-MIP DVB
MIP inserter – Single Frequency Network Adapter

Input Interface

<table>
<thead>
<tr>
<th>Input</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPEG2-TS</td>
<td>2xASI software selectable</td>
</tr>
<tr>
<td></td>
<td>1+1 ASI redundancy BNC (75 Ω)</td>
</tr>
<tr>
<td>Clock Reference</td>
<td>10MHz and 1PPS inputs</td>
</tr>
<tr>
<td></td>
<td>Optional GPS input</td>
</tr>
<tr>
<td>Control</td>
<td>10/100 Base-T for standard web based interface.</td>
</tr>
</tbody>
</table>

Output Interface

<table>
<thead>
<tr>
<th>Output</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPEG2-TS</td>
<td>Mirrored ASI output (75 Ω)</td>
</tr>
<tr>
<td></td>
<td>framing: 188/204 (RS coding)</td>
</tr>
<tr>
<td>TS substitution</td>
<td>Null and MIP packets insertion upon input sync loss (configurable)</td>
</tr>
<tr>
<td>Output mute</td>
<td>Configurable output mute upon 10 MHz loss and/or input sync loss</td>
</tr>
</tbody>
</table>

Features

- Processing
  - MegaFrame Initialization Packet insertion according to TS 101 191.
  - All DVB modes supported
  - Hierarchical mode support
  - NIT update
  - All optional functions: up to 128 transmitters at the same time

- Input data
  - PCR restamping
  - Bitrate adaptation

- Alarms
  - Sources
    - ASI Sync missing
    - MPEG2-TS sync missing
    - 10MHz / 1PPS loss
    - No PCR / NIT detected
    - System T° / Overflow
    - System Clock loss / internal error
    - GPS signal Loss (option)
  - SNMP
    - Any alarm can be configured as a trap and/or trigger relay out

- Physical
  - Height: 44 mm / 1.7 in.
  - Width: 440 mm / 17.48 in.
  - Depth: 274 mm / 10.79 in.
  - Format: 1 RU, width 19"
  - Power supply: 100-240VAC
  - Power consumption: 8W

- Features
  - Redundancy
    - Redundant ASI inputs
    - Mirrored ASI outputs
    - 1+1 seamless switch-over
  - Supervision
    - Easy to use web-based GUI
    - Full SNMP v2 support
    - Easy integration into any NMS

ORDERING INFORMATION

Model #: NN6-MIP-DVB - SFN Adapter / MIP Inserter

Option:
- NN6-MIP-MULTI - Multistandard option; adds DTMB SFN adaption capabilities
- NN6-GPS - Built-in GPS Receiver
- SFN Guard - 1+1 seamless redundancy option for SFN adapters. Makes two SFN adapters equipped with SFNguard transmit a bit-similar content. In case one of the two adapters fails, switch to the other SFN adapter is seamless.

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