MIP 1000 is a high quality, professional, flexible and cost-effective solution to insert the MIP (Mega-frame Initialization Packet) and adapt the Transport Stream for SFN (Single Frequency Network) according to DVB-T/H standard. The MIP 1000 has to be installed in the head-end of the Network before the distribution (backhauling) to the transmitters (that must be transparent); it provides the information needed for the synchronization of the network to the same frequency and the transmitter settings data.

Features:
- All DVB-T/H modes and bandwidth supported;
- Compliant to TS 101 191;
- Hierarchical mode supported as option (double Transport Stream – double MIP insertion);
- MIP functions supported;
- Automatic bit rate adaptation of the incoming Transport Stream;
- PCR time restamping;
- GPS locked hi stability reference oscillator option available (10MHz + 1pps);
- Automatic near seamless switching to secondary inputs (option).

The MIP 1000 Block Diagram

Available Main Options:
- GPS locked hi stability reference oscillator (10MHz + 1pps);
- 2nd INPUT + OUTPUT for hierarchical operation;
- Secondary input(s) with near seamless switching.

All specifications contained in this document may be changed without prior notice.
### MIP INSERTER SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Inputs:</th>
<th>Up to 4 ASI (BNC female 75)</th>
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</thead>
<tbody>
<tr>
<td>MIP insertion:</td>
<td>According to TS 101 191</td>
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<tr>
<td>Input transport stream adaptation:</td>
<td>PCR time restamping + Bit rate adaptation (null packets deletion/insertion)</td>
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<td>Synchronization inputs:</td>
<td>1ppS (5V – TTL level) + 10MHz</td>
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<tr>
<td>Option:</td>
<td>GPS locked Hi stability reference oscillator</td>
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<tr>
<td>Outputs:</td>
<td>Up to 2 double ASI (BNC female 75)</td>
</tr>
<tr>
<td>Hierarchical mode:</td>
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</table>

### GENERAL CHARACTERISTICS

- **Power supply:** 220Vac ± 10% 50/60 Hz (Different power supplies and tolerances available on request)
- **Remote control interface options:** RS485; RS232; Ethernet 10/100 Base-T (SNMP and web server support)
- **Housing:** Rack drawer 19” 1U or 2U according to the options installed
- **Operating temperature range:** 0 to 45°C.
MIP INserter SPECIFICATIONS:

- **Inputs:** Up to 4 ASI (BNC female 75 Ohm)
- **MIP insertion:** According to TS 101 191
- **Input transport stream adaptation:** PCR time restamping + Bit rate adaptation (null packets deletion/insertion)
- **Synchronization inputs:** 1ppS (5V – TTL level) + 10MHz
  - Option: GPS locked Hi stability reference oscillator
- **Outputs:** Up to 2 double ASI (BNC female 75 Ohm)
- **Hierarchical mode:** Supported; option for double MIP insertion (high and low priority streams)

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A screenshot of the MIP inserter configuration software

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MIP inserter board

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A screenshot of the MIP inserter configuration software
MIP 1000 Block Diagram

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The high quality, professional and cost-effective solution

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