

# DVB-T2 Gateway

## bc007

The Binary Core DVB-T2 gateway (bc007) is compliant with ETSI TR 302 755 V1.3.1 standard. It can be used to feed multiple DVB-T2 modulators, from Binary Core (bc006) or from third party producers. Upgraded for T2-lite transmission.

## Features

- Up to 8 PLPs for T2-base profile and up to 8 PLPs for T2-lite profile.
- BaseBand data frame creation.
- L1 signalling frame creation.
- STS frame insertion for SFN synchronization (null, relative and absolute).
- Individual Addressing frame insertion.
- Input TS rate adaptation with PCR restamping.
- Input Stream SYnchronization (ISSY - short, long).
- Null packet deletion.
- T2-MI stream generation.
- Encapsulation in MPEG2 Transport Stream.
- PCR, PAT and PMT packet insertion.

# DVB-T2 gateway processing

The input to a T2 system consists of one or more PLPs. The mode adaptation modules, which operate separately on the contents of each PLP, slice the input data stream into data fields which, after stream adaptation, form baseband frames (BBFRAMEs). The mode adaptation module comprises the input interface, followed by three optional sub-systems: the input stream synchronizer, the null packet deletion and the CRC-8 encoder. Mode adaptation processing ends with slicing the incoming data stream into data fields and inserting the baseband header (BBHEADER) at the start of each data field. The current implementation of the core supports input PLPs in Transport Stream (TS) format only. Input TS bit-rate adaptation with PCR restamping can be enabled. An external DDR memory module is employed as a support memory for input data stream elaboration.

The scheduler allocates sections of the input bit-streams to baseband frames within specific interleaving frames, and allocates the slices and sub-slices of each PLP to cells of the T2-MI frame. Then a T2-MI frame is created. In case of SFN operations, a Synchronization time-stamp is inserted. The output stage encapsulates T2-MI frames in a transport stream and adds PCR, PAT and PMT packets.

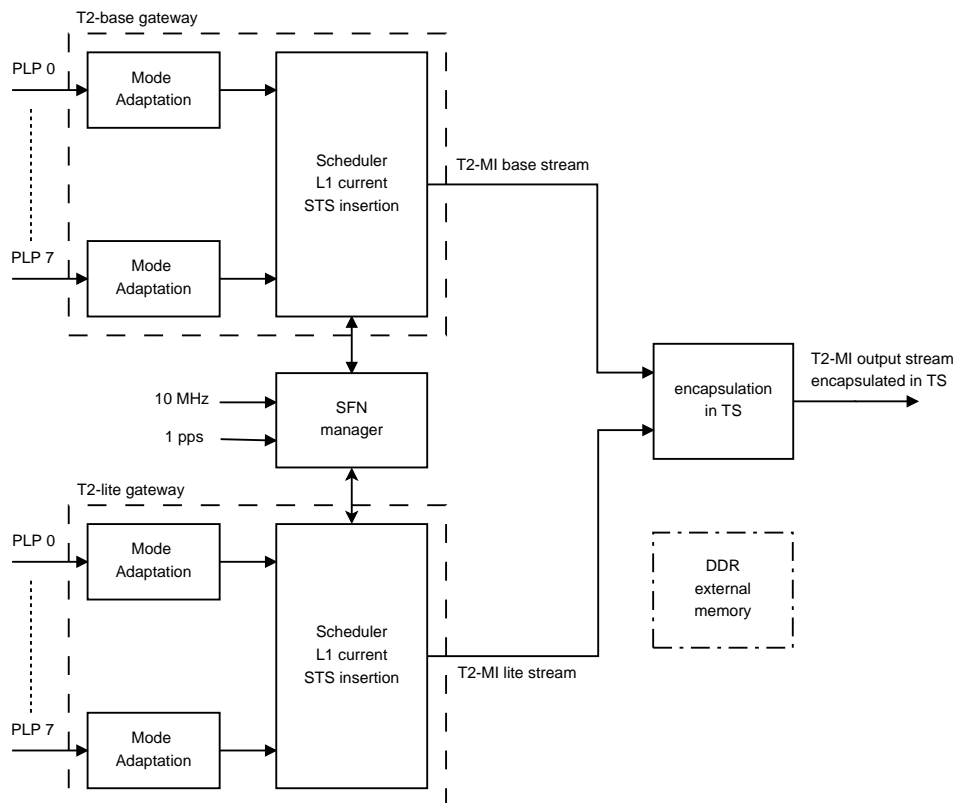


Figure 1: DVB-T2 gateway block diagram