Features

- **Drop-in module for 7-Series, Virtex-6™, and Spartan™-6™ FPGAs**
- **N SPI input / M SPI output (N and M from 1 to 8)**
- **Adapt one or several MPTS/SPTS stream rate into one or several MPTS by filtering and multiplexing complete services**
- **Management of PSIP tables (automatic tables generator) according to ATSC A/65:2009, A/53:part 3 and ISO 13818-1.**
- **Management of PSI/SI tables from DVB standard ETSI EN 300 468 (for input analysis only)**
- **Configurable via an RS232 link or I²C link**
- **Service filtering**
- **Full PCR re-stamping**
- **Master/Slave control of input/output mux flows**
- **Statistical service bandwidth estimation per input**
- **Maximize output payload bandwidth thanks to smoothing FIFO.**
- **Common output Smoothing FIFO can be implemented as block RAM, external Synchronous SRAM memory or external DDR3 (same memory than program memory for Spartan-6 only using MCB)**
- **Size of the output smoothing FIFO is configurable and common for all output channels.**
- **Full synthesizable RTL design (not delivered) for easy customization**
- **Netlist version available for ISE 14 and later versions**
- **CPU Interface to control MVD Modulator CORE**

Applications

The MVD ATSC Remultiplexer allows to adapt and multiplex transmodulator bandwidth from several sources towards one or several modulators.

Ordering information and related cores

Description

The MVD ATSC Remultiplexer core analyses the MPEG TS stream inputs and gives access to the followings information and statistics:

- **Incoming TS Stream features (TS_ID, Version, Tables ...)**
- **Incoming/ Payload/ Outcoming rates**
- **Program List and bandwidth for each program.**
- **Program Information (Short Name, Program Number, Access Control Flags (VCT & PID Frame Header), etc...)**

Then, it filters user selected programs and regenerates PSIP tables such as such as PAT, CAT, PMTs (according to configuration), MGT, STT, VCT (Cable or Terrestrial) - EIT0->EIT3, RRT

Not filtered PMT program and others PID which do not correspond to any program or PSIP tables are passed through.

PMTs are re-generated according to the modifications to apply to the output stream.

CAT and related PIDs are filtered according to the configuration of the remultiplexer.

The ATSC Remultiplexer core allows the filtering of programs of ATSC MPEG TS flows compliant with the standards :

- **ISO13818-1**
- **A53/Part 3; A65:2009**
- **ETSI EN 300 468 v1.8.1 (2008-7)**

FIFO type	Designation
BRAM	**MVD_ATSC_REMUXN-M_BRAM_TE_NET**
SSRAM	**MVD_ATSC_REMUXN-M_BRAM_TE_NET**
DDR*	**MVD_ATSC_REMUXN-M_BRAM_TE_NET**

*Spartan-6 only (at this time : ask for others families)
Where N = number of input (1 to 8) and M = Number of output (1 to 8).
N and M Values must be defined at the order.

Related cores : ASI, Cable Modulator J83B, DVB-C, DVB-S and/or DVB-T/H cores, contact us at info_cores@mvd-fpga.com