



## Features

Multi mode ASI receiver

- European standard EN50083-9 Annex B
- Drop-in module for Virtex-5™, Virtex-4™ and Spartan™-3/E/A FPGAs
- Supports 188 or 204 bytes packet input
- Supports 3 ASI interfaces Input :
  - HOTLINK (Parallel Input)
  - LVDS (separate Clock and Data Input)
  - Combined (clock recovery from Data)
- Supports Data Packet or Data Burst format
- Single channel – support for multi channel
- Full synthesizable RTL VHDL design (not delivered) for easy customization
- Netlist version available for ISE 9.2 and later versions

## Applications

ASI may be used in applications related to DVB/MPEG-2 transport streams.

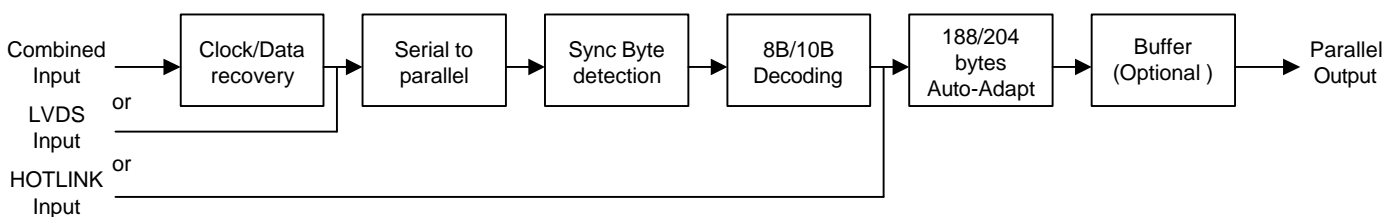
## Description

The MVD ASI receiver core is a drop-in module that includes the following functions :

- Clock/Data recovery
- Serial/parallel Conversion
- Sync Byte (FC Comma Detection)
- 8B/10B decoding
- Auto adaptation to 188/204 bytes packet Input
- Baud rate measurement
- Optional frame buffer
- 188 bytes MPEG\_ASI output

In Combined mode, no external components are needed (1).

A 4 channels complete application (Combined mode) fits into Xilinx 3S50.



**Resource Utilization** The core configuration may be set by conditional synthesis . Typical configuration with Combined input.

		Slices	BRAMs	DCM	BUFG	Deliverables : Datasheet and user's guide Netlist for core generation and testbench for simulation
1 Channel	Spartan3/E/A	60/200	0/1	2	5	
	Virtex 4	60/200	0/1	2	5	
	Virtex 5	50/166	0/1	1 PLL	4	
4 Channels (combined mode)	Spartan3/E/A	797	0/4	2	5	
	Virtex 4	797	0/4	2	5	
	Virtex 5	664	0/4	1 PLL	4	

*(values may vary depending on implementation options)*

## Ordering information and related cores

Parameters	Interfaces for MPEG_TS input stream	Designation

(1) Equalizer and/or transformer is recommended for long cable interfaces.

VHDL source code : can be delivered as an option under NDA and other specific clauses

Related cores : Cable Modulator J83B, DVB-S and/or DVB-T/H cores contact us at [info\\_cores@mvd-fpga.com](mailto:info_cores@mvd-fpga.com)

Documentation and support : Datasheet and user's guide. In addition MVD can provide on site or remote coaching.