

MIL-STD-1553 RT Front End FPGA Core

MIL-STD-1553B Notice 2 Remote Terminal front end Core for FPGA Devices

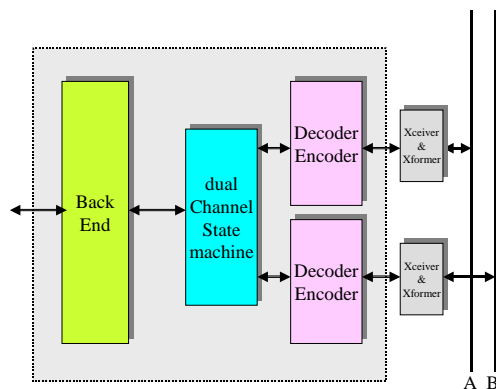
Feature Summary

- Suitable for any MIL-STD-1553 Remote Terminal implementation.
- Best gate count usage in the industry.
- Supports any whole number clock frequency.
- CPU host interface not needed.
- Connects to any transceiver-transformer pair.
- Core has undergone full validation testing.

An unflagging commitment to quality and excellence along with strict adherence to meeting the stringent requirements of the military specifications have been the guidelines for Sital Technology's MIL-STD-1553B notice 2 RT core.

Sital Technology's 1553 front-end RT core is a uniquely portable and flexible solution, based on an innovative vendor independent architecture, for any PLD/FPGA device.

RT Block Diagram



Manchester Decoder

The unique Manchester decoder can work with any whole number clock frequency from 12Mhz and up. (For example it could work with a PCI interface's 66 Mhz clock)

Back End Interface

The 1553 RT front-end core interfaces the backend with a simple address-data read and write "bus cycles". For each word requested by a transmit command, the core introduces a read cycle very much like a CPU.

For a receive command, the core produces a write cycle. The user can build a FIFO mechanism or simple registers in his FPGA to interface this simplified backend interface.

This core is best used where CPU is not required.

RT Block Gate Count:

Vendor	Family	Used Logic
Altera	Cyclone	823 LEs
Altera	Stratix	820 LEs
Xilinx	Spartan2E	490 Slices
Xilinx	Virtex II	487 Slices

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Transceivers

Sital Technology's 1553 Front-end RT core connects to any transceiver-transformer pair as required by the design. The core was fully validated with a 3rd party dual transceiver.

Validation

Sital Technology's 1553 front-end RT core, without any additional circuits, has been successfully implemented in a 3rd party FPGA, and passed the full MIL-STD-1553B Notice 2 RT Validation test plan in its laboratories.

Licensing

Sital Technology's 1553 front-end RT core uses a unique method to ease the licensing of the core.

We have eliminated the cost of ownership, meaning there is no initial payment for the core. A pay per use business model is implemented, making it very simple, straightforward and cost effective.

For More information:

www.sital.co.il/1553.html

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