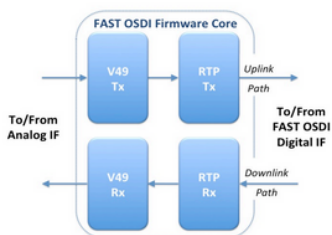


FAST OSDI Firmware Core (TIA-5041)

Firmware Core for Digital Modems

The FAST Interface Firmware Core (FIFC) eases development of TIA-5041 compliant digital modems by providing a proven core for the FAST OSDI interfaces. Both uplink and downlink paths are included. The FIFC has been instantiated and fully tested on Xilinx and Intel/Altera FPGAs. The core is delivered as four separate entities for integration flexibility. Multiple VITA-49 (V49) streams are supported through multiple instantiations of the VITA-49 Tx and Rx processors.



VITA-49 Tx Processor

- Encapsulates user sample data into TIA-5041 compliant SDT Packets
- Creates packets depending on the use mode:
 - Uplink: IF Data Extension & Control Data Packets
 - Downlink: IF Data & IF Data Context
- Loopback test capability
- Packet buffering
- Accepts 32 bit I/Q data samples at rates up to 150 MSPS

RTP Tx Processor

- Encapsulates multiple FAST VITA-49 stream data packets into an RTP packet
- Supports multiple streams up to 32
- Packet buffering

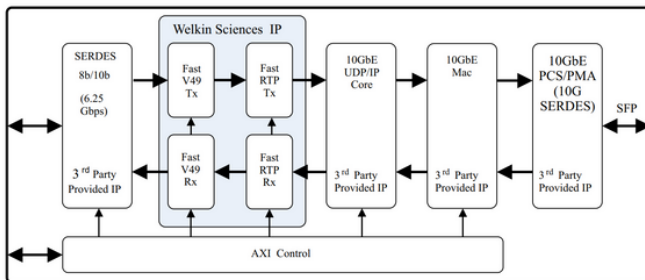
VITA-49 Rx Processor

- Receives and de-packetizes TIA-5041 compliant SDT packets
- Processes packets depending on the use mode:
 - Uplink: Receives IF Data Extension and Control packets
 - Downlink: Receives IF Data and IF Data Context packets
- Rejects packets not meeting the SDT specification
- Loopback test capability
- Packet buffering
- Packet error detection and counters

RTP Rx Processor

- Removes the RTP layer
- Sorts packets into separate VITA-49 data streams, supporting up to 32 streams
- Packet buffering
- Error detection and monitoring functions

Typical Application



For further information on our products,
 email request to info@welkinsciences.com.