



2.5G OTN IP Solution

Altera's 2.5G OTN IP solution reduces time to market and costs associated with FPGA intellectual property (IP) development. Providing support for a variety of client rates, ranging from GE to OTU1, the 2.5G OTN IP Solution is fully customizable per user requirements.

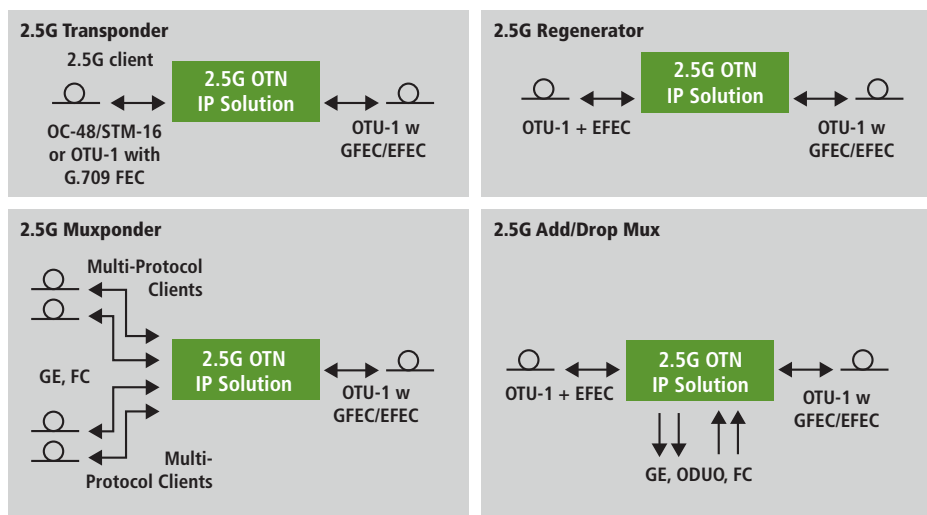
General Features

- 2.5G throughput
- Provides a variety of client signal mapping into OTU1 with FEC
- Optional G.709 FEC or Enhanced FEC Encoding and Decoding
- Compliant with ITU-T G.709 and ITU-T G.798 recommendations
- Extensive SONET/SDH statistics and control
- Generic CPU interface for control and monitoring
- Supports IEEE 802.3 Ethernet specifications
- GFP compliant with ITU-T G.7041
- Optional DPSK pre-coder or other pre-coding algorithm
- Support for connection to backplane interface
- Client side can support a variety of signal combinations of Ethernet, OTN, SONET/SDH, and FC
- Enhanced LAN PHY Support
- Forward Error Correction and Enhanced Forward Error Control

Key Features

- Flexible 2.5G OTN solution capable of operating as a transponder, regenerator, muxponder, or ADM
- Choice of G.709 FEC or Enhanced FEC algorithm
- Solution is customized per user requirements
- Hardware proven solution

2.5G OTN IP Application



OTN Standards Support

Framing

- FAS – Frame Alignment Signal used to frame up and to identify OOF and LOF conditions
- MFAS – Multi-frame structure via a Multi-frame alignment signal byte

OTU1 Section Overhead Monitoring

- Trail Trace Identifier (TTI) Monitoring
- BIP-8
- BEI / BIAE Monitoring
- Backward Defect Indicator (BDI) Monitoring
- Incoming Alignment Error (IAE) Monitoring

ODU0/ODU1 Path Overhead Monitoring

- Trail Trace Identifier (TTI) Monitoring
- BIP-8
- Backward Defect Indication (BDI)
- Backward Error Indication (BEI)
- AIS Maintenance Signal Detection
- OCI Maintenance Signal Detection
- Tandem Connection Monitoring (TCM)
- LCK Maintenance Signal Detection

OPU0/OPU1 Path Overhead Monitoring

- Payload Structure Identifier (PSI)

Ethernet LAN PHY Support

Altera's 2.5G OTN IP solution supports Ethernet physical coding sublayer (PCS) and media access controller (MAC) statistics monitoring and status per IEEE802.3.

SDH/SONET

Altera's solution supports standard SONET/SDH section path and line overhead monitoring.

GFP Mapping

In compliance with ITU-T G.7041 and ITU-T G.Supplement 43 recommendations, Altera's 2.5G OTN IP solution supports Ethernet LAN standard GFP mapping into OTU-1, GFP mapping per G.sup-43, and GFP LAN transparent mapping into OTU-1 overlocked with and without fixed stuffed bytes (OPU1e and OPU2e).

Forward Error Correction

- G.709 Forward Error Correction or Enhanced Forward Error Correction.
- FEC alternatives include ITU standards based codes as well as proprietary codes.

Want to Dig Deeper?

For more information about Altera's 2.5G OTN IP solution, please contact your Altera sales representative or FAE, or visit www.altera.com.

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