



CORTINA

Product Brief

Cortina Systems® IXF19301/19303/19325 Bandwidth Aggregation and Channelizer Devices with Virtual Concatenation

Product Description

Cortina Systems® IXF19301/19303/19325 Bandwidth Aggregation and Channelizer Devices with Virtual Concatenation (IXF19301/19303/19325 Framer/Mapper) family of service framer products are highly integrated interface solutions for the transport of multi-service traffic. The various devices are tailored for 10 Gigabit Ethernet (10 GbE), 5 GbE and 2.5 GbE applications with or without line and path protection applications. The devices support a single STS-192/STM-64 and up to 4 STS-48/STM-16, 16 STS-12/STM-4, 16 STS-3/STM-1 or a combination of these via 4 distinct ports per interface. They support concatenated and non-concatenated payloads including STS-1, STS-Xc (where X=3, 6, 9,..., 48) and STS-192c. They support virtually concatenated SPEs/VCs including STS-1/VC-3-Xv (where X=1-192) or STS-3c/VC-4-Xv, (where X = 1-64). The integrated 10 GbE Media Access Controller (MAC) within the IXF19301 Framer/Mapper allows 10 GbE Wide Area Network (WAN) or Local Area Network (LAN) PHY operations. IXF19301/19303/19325 Framer/Mapper supports Packet Over SONET (POS), Generic Framing Procedure (GFP), X.85, X.86, Link Access Procedure-SDH (LAPS) and Asynchronous Transfer Mode (ATM) data mapping for up to 64 SONET/SDH virtually or contiguously concatenated containers. The devices support the SPI-4 Phase 2 System Interface for easy connection to multi-port MACs, Field Programmable Gate Arrays (FPGAs), or Network Processors. IXF19301/19303/19325 Framer/Mapper devices perform

section/line overhead termination by implementing a cross-connect allowing the nonblocking transfer of non-concatenated and concatenated payloads between the data and line interfaces. The devices manage both VC -3 to AU-3 and VC-3 to TU-3 container mapping options for flexible SDH configurations.

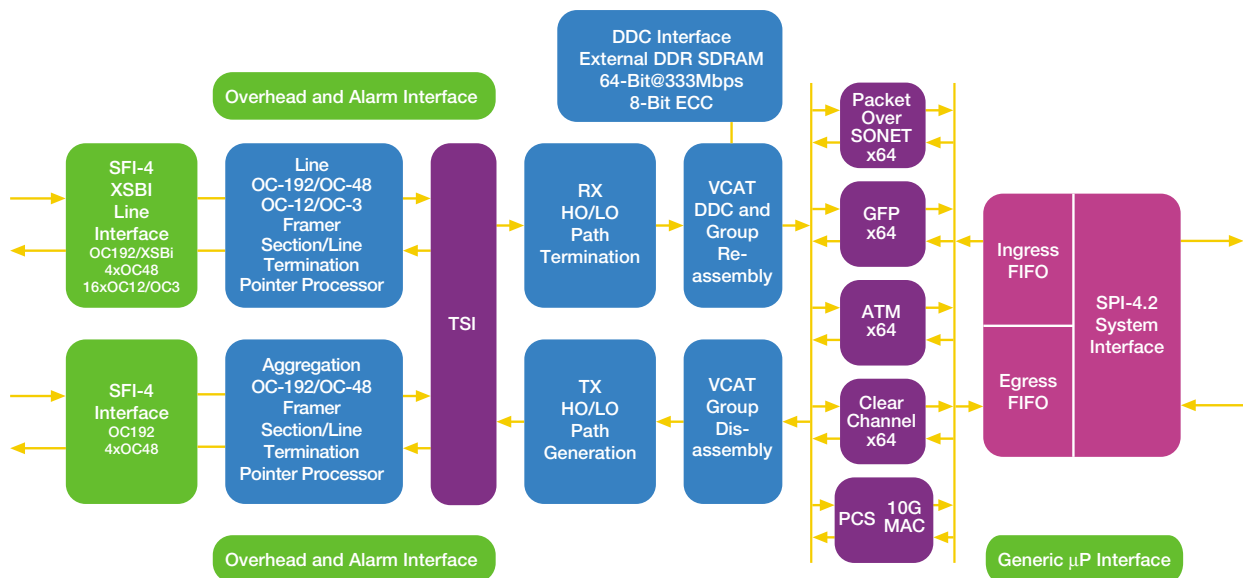
The IXF19301/19303/19325 Framer/Mapper system interface implements two independent on-chip FIFO memories for the ingress and egress paths, each of them with 128 KB depth. Work and protect framers support multicast, add/drop or are configurable for any port to any port protection.

IXF19301/19303/19325 Framer/Mapper Bandwidth Aggregation and Channelizer Devices with Virtual Concatenation are available in 3 versions:

IXF19301: STS-192/STM-64, 10 GbE LAN/WAN, x4 STS-48/STM-16, x16 STS-12/STM-4 and STS-3/STM-1 working interface and STS-192/STM-64, x4 STS-48/STM-16 protection interface

IXF19303: STS-192/STM-64, x4 STS-48/STM-16, x16 STS-12/STM-4 and STS-3/STM-1 unprotected, or x2 STS-48/STM-16, x8 STS-12/STM-4 and STS-3/STM-1 protected (1+1; 1:1)

IXF19325: x2 STS-48/STM-16, x8 STS-12/STM-4 and STS-3/STM-1 unprotected, or x1 STS-48/STM-16, x4 STS-12/STM-4 and STS-3/STM-1 protected (1+1; 1:1)



IXF19301 Framer/Mapper Block Diagram

Features

- Virtual Concatenation (VC) with Link Capacity Adjustment Scheme (LCAS)
- 64 channels GFP, POS, X.85, X.86, LAPS and ATM Mappers
- STS-192/STM-64, STS-48/STM-16, STS-12/STM-4, STS-3/STM-1, SONET/SDH Interfaces
- Internal non-blocking STS-1 Timeslot Interchanger
- 10 Gbps Ethernet MAC with WIS and PCS (IXF19301 Framers/Mapper only)

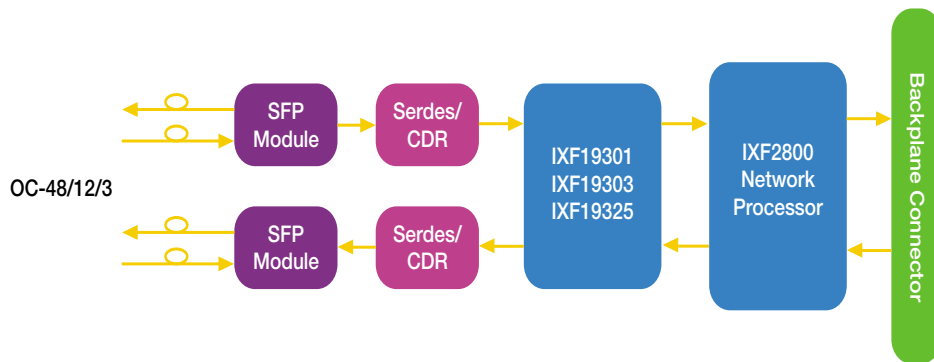
Benefits

- Allows better bandwidth utilization down to STS-1 granularity with automatic adjustment to the available line bandwidth
- Multi-service capabilities with a high number of channels supports the mapping of different type of traffic such as Packet over SONET, Ethernet over SONET, ATM, Fibre Channel, FICON, ESCON and Digital Video
- Support of various types of SONET/SDH Interfaces support cal line and backplane interfaces from 155 Mbps up to 10 Gbps
- Internal non-blocking STS-1 Timeslot Interchanger supports data aggregation, multiplexing/ demultiplexing and protection switching at ST S-1 level
- Allows 10 GbE WAN and LAN PHY operations

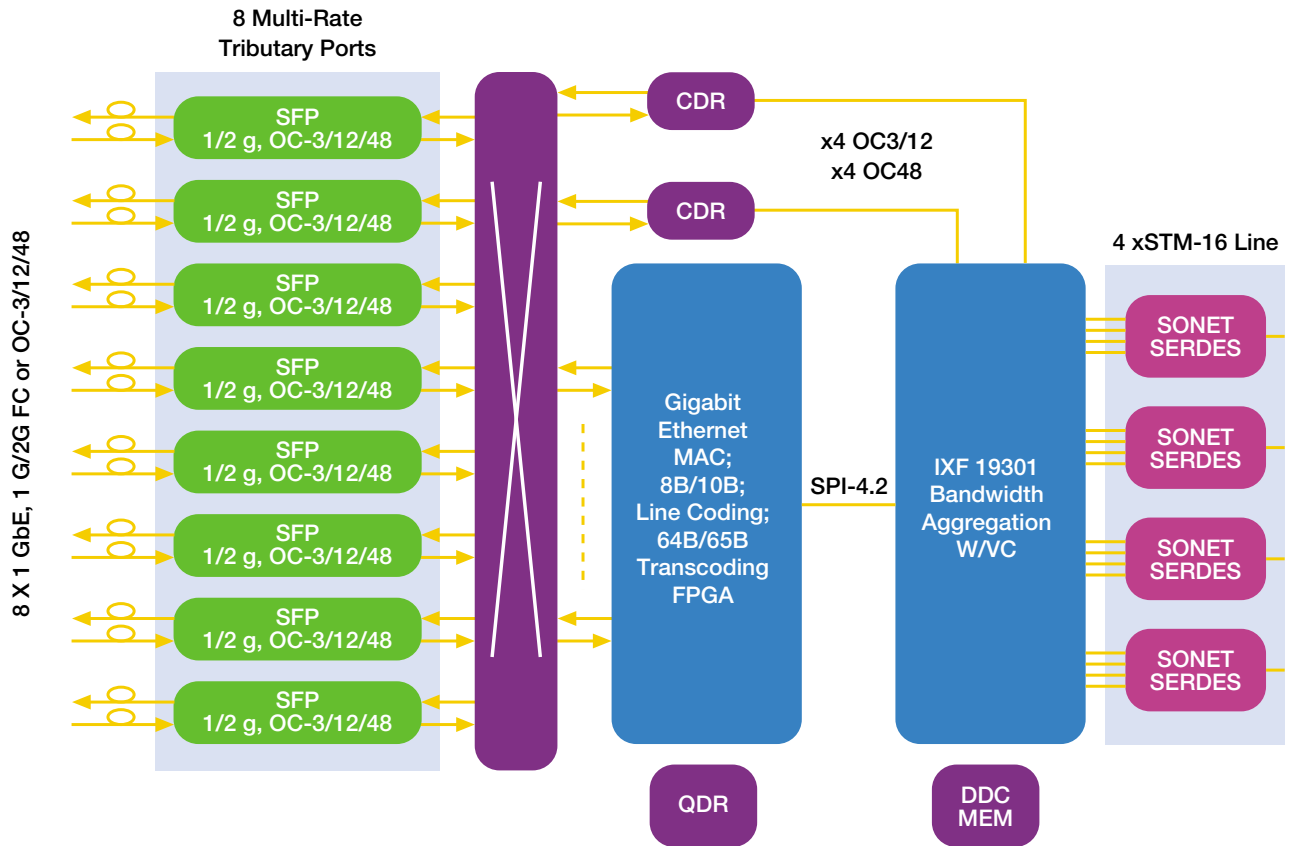
Key Applications

- Edge and Core Router Platforms
- SONET/SDH Add/Drop Multiplexers
- Multi-Service Provisioning Platforms
- Digital Cross Connect Aggregation Blades
- DWDM Muxponder Systems
- Emerging Resilient Packet Ring (RPR) Node Architectures
- 10 GbE LAN to WAN Conversion Ports

Router Line Card



Client Adaptation Line Card with GFP-F, GFP-T and Virtual Concatenation



Cortina in Communications

Cortina is a leading supplier of intelligent communication solutions through continuous innovations in advanced port processing and intelligent port connectivity to the Core, Metro, Access and Enterprise Market Segments. With our state-of-the-art high speed analog digital integration, we deliver a wide suite of products that address our customers'

performance, density and flexibility needs enabling faster time-to-market, longer time-in-market, and increased revenue opportunities. Working closely with our customers to understand their system requirements and anticipate their needs, we are creating the foundation ingredients for new generations of services.

*Other names and brands may be claimed as the property of others.



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