



CORTINA

Product Brief

Cortina Systems® IXF18102 10 Gbps Physical Layer Device for STS-192c/STM-64c POS/GFP

Product Description

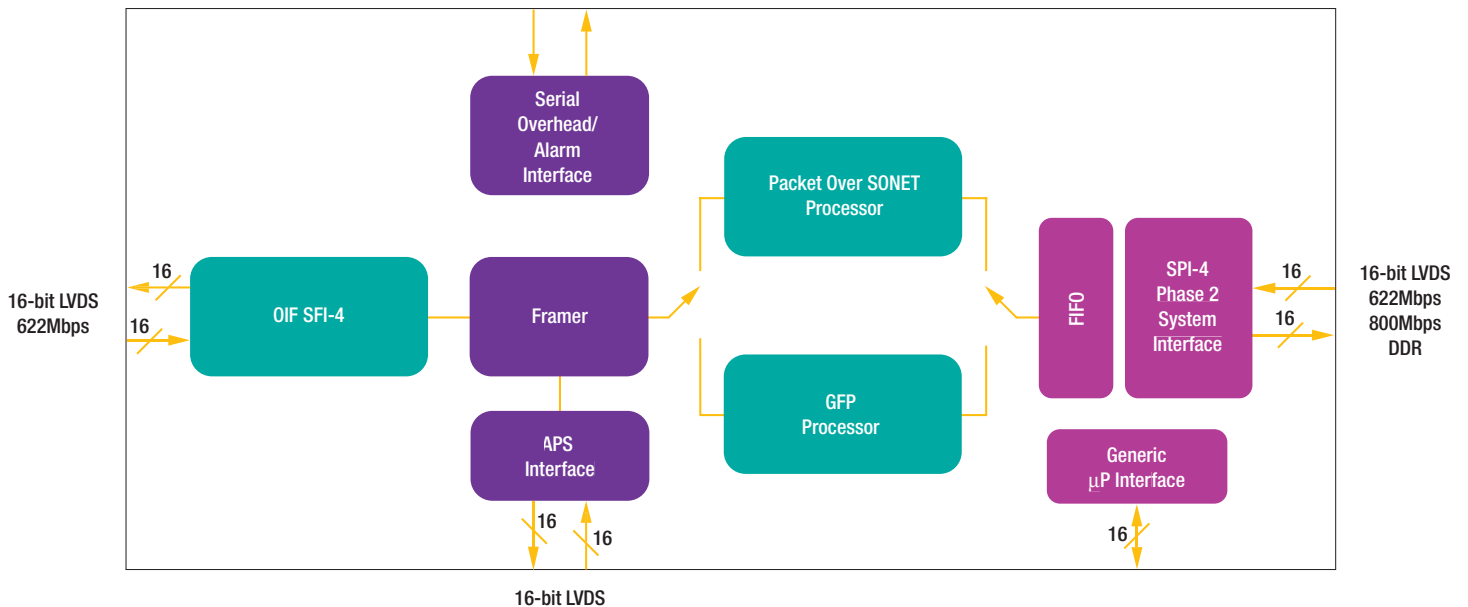
The Cortina Systems® IXF18102 10 Gbps Physical Layer Device (PHY) (IXF18102 Framer) is a highly integrated framer solution for STS-192c/STM-64c port applications. The IXF18102 Framer supports various modes of operation for transport of High Level Data Link Control (HDLC) frames, Packet over SONET (POS), or Generic Framing Procedure (GFP) packet formatting.

Internal mapping engines provide the required formatting and packet data maintenance into the STS-192c/STM-64c SONET/SDH frame payload. A data-over-Fiber packet mapping mode is supported for test equipment and test functionality verification within a system. The GFP mapping engine can be connected directly to Forward Error Correction (FEC) or OTN digital wrapper devices for GFP, per G.709 specifications.

The system interface is 16 bits wide, features 622 Mbps – 800 Mbps Double Data Rate (DDR) clocking and supports the industry standard System Parallel Interface Level 4 Phase 2 (SPI-4.2). The SPI-4.2 interface is Low Voltage Differential Signaling (LVDS).

On the line side, the IXF18102 Framer supports the OIF* SerDes Framer Interface Level 4 (SFI-4) interface, which is 16 bits wide with 622 Mbps data rate.

The IXF18102 Framer supports Automatic Protection Switching (APS) for SONET/SDH. The IXF18102 Framer also supports various types of loopbacks such as line remote, line local, system remote as well as system local and Synchronous Payload Envelope (SPE) payload test for general development functionality testing and debugging.



IXF18102 Framer Block Diagram

IXF1810x Family of 10 Gbps Physical Layer Devices - High Level Overview

Cortina's IXF1810x family of 10 Gigabit devices provide the broadest support for 10 Gbps solutions. The protocols supported are STS-192c POS, 10 Gigabit Ethernet WAN, 10 Gigabit Ethernet LAN, and GFP framing. All these devices are pin-, footprint-, and register set-compatible. This allows customers to design one line card for multiple applications, providing cost savings over a single line card with other unsupported features. The following lists the IXF1810x family feature set:

Part No	Feature Set
IXF18101	<ul style="list-style-type: none"> • STS-192c/STM-64c POS • GFP • 10 GbE LAN and WAN with MAC, PCS, and WIS
IXF18102	<ul style="list-style-type: none"> • STS-192c/STM-64c POS • GFP
IXF18103	<ul style="list-style-type: none"> • 10 Gigabit Ethernet LAN and WAN PHY with MAC, PCS, and WIS
IXF18104	<ul style="list-style-type: none"> • 10 Gigabit Ethernet LAN PHY with MAC, and PCS

The IXF18102 Framer is designed to provide a single chip solution for all 10 Gigabit physical layer requirements for metro and the core networks, and it offers the following features and benefits:

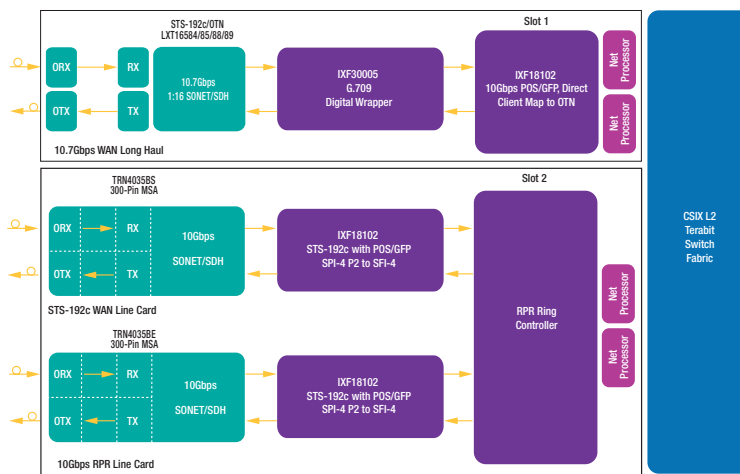
Features	Benefits
<ul style="list-style-type: none"> • Two modes of operation: <ul style="list-style-type: none"> - STS-192c/STM-64c POS - STS-192c/STM-64c GFP 	<ul style="list-style-type: none"> • Device is optimized to support POS and GFP at STS-192c/STM-64c
<ul style="list-style-type: none"> • SFI-4 	<ul style="list-style-type: none"> • SFI-4 is widely deployed as the interface for OC-192c optics modules
<ul style="list-style-type: none"> • SPI-4.2 	<ul style="list-style-type: none"> • Helps minimize pin count and allows interface architecture to be scaled beyond 10 Gbps • LVDS I/O, which improves signal integrity, versus HSTL implementations • Independent of the type of data protocol being transferred
<ul style="list-style-type: none"> • Automatic protection switching 	<ul style="list-style-type: none"> • Provides facilities protection and redundancy using working and protection IXF18102 Framer devices

Key Applications

- Terabit Switch/Router Platforms
- Edge and Core Router Platforms
- SONET/SDH Add/Drop Multiplexers
- Multi-Service Provisioning Platforms
- 10 GbE PMON in Long-Haul Transport
- Metro POP Ethernet Switches
- Storage Area Networks
- Network Attached Storage
- Resilient Packet Ring (RPR)
- Dynamic Packet Transport applications

IXF18102 Framer Advantage

- Supports advanced SPI-4.2 interface
- Supports GFP, which allows the transport of data center protocols such as FICON, ESCON, and Fiber Channel-Over-Transport networks
- Footprint-compatible with the IXF1810x device family, to provide cost reduction for customers who may only need a subset of the IXF18101 Framer functionality
- Optimized for OC-192c/SDH-64c line card applications



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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