Cortina Systems® CS2777 OC192 Integrated MAC/Framer

Overview

The Cortina Systems® CS2777 is an integrated MAC / Framer (CS2777 MAC/Framer) combining POS, GFP, ATM and RPR functionalities. It provides users a choice of line interfaces and is applicable in Metro Router and Switch applications.

Features

SONET/SDH STS-192c/48c Processor supports

- Section, Line and Path processing, compliant with SONET/SDH standards (GR-253-CORE and G.707)
- DCC and APS processing and access to TOH/POH bytes via serial interfaces and microprocessor interface.

Mappers provided for

- GFP
- POS / X.85 (LAPS)
- ATM

RPR/SRP Processor

- IEEE 802.17* compliant
- Supports RPR over GFP, HDLC and 10GE
- Internal transit buffer of 1 Mbyte
- Supports single and dual transit buffer configurations
- Programmable features for fairness messages
- Support for multiple priorities
- RPR processor can be bypassed
- RPR mate interface is provided via a XAUI port
- Support separate TP/Control messages buffer
- Extensive performance monitoring counters
- Support for legacy SRP equipment

SPI-4.2 System Interface

- Compliant with OIF-SPI4-02.0
- Supports Store and Forward feature in the Egress side
- Supports static and dynamic alignment features

Line Interfaces

- XFP 10 Gb/s Serial
- SFP 2.5 Gb/s Serial
- 16-bit SFI4.1 (OIF Compliant)
- 4 bit SFI4.2

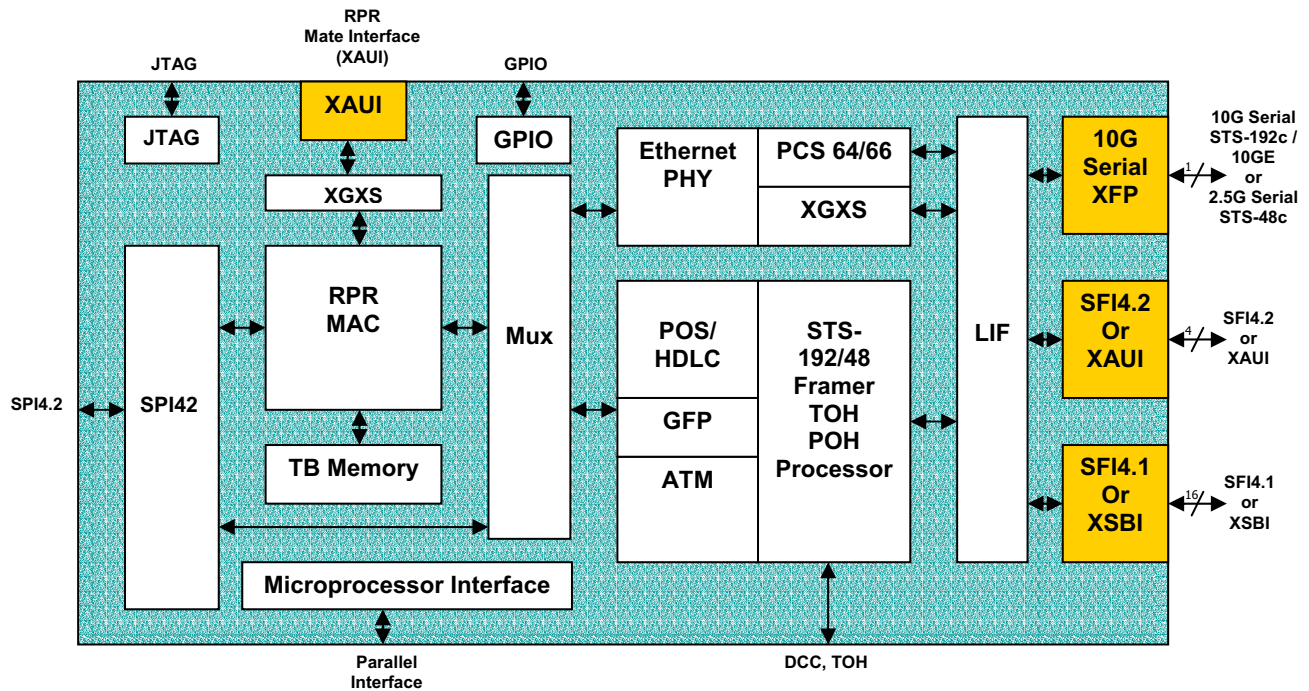### Standard µp and JTAG Interface

- Motorola* and Intel* compatible

Package

- UPBGA 33x33mm^2
- Designed for 10G serial interface
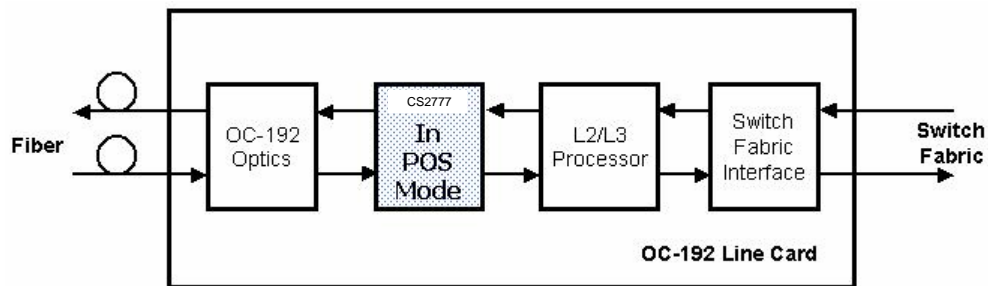- 400 signal pins, 1020 total balls

Low Power

- .13 µm CMOS technology
- 3.2 W if RPR is powered down, in POS/ATM applications
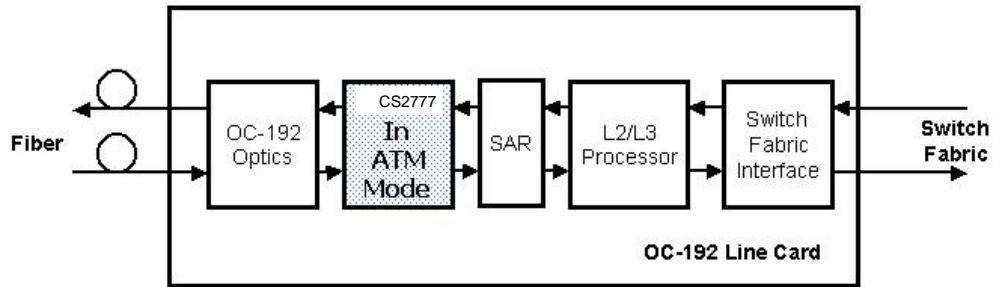- 6 W worst case
- Power supplies of 2.5 V and 1.2 V
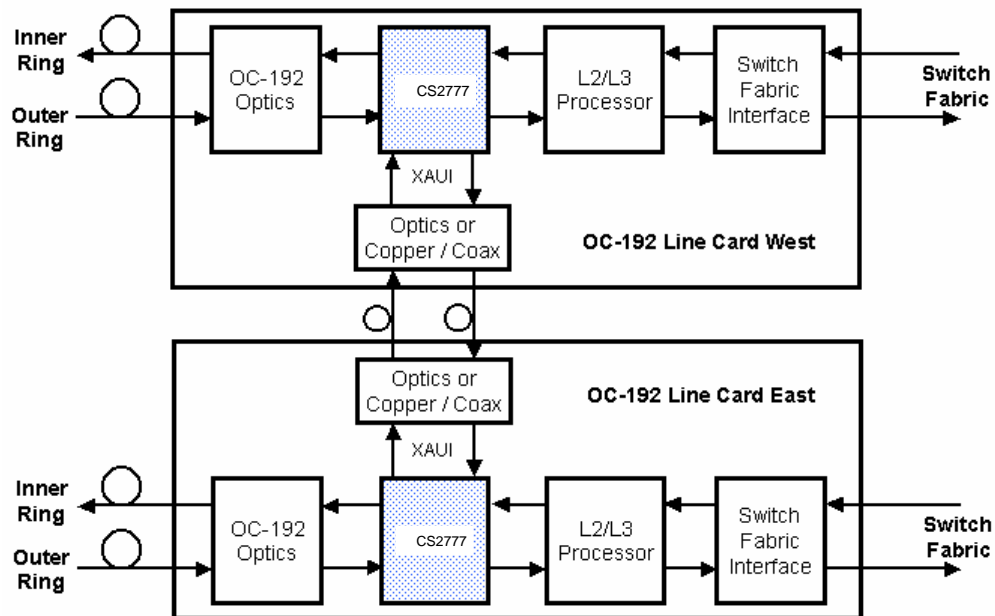
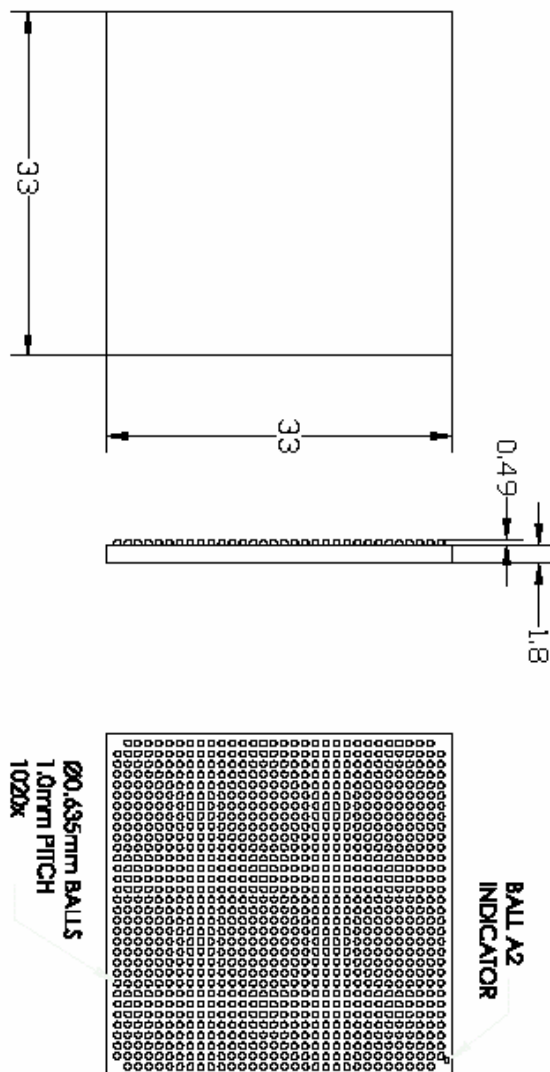## CS2777 MAC/Framer Block Diagram

POS Mode Application

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Fiber
OC-192 Optics — CS2777 In ATM Mode — SAR — L2/L3 Processor — Switch Fabric Interface — **Switch Fabric**

OC-192 Line Card

RPR Mode Application

Inner Ring
Outer Ring
OC-192 Optics — CS2777 — L2/L3 Processor — Switch Fabric Interface — **Switch Fabric**
XAUI
Optics or Copper / Coax
OC-192 Line Card West

Optics or Copper / Coax
OC-192 Line Card East
XAUI

Inner Ring
Outer Ring
OC-192 Optics — CS2777 — L2/L3 Processor — Switch Fabric Interface — **Switch Fabric**

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.