



Cortina Systems® CS2111 Dual-Ring RPR MAC IC

Overview

The Cortina Systems® CS2111 is an integrated dual-ring RPR MAC (CS2111 MAC) that provides an efficient solution for high-density line cards in ADMs, MSPPs, Switches and Routers.

Features

Functionality

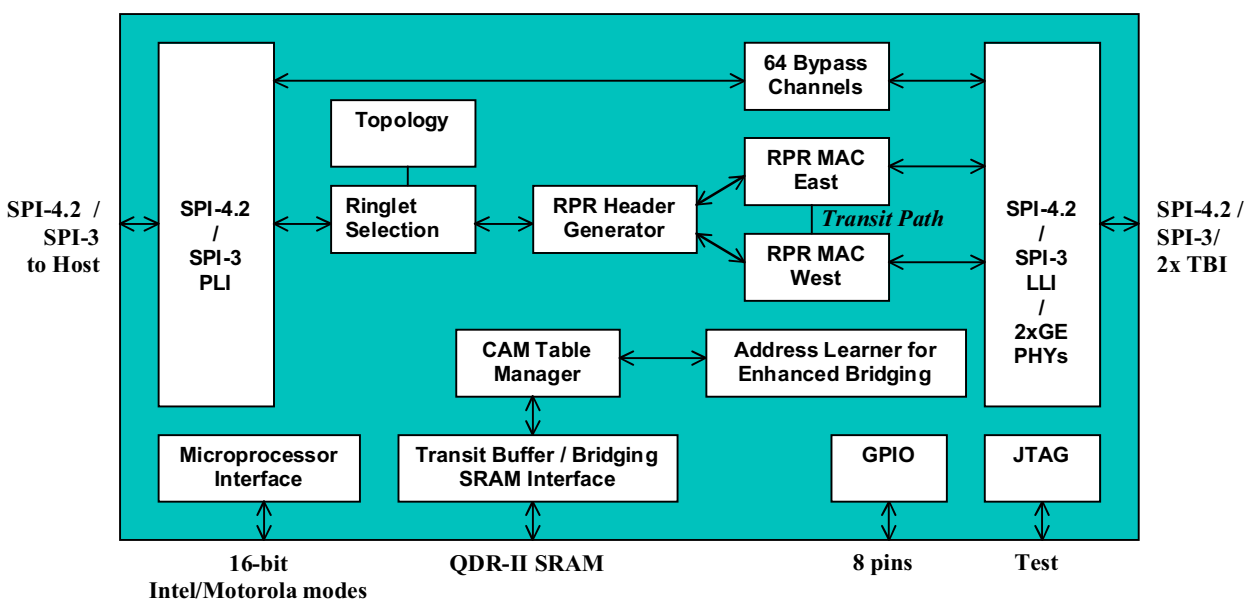
- Compliant with 802.17 standard
- One RPR ring, two RPR channels, are terminated by the CS2111 MAC
- CS2111 MAC ICs can be cascaded for higher RPR channel count
- RPR channels can occupy any slice size of the total 10 Gb/s throughput
- Supports Enhanced Bridging (Up to 128K MAC addresses)
- Ethernet hosts does not need any RPR Awareness in Bridging Mode
- RPR fairness messages handled by internal micro-sequencer
- RPR control plane on either microprocessor or host
- Topology/Protection frame off-load
- Support for all RPR priorities
- Single and dual transit buffer options
- Conservative and aggressive fairness engines
- 64 bypass channels for non-RPR traffic
- Dual-card protection capable
- Extensive performance monitoring counters
- Support for legacy SRP equipment

Interfaces

- External QDRII SRAM supports 2 to 16 Mbytes of transit buffers
- SPI-4.2 or SPI-3 physical layer interface to host
- SPI-4.2 or SPI-3 or dual TBI link layer interface to framer
- SPI-4.2 interfaces can run at full rate or quarter rate for 2.5 Gb/s operation
- 16-bit microprocessor interface with Intel and Motorola modes
- JTAG and GPIO

Low Power

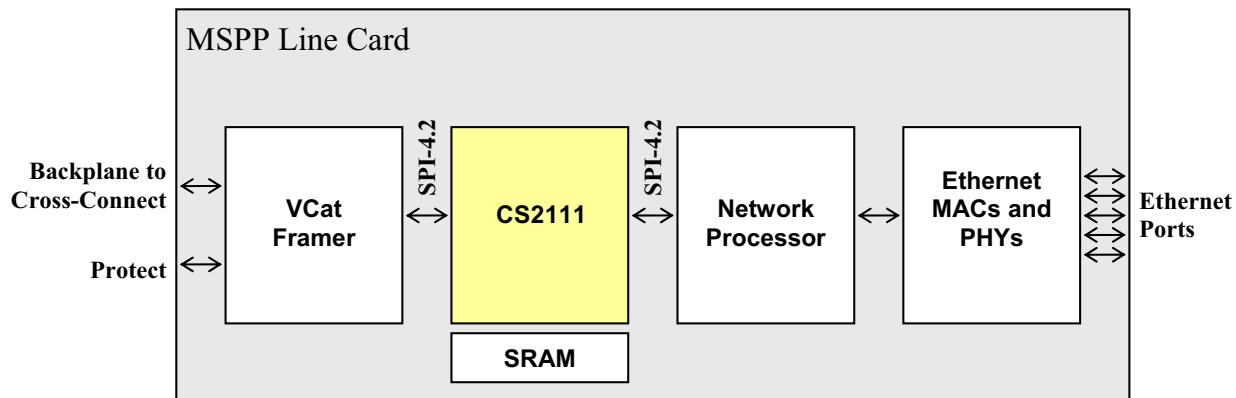
- 896 ball BGA, 31x31mm²
- .13 μm CMOS technology



CS2111 MAC Block Diagram

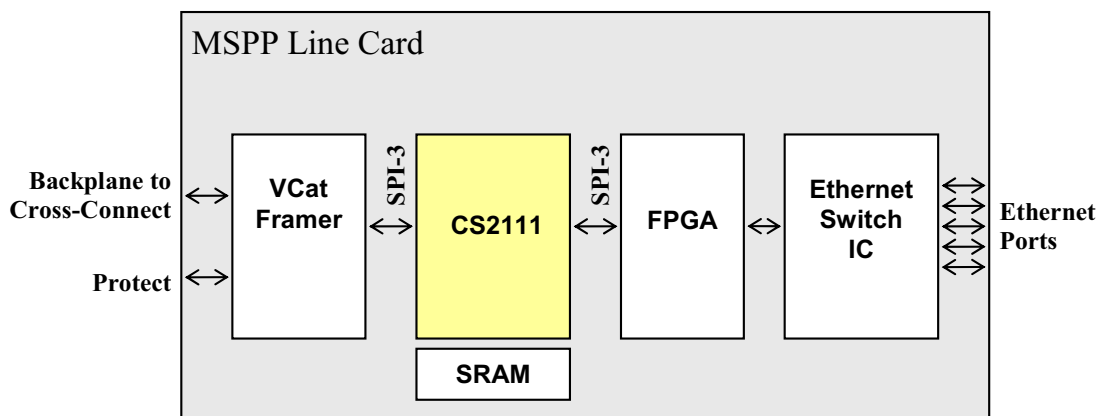
10 Gb/s ADM/MSPP Line Card Application

This line card terminates two RPR rings and supports up to 64 point-to-point channels.



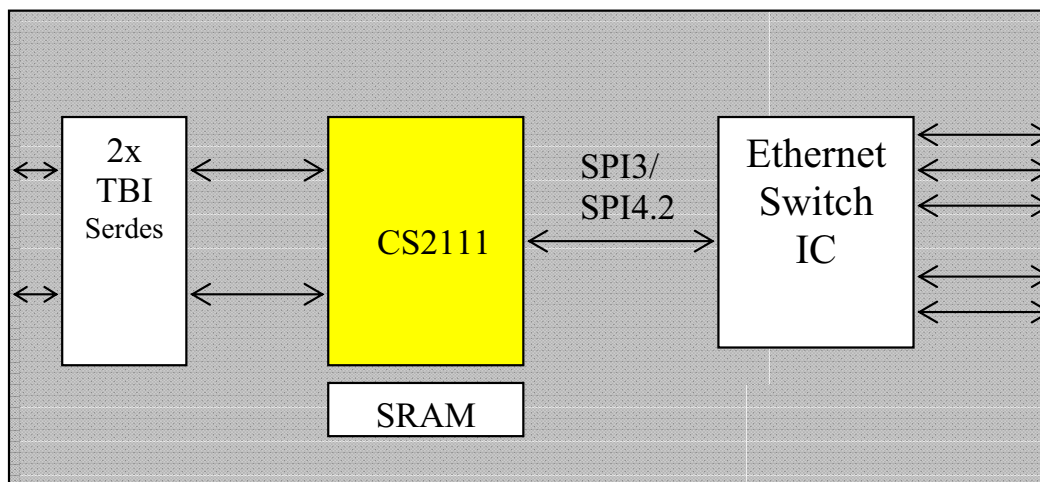
2.5 Gb/s ADM/MSPP Line Card Application

Layer 2 switching line card for efficient metro data transport.



Gigabit Ethernet Aggregation Application

Layer 2 switching line card for efficient metro data transport over gigabit Ethernet Optics.



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.

