

**4-Channel Multiplexer and Link Extender for SAS, SATA, Ethernet and FC**

**FEATURES**

**GENERAL - SATA AND SAS**

- Four bi-directional 2:1 SATA or SAS multiplexer/demultiplexer.
- Compliant with SAS Internal and External specification.
- SATA Gen1i, Gen1x, Gen2i, Gen2x compliant.
- In the downstream direction, the QuadSMX 3G demuxes the initiator-side receive ports to either the A or B device-side transmit ports.
- In the upstream direction, the QuadSMX 3G selects either the A or B device-side receive port to output on the initiator-side transmit ports.

- Passes-thru out-of-band (OOB) signaling.
- Internal OOB detectors for COMSAS, COMRESET/COMINIT and COMWAKE.
- Provides port reordering to support standard SATA/SAS 4 channel connectors and easier PCB routing.

**GENERAL - ETHERNET AND FIBRE CHANNEL**

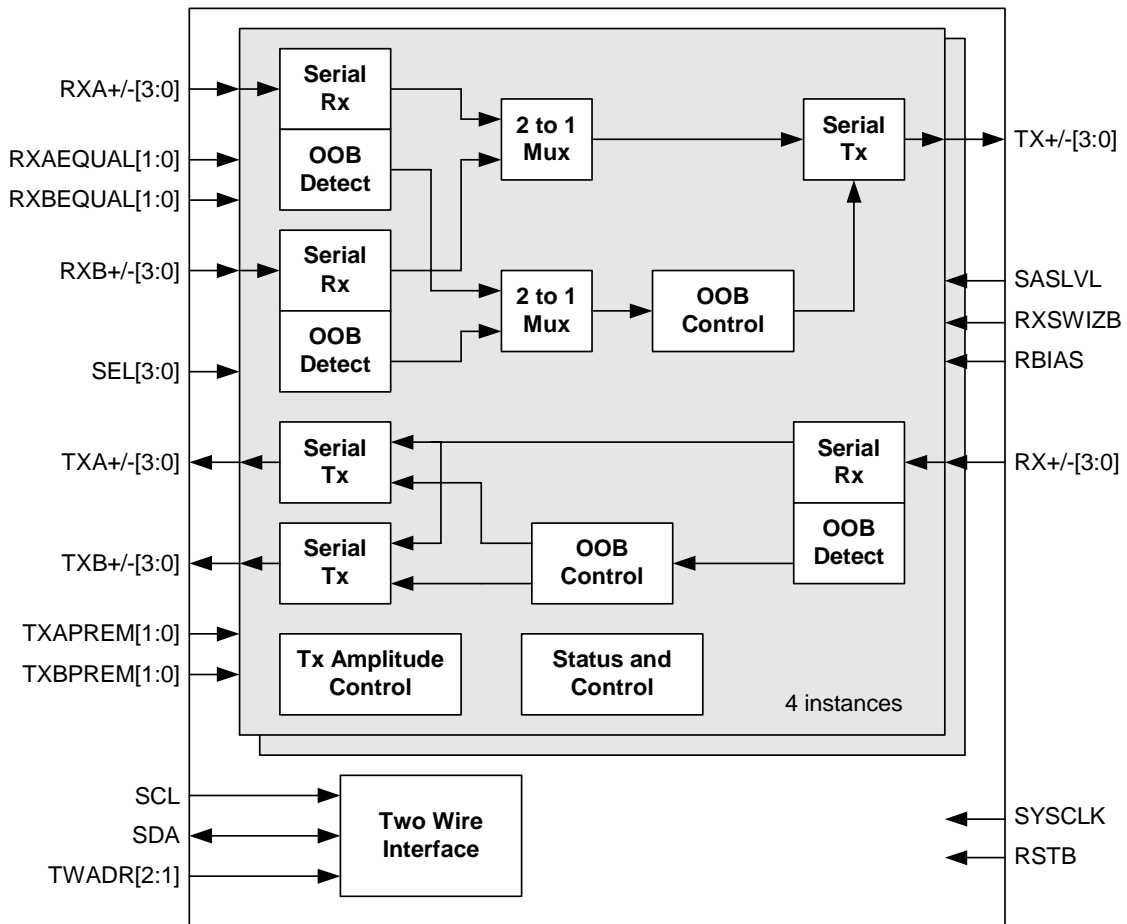
- Four channel bi-directional Gigabit Ethernet and 10 Gigabit Ethernet (XAUJ) link extender and 2:1 serial multiplexer/demultiplexer.
- Four channel bi-directional 1G,2G and 10G Fibre Channel link extender and 2:1 serial multiplexer/demultiplexer

- Provides transmit redundancy for Ethernet and Fibre Channel Switch Applications. In this case, data is broadcast to both Port A and Port B.

**HIGH-SPEED I/O**

- 1.0 Gbit/s to 3.2 Gbit/s operation.
- Automatic amplitude control for SATA and SAS applications.
- Programmable receive equalization, transmit pre-emphasis and transmit output swing.
- Integrated resistive termination and receive AC coupling.
- Analog interfaces support SATA and SAS hot plug.

**BLOCK DIAGRAM**



**4-Channel Multiplexer and Link Extender for SAS, SATA, Ethernet and FC**

**TEST AND CONTROL**

- Two-wire Interface (TWI) for configuration and status.
- Pin-strappable for standalone operation.

**PHYSICAL**

- 1.8 V and 3.3 V power supply.
- 0.18  $\mu$ m CMOS technology.
- 1W typical power.

- 100-pin BGA.
- 11 x 11 mm package.

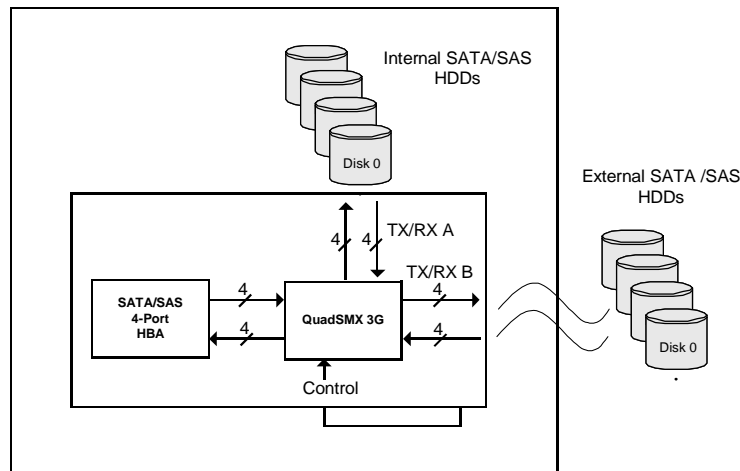
**APPLICATIONS**

- Host Bus Adapter.
- RAID controller.
- Ethernet (1GE and 10 GE XAUI) and Fibre Channel (1,2 and 10 GFC) link extender.

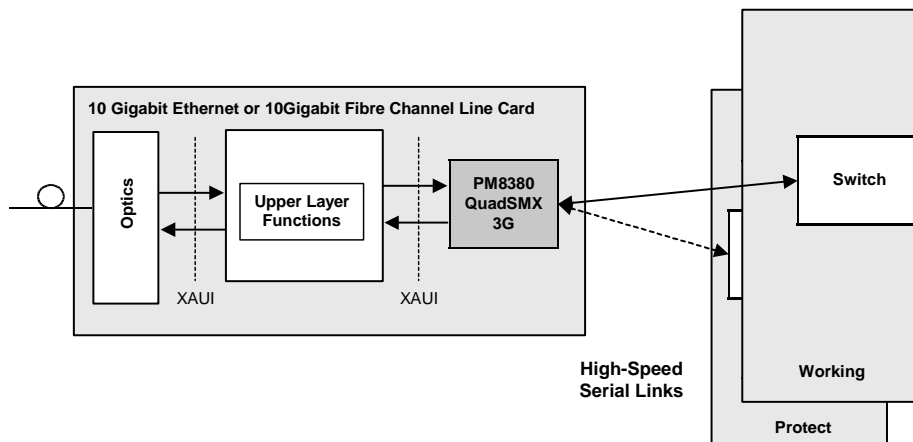
- Ethernet (1GE and 10 GE XAUI) and Fibre Channel (1,2 and 10 GFC) mux/demux.
- PCI Express, PCI Advanced Switching, ATCA, serial RapidIO, Infiniband, and HDTV link extender and mux/demux.

**TYPICAL APPLICATIONS**

**SERVER-CLASS SATA/SAS CONTROLLER**



**ETHERNET OR FIBRE CHANNEL SWITCH**



Head Office:  
 PMC-Sierra, Inc.  
 8555 Baxter Place  
 Burnaby, B.C. V5A 4V7  
 Canada  
 Tel: 1.604.415.6000  
 Fax: 1.604.415.6200

To order documentation,  
 send email to:  
 document@pmc-sierra.com  
 or contact the head office,  
 Attn: Document Coordinator

All product documentation is available  
 on our web site at:  
 http://www.pmc-sierra.com  
 For corporate information,  
 send email to:  
 info@pmc-sierra.com

PMC-2030351 (v3)  
 For a complete list of PMC-Sierra's  
 trademarks, see our web site at  
 http://www.pmc-sierra.com/legal/  
 Other product and company names  
 mentioned herein may be the trademarks of  
 their respective owners.