**Product Overview**

The PAS5211 is a four-port Gigabit PON Optical Line Terminal (OLT) System-on-Chip (SOC) dedicated for use in a Gigabit Passive Optical Network (ITU-T G.984 GPON). The PAS5211 chip integrates GPON Media Access Control (MAC) functions, GPON protocol management, IEEE 802.1ad-compliant VLAN bridge, Ethernet MAC functions, and an embedded CPU subsystem.

**Product Highlights**

- **Quad-channel Gigabit PON OLT-compliant** with ITU-T G.984 standard:
  - 128-bit AES downstream encryption
  - Forward Error Correction (FEC)
  - PON network diagnostic interface
- **Programmable interface logic** for optical transceiver
- **Integrated CPU subsystem**
- **Complete integrated hardware and software solution** for PON network control and real-time management
- **Complete OLT driver software package** development platform supports automatic operation and OEM extensions
- **Programmable dynamic bandwidth allocation (DBA)** hardware engines with run-time downloadable algorithms

**Benefits**

- Full ITU-T G.984 GPON OLT functionality with integrated ARM CPU and a comprehensive software package
- Integrated GPON SERDES
- IEEE 802.1ad-compliant VLAN bridge
- IP Multicasting support
- Comprehensive OLT software development package with a complete set of device drivers
- Integrated encryption engine enhances security and privacy
- Run-time programmable dynamic bandwidth allocation (DBA) hardware engines
- On-chip controller for performing complete link management and 0AM of GPON link with up to 128 ONTs per GPON channel

**OLT Line Card Example**
**Block Diagram**

**Interfaces**
- Four full-duplex transmit and receive GPON ports, operating at 2.488 Gbit/s downstream and 1.244 Gbit/s upstream
- Integrated GPON SERDES cores
- Flexible optical transceiver control interfaces to support transceivers from multiple vendors
- XAUI backplane interface with redundancy
- Multiple, full-duplex serial Ethernet interfaces to switch ICs
- Flexible, multi-mode host interface for connectivity to the core network controller
- Software memory extension interface for advanced embedded applications
- LED indications for the PON, core network and host interfaces
- General-purpose I/O interface

**Further Resources**

**Technology Webpage**
www.pmcs.com/products/optical_network/ftth_pon/

**Technical Documentation**
www.pmcs.com/resources/downloads_support.html

**About PMC**

PMC (Nasdaq:PMCS) is the semiconductor innovator transforming networks that connect, move and store digital content. Building on a track record of technology leadership, we are driving innovation across storage, optical and mobile networks. Our highly integrated solutions increase performance and enable next generation services to accelerate the network transformation. For more information visit www.pmcs.com.