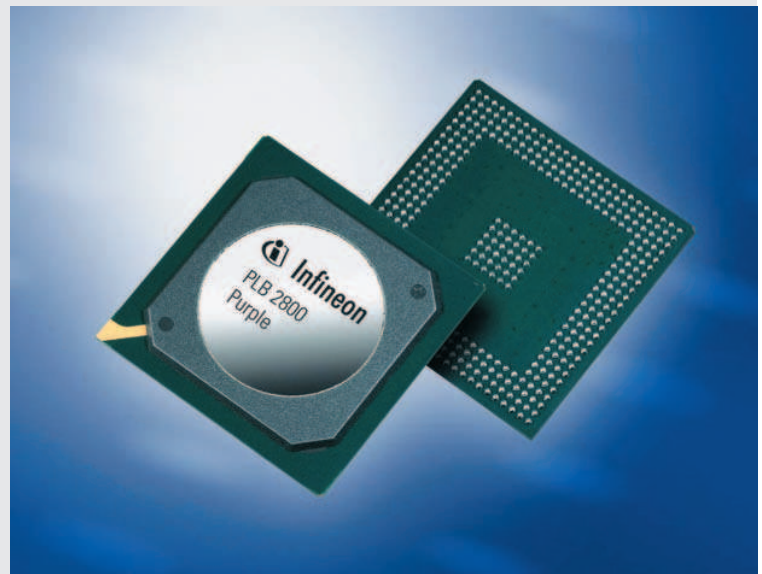


Infineon's Purple (PLB 2800) is a highly integrated and configurable Layer 2+ SoC (Switch-on-a-Chip). It extends Infineon's Layer 2 Ethernet switch family of products for higher integration, and more advanced traffic management. The Purple's versatile configuration and stacking options permit a variety of system topologies designed to increase the deployment of Ethernet access applications.

The Purple features a large on-chip packet buffer and address tables. With the addition of an on-chip 64-bit MIPS CPU, the need for an external memory and controller is eliminated.

Advanced security and Quality of Service (QoS) features are guaranteed using extensive VLAN management capabilities and port-based security for guarded and secure handling of traffic flows.

The Purple supports seven different configurations, ranging from eight GbE ports up to 48FE + 2GbE.



Purple

Applications

- Ethernet access switch for IP-DSLAM/DLC/MDU/MTU
- High port count workgroup switch
- GbE aggregator Ethernet Switch
- Cellular base stations
- Packet over SONET/SDH systems

Features

- 21 Gbit/s 12 million packets/second switching engine for solid L2+ wirespeed switching performance
- Embedded 64-bit MIPS 5Kc CPU
- On-chip DRAM, SRAM
- Stackable with up to 16 Purple switches with complete stack management
- Four Class of Service (CoS) queues per port

- Strict priority and Weighted-Fair-Queuing (WFQ) packet scheduling
- Advanced buffer control
- Broadcast and multicast storm control
- Multicast support for up to 256 multicast groups
- Port based flow control
- Per-flow token bucket policing
- Per-queue rate shaping
- Port, tag and flow-based VLANs
- Stacked VLAN support
- Port-based security
- Intrusion detection
- eCPU switch management with Bus mastering capabilities, flow-based accounting and RMON support
- Hardware assistance for protocols such as STP, GVRP and IGMP and Snooping

Interfaces

- SMI I V1.2/V2.1 for FE ports
- (R)GMII/TBI/MII for GE ports
- 32-Bit, 66 MHz PCI or generic host bus with DMA support
- I²C Interface for configuration EEPROM, optional low-cost CPU
- PC-133 SDRAM interface for external CPU DRAM
- EJTAG Interface for testing
- General purpose timer and I/Os

Standards Supported

- Supports a wide variety of IEEE 802.xx protocols
- IETF RFCs 1155–1157 SNMP
- IETF RFCs 1213, 1643, 1493
- IETF RFC 1757 RMON

Physical Characteristics

- P-BGA-388-2 package
- Core logic operates at 1.8 V

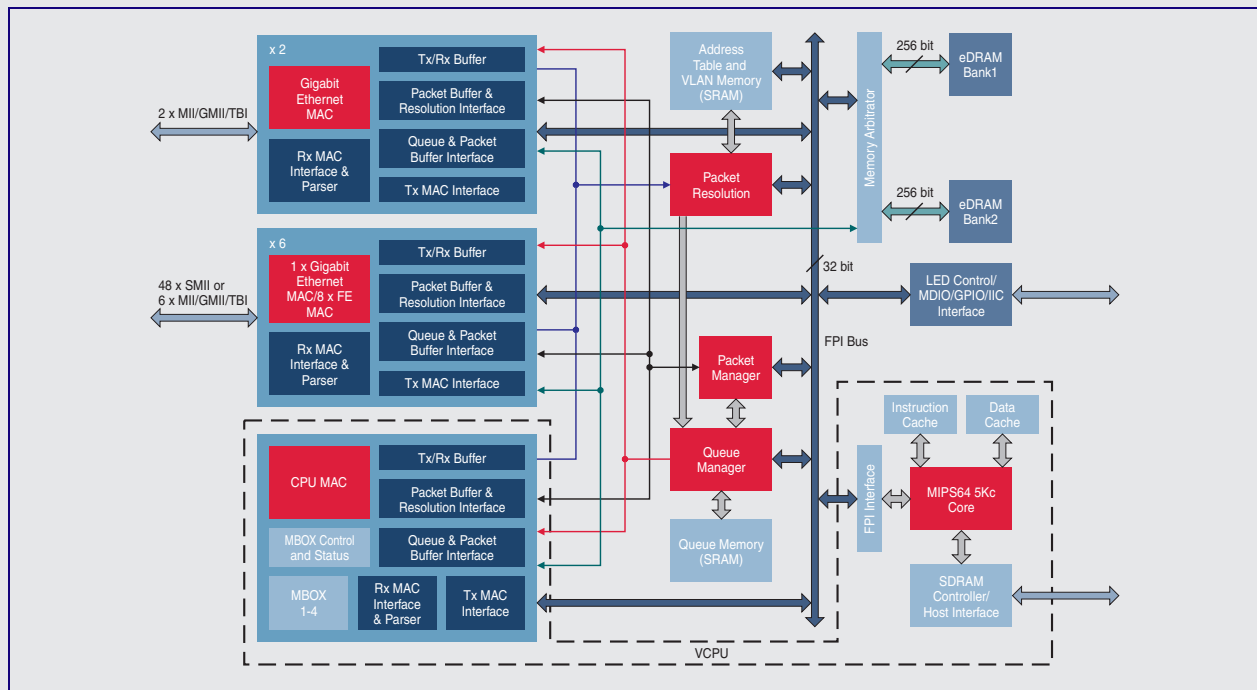
Purple

48FE+2GbE/8GbE L2+
Configurable Ethernet
Switch-on-a-Chip
PLB 2800

Never stop thinking.



PLB 2800 Block Diagram



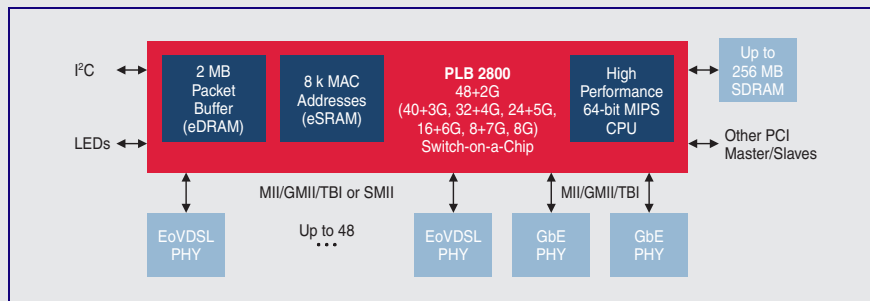
Ordering Information

PLB 2800 IC

Product	Sales Code	Description	Package
Purple	PLB 2800	48FE+2GbE/8GbE L2+ Configurable SoC	P-BGA-388

Purple Design Tools

Product	Sales Code	Description	Package
Purple2800x	Purple 2800 8GbEC	LAN Switch Demo Board	Main board with 8GbE copper modules
Purple2800x	Purple 2800 48+2GEF	LAN Switch Demo Board	Main board with 48FE+ 2GbE fiber modules
Purple2800x	Purple 2800 48+2GbEC	LAN Switch Demo Board	Main board with 48FE+ 2GbE copper modules
VDSL2800	SP-VDSL2800	Ethernet Access Switch Demo Board	Main board with 24 EoVDSL ports +2GbE uplinks



Small Form Factor 48 + 2G Layer 2 Ethernet over VDSL Switch Application Example

How to reach us:

<http://www.infineon.com>

Published by
Infineon Technologies AG,
St.-Martin-Strasse 53,
D-81669 München

© Infineon Technologies AG 2003. All Rights Reserved.

Attention please!

The information herein is given to describe certain components and shall not be considered as a guarantee of characteristics.

Terms of delivery and rights to technical change reserved.

We hereby disclaim any and all warranties, including but not limited to warranties of non-infringement, regarding circuits, descriptions and charts stated herein.

Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office.

Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office.

Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

Template: pb_tmplt.fm/2/2003-05-01