BROADCOM®

Product Brief

BCM55050

50G ITU PON/NGPON2/XGS-PON/10GEPON/ XGPON/GPON ONU

Features

- Integrated WAN Interfaces:
  - 50G ITU PON
  - NGPON2
  - XGS-PON
  - 10GEPON
  - XGPON
  - GPON
  - EPON
  - Internal SerDes circuitry enabling glueless interface to optical transceivers
- Integrated LAN Ports:
  - SGMII/HSGMII serial interfaces, with support for G999.1 (G.int)
  - RGMII Ethernet port, XFI (10G)
  - 25G SerDes interfaces
- Dual-core Brahma53 control processor architecture:
  - 1 GHz – 32 KB I/D caches, 1 MB L2 shared cache. Plus Secure Boot
- XRDP Network Processor enables 50 Gbps Layer 2 packet processing, flexible classification and filtering:
  - Real-time load balancing
  - Dynamic power reduction
- High-speed memory architecture, 2133 MHz LPDDR4 with 32-bit wide interface
- Flexible Flash memory support
- One PCI Express (PCIe) single lane, Gen 2

Overview

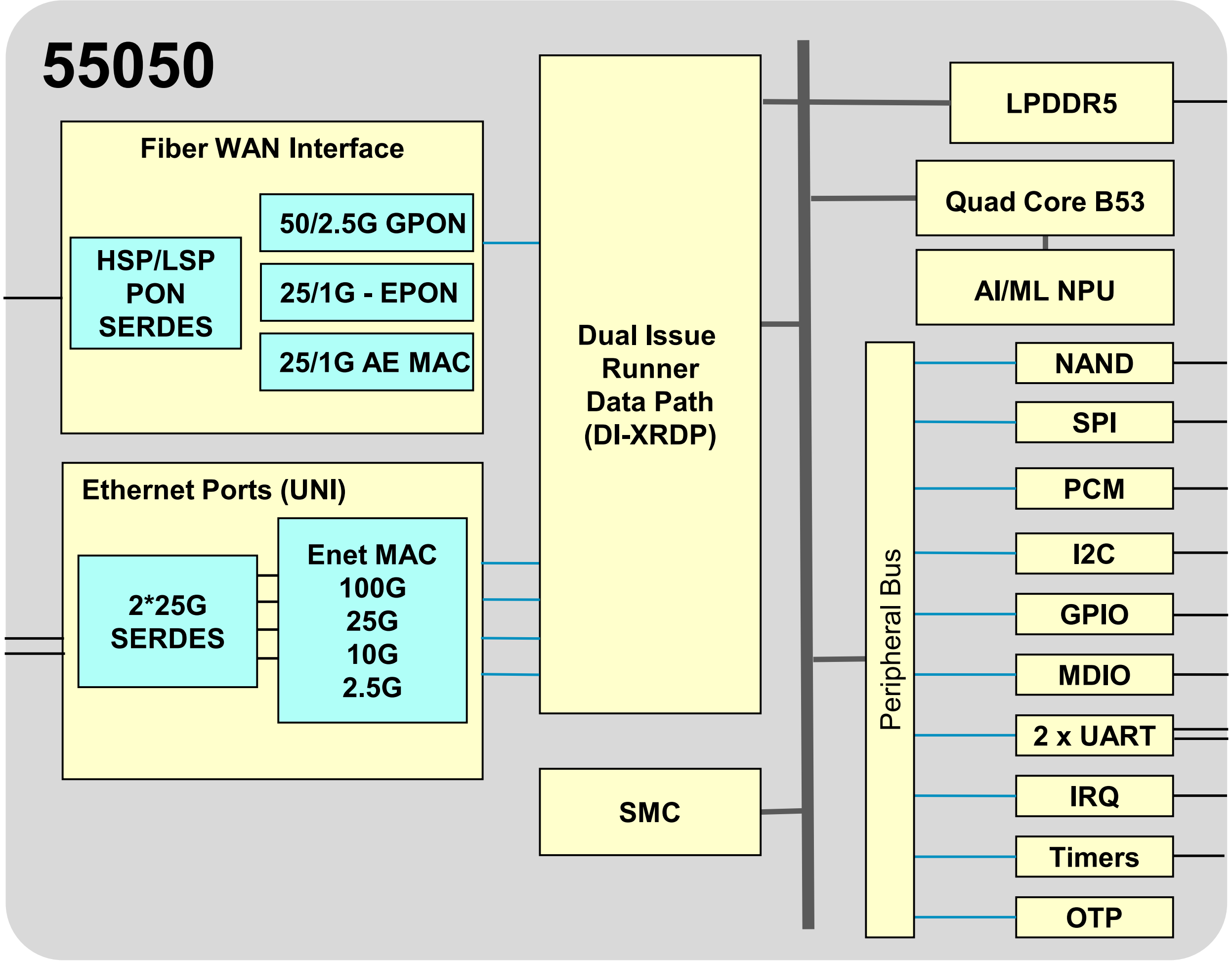
The BCM55050 is a highly-integrated NGPON2/XGSPON/10G EPON/50G ITU PON/XGPON/GPON ONU system-on-a-chip, optimized for rich service delivery and intelligent access applications.

The seventh-generation processor integrates PON MACs, SerDes, two RGMII interfaces, four HSGMII interfaces, two 10G XFI interfaces, two 25G SerDes interfaces, and a LPDDR4 controller, along with unrivaled QoS management, security, and hardware acceleration.

The BCM55050 features an advanced dual-core application processor and a 50G network processor enabling unmatched service application flexibility with benchmark performance. Each processor executes independently, giving maximum flexibility for the concurrent processing of ONU applications and high-throughput networking services.

With field-proven and ITU/IEEE-interoperable software, the BCM55050 enables low-risk development and the fastest time-to-market implementations of ONU applications.

Figure 1: Functional Block Diagram



Ordering Information

Part Number	Package	Ambient Temperature (with Heat Sink)
BCM55050A0IFSBG	25 mm x 25 mm FCBGA, Industrial	-40°C to 85°C

For more product information: broadcom.com