

## BL2348 GPON Processor

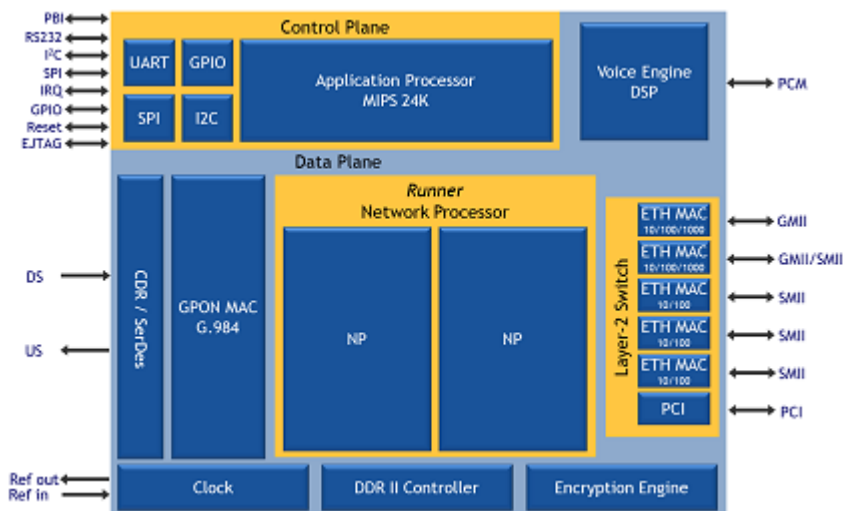
Part of the Alto processor family, the BL2348 is a low power and cost effective SoC targeting intelligent GPON Gateway service application processing in high performance access networks. The BL2348 incorporates the industry's most advanced interfaces including Gigabit Ethernet, VoIP DSP and PCI, along with unrivaled QoS, security and hardware acceleration. Integrated with the innovative dual core Runner™ network processor, the BL2348 enables unmatched service application flexibility with benchmark performance. Its instruction set has been designed from the ground up and is optimized to accelerate services and networking over a wide range of protocols and traffic management models, while maintaining up to 1Gbps routing throughput.

With industry-standard operating systems and software toolchains, BL2348 also integrates a MIPS32 for demanding application processing. An on-board DSP enables toll quality voice of simple, complex, and wideband CODECs, with a proven and comprehensive telephony feature set. BroadLight's GPON RG solution also includes the GateMakerPro software package allowing developers to implement production grade products quickly and with low-risk.

Decoupling the data, control, and voice planes, the SoC architecture maximizes throughput performance while maintaining all host and peripheral application tasks. The architecture enables new data path functionality to be added to the Runner™ network processor, guaranteeing versatility, scalability and a long product life cycle.

## FEATURES

- ▶ Single chip solution for GPON residential gateway
- ▶ Flexible high performance network processor
- ▶ TCP/IP/UDP acceleration engine enables wire-speed throughput
- ▶ Hardware security engine enables high-performance VPN tunneling, IPSec encryption/decryption, authentication
- ▶ PCI bus interface to support 4 external peripheral components such as 802.11b/g/n
- ▶ Single low-cost clock source 19.44 MHz crystal reduces overall system cost and simplifies design
- ▶ Single low cost DDR2 memory
- ▶ GateMaker software suite is a proven and comprehensive package enabling quick and low-risk development
- ▶ RTOS platform independent with complete toolchain
- ▶ ANSI C source code for configuring, provisioning, performance and fault monitoring of all device recourses
- ▶ Industry standard development and debugging environment



## BL2348 SPECIFICATIONS

### Dual Core Runner™ Network Processor

- ▶ Performance optimized for CPE service networking
- ▶ Flexible filtering, classification, remarking and packet modification
- ▶ Advanced traffic management and QoS
- ▶ NAT, Firewall, TCP/IP/UDP accelerators
- ▶ Comprehensive and simultaneous IPv6 and IPv4 support
- ▶ IPsec, SSL, DES, 3DES, AES, SHA1, MD5

### Gig Class Performance

- ▶ Up to 2 Gbps full duplex Layer-2
- ▶ Up to 1Gbps full duplex Layer-3/4 with NAT/FW and PPPoE
- ▶ 16K session with NAT/FW
- ▶ No performance degradation over multiple sessions

### CPU

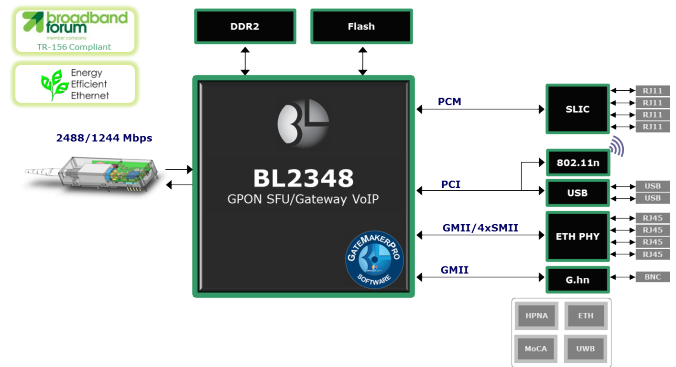
- ▶ MIPS32 24K RISC core with MMU
- ▶ 4-way, 16 KB instruction and 16 KB data cache

### Integrated I/Os

- ▶ 5 Configurable Ethernet MACs: 2GbE or 4FE+1GbE
- ▶ 32 bit/33 MHz PCI Host Rev 2.3
- ▶ PCM highway
- ▶ 16 bit/66 MHz local bus
- ▶ UART, SPI, I<sup>2</sup>C
- ▶ GPIOs

### VoIP DSP

- ▶ Up to 4 voice ports
- ▶ G.711, G.722, G.723.1, G.726, G.729A/B, G.722.2
- ▶ G.168 echo cancellation
- ▶ T.38 fax relay
- ▶ Tone and comfort noise generator
- ▶ Voice activity detection
- ▶ Comprehensive telephony features



### Low Power

- ▶ Intelligent power management
- ▶ 0.9 W typical

### Physical

- ▶ 19x19 mm BGA-441
- ▶ Industrial grade -40°C to +85°C

For more information visit our website at: [www.broadlight.com](http://www.broadlight.com)

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