

APPLICATION PROCESSOR FOR NETWORK MANAGEMENT APPLICATIONS

FEATURES

- ARM7DMIS-based microprocessor with 192-KB ROM and 40-KB RAM on chip
- USB 2.0 full-speed hub with support for three downstream ports
- High-speed UART interface (9600 bps to 3.0 Mbps) with automatic baud rate detection
- 480 byte UART transmit and receive FIFOs
- SMBus 2.0 interface
- Supports up to 512 kbits of external flash memory
- Built-in on-chip voltage regulators
- Low power consumption in all modes of operations
- 121-pin 1.0-mm BGA package (lead-free)
- Operating temperature 0°C to 70°C

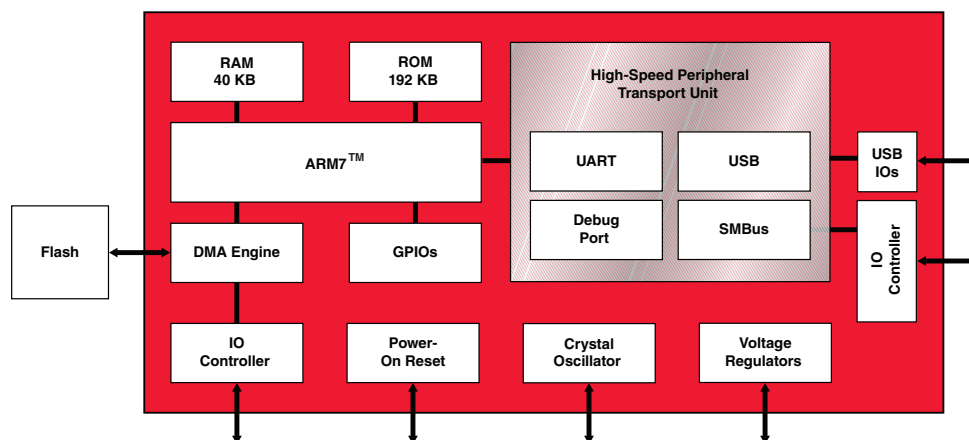
APPLICATIONS

- Application processor for LAN-on-Motherboard (LOM)
- Complete DASH management solution (in conjunction with BCM5757)

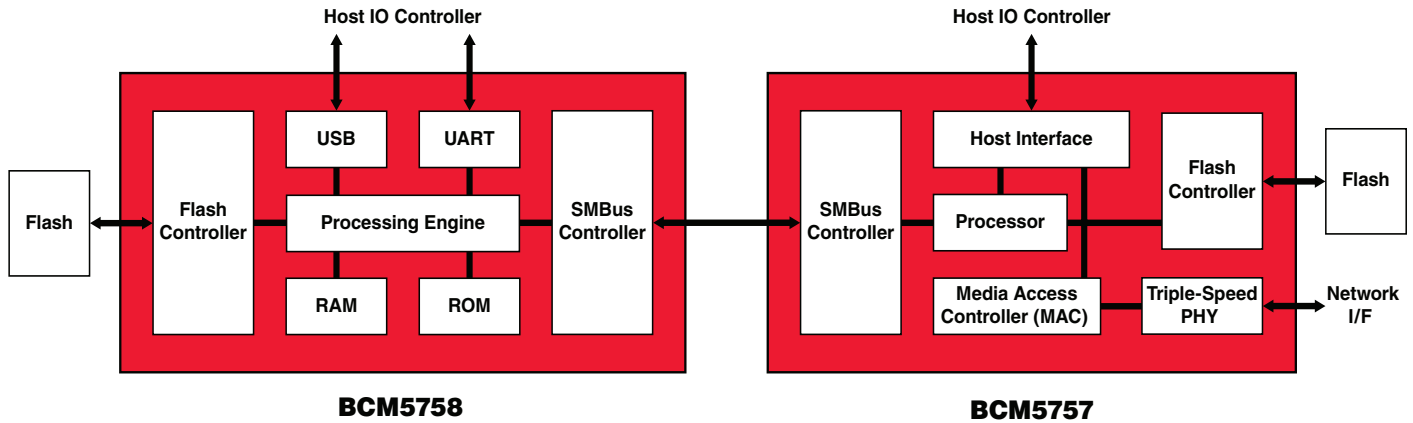
SUMMARY OF BENEFITS

- DASH 1.0 support:
 - Web services based management (WS-Man)
 - Common Information Model (CIM) profiles support: base desktop mobile, physical asset, boot control, power state management, software inventory, CPU, system memory, fan, power supply, sensor, role-based authentication, simple identity management.
 - HTTP/TCP transport protocol
 - Shared MAC/IP addressing model (with host addresses)
 - Class-A and Class-B security with HTTPS (TLS security profile)
 - Effective and flexible credential distribution
- ASF 2.0 support:
 - Platform Event Traps (PETs)
 - Remote control (power on/off, power cycle reset, reset)
 - Boot device selection
 - Offline mailbox
- Field firmware upgradeability.
- Out-of-Box manageability without one-good-boot requirement.
- Remote boot using iSCSI boot protocol.
- Wake-on-LAN with Interesting and magic packet support.
- Ability to support console redirection and USB redirection via a firmware upgrade.
- Fully configurable management parameters via manual or scripting (CLI) methods.

BCM5758 Block Diagram



OVERVIEW



System Implementation Diagram

The BCM5758 is an application processor, which, when combined with the BCM5757 integrated Gigabit Ethernet controller, provides a complete DASH-based management solution for the enterprise desktop PC market. The scalable architecture combined with a highly optimized firmware and software enable low-power and cost effective management functionality for in-band, out-of-band, and out-of-service environments. The on-chip processor and memory (used for both code and data) allow the BCM5758-based implementation to be highly secure and less vulnerable to system component failure.

The powerful on-chip processor runs a real-time operating system (RTOS) with full network and WS-Man stack. Included HTTP and HTTPS protocol stacks provide support for secure (authenticated and encrypted) communication with the remote console. As a result, power control, boot control, assets inventory, and many other management functions can be performed remotely and over authenticated and encrypted secure connections, while the managed system is in out-of-service or OS-absent state.

Target applications of the BCM5758:

- Fully managed desktop and mobile PC LOM.

Software applications:

- Broadcom Advanced Control Suite (BACS) for Windows NT, 2000, XP and Vista.
- DOS-based user and manufacturing diagnostics.

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BROADCOM CORPORATION
16215 Alton Parkway, P.O. Box 57013
Irvine, California 92619-7013

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Phone: 949-450-8700
Fax: 949-926-5203
E-mail: info@broadcom.com
Web: www.broadcom.com