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BCM5758 PRODUCT Brief

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

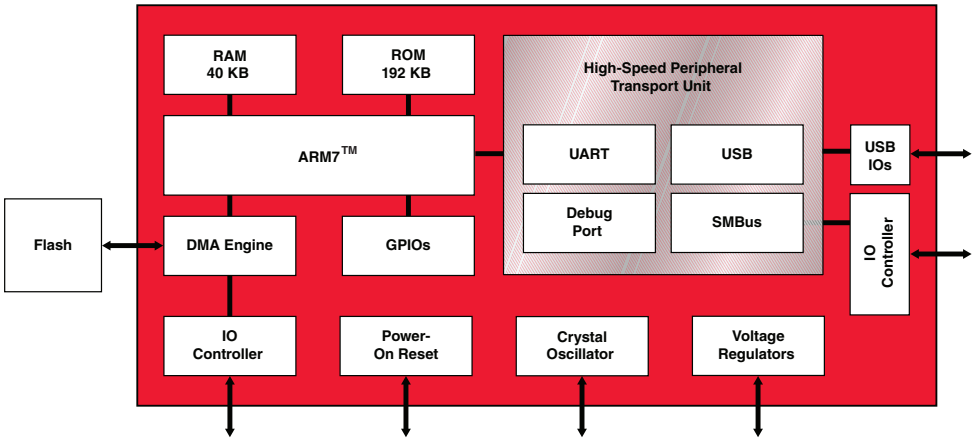
APPLICATIONS

- 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



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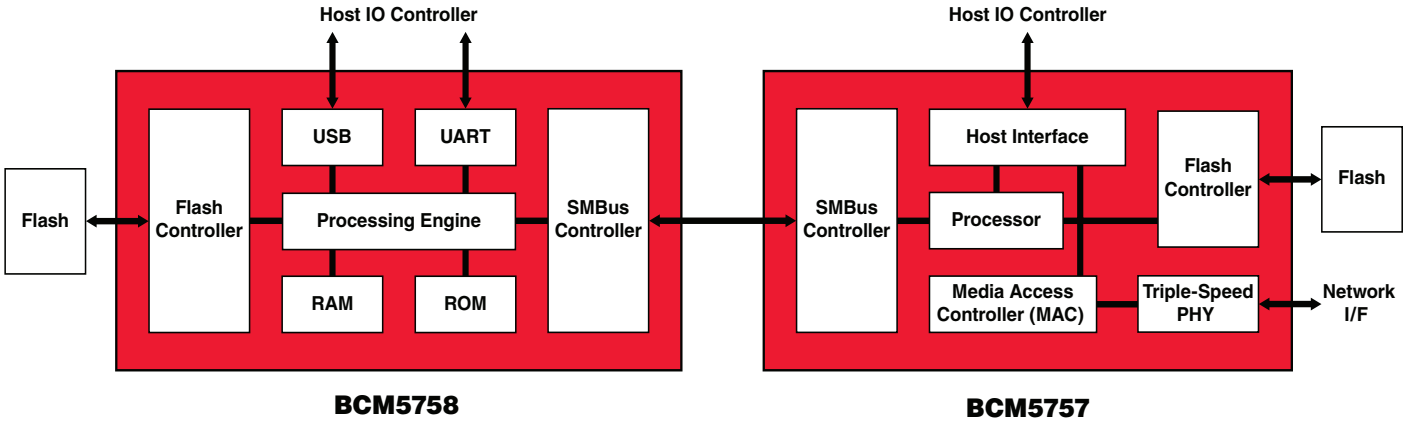
OVERVIEW



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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