Product Overview

AMD Socket AM2 processor-based Storage Bridge Bay (SBB) reference design kit (RDK) is a standardized storage controller that has been designed to comply with the SBB 2.0 specification within the 100-watt power envelope. It has been designed for OEMs to meet the needs of low- to mid-range networked storage systems. This innovative storage solution enables OEMs to develop leading price-per-performance storage systems — whether NAS, SAN, or Unified Storage — with exceptional I/O capabilities. The AMD AM2 SBB RDK is designed to leverage the rich feature set of the AMD Athlon™ processor. This complete solution — that includes storage operating systems from leading storage ISVs — is designed to help you bring your products to market faster. By including schematics and layout source files, based on AMD's embedded solutions offering of low-power AMD Athlon processors, including the AMD Athlon X2 4200+ dual-core, the AMD Athlon 3100+ single-core processors, and future products, this RDK helps make it easy to get to market.

The flexible architecture of the AMD AM2 SBB RDK uses PCI Express® x8 Host Bus Adapter (HBA) for broad host interface connectivity — whether GigE, 10GigE, Fibre Channel, or InfiniBand.

Speed your time to market

AMD developed this reference design to shorten design cycles and to help you move your solution to market fast. The AMD AM2 SBB RDK follows the SBB standards, enabling one storage controller to fit a broad range of storage solutions to help reduce engineering investments in thermal, electrical, and mechanical design. Your engineering team can spend more time focusing on features that will make your solution truly exceptional. The design has been completely built and tested to ensure it is a production ready solution. This provides you with a complete product to take to production or an excellent design starting point.

AMD Socket AM2 processor-based SBB RDK can help you:

- Minimize cost and production time
- Utilize SBB 2.0 — an industry-standard form factor
- Benefit from proven schematics, layout, and bill of materials (BOM)
- Enhance product success by allowing designers to focus on your unique product requirements

AMD AM2 SBB RDK and Storage Solution Partners

AMD has teamed up with Sanmina-SCI Corporation as the manufacturing partner to further assist with acceleration of time-to-market and time-to-volume of your SBB storage system. This manufacturing partnership brings a ready to be commercialized dual-controller storage system based on AMD AM2 SBB RDK.

AMD has collaborated with AMI to demonstrate the dual-controller high availability feature in a fully configured SBB storage system running AMI's StorTrends® iTX Data Storage Software. Designed for enterprise-level high availability and disaster recovery, StorTrends iTX is designed to be cost-effective, scalable and suitable for both novice and advanced users. StorTrends iTX combines the advantages of the storage centralization and scalability of IP-based Storage Area Networks with the ease of use and file sharing of Network Attached Storage onto a single platform at a very attractive price.

OEMs can benefit from the advantages of AMD AM2 SBB RDK manufactured by Sanmina-SCI and integrated with AMI StorTrends iTX storage operating system for a turn-key enterprise-class storage solution for the mid-range market.
PRIMARY PRODUCT FEATURES

CPU
Supports AMD Athlon™ socket AM2 processors with up to 35W TDP including AMD Athlon X2 dual-core and AMD Athlon single-core processors. See the AMD Embedded Solution Product Selection Guide for the complete list of Embedded AMD Athlon processors.

Chipset — Broadcom HT-2100 + HT-1000
- PCIe® interfaces for peripheral connectivity
- USB 2.0 Interface for debug and system management
- LPC for SIO and BIOS connectivity
- SATA for OS

BBU — Battery Back-Up of Memory
- Battery, charger, lockout, switch-over logic, fuel gauge, and other related circuitry
- Required additional customer-specific software integration to fully exercise data recovery on the validated hardware platform

Peripheral Components
- 1GbE Interface to SBB back plate for out-of-band RAID controller management
- 1GbE Interface to SBB midplane for inter-canister communication
- LSI SAS1068E SAS controller
  - 4 ports to SAS port expander
  - 4 ports for inter-canister connectivity
- LSI SAS38 SAS expander
  - 28 ports to mid-plane connectors

Main Memory
- 2 DDR-2 DIMMs supporting PC2-6400 with ECC

HBA (Host Bus Adapter) Slot
- PCIe x8 low profile slot
- Limited power consumption; TBD (will be significantly less than the 25W allowed in the PCIe spec for a x4/x8 low profile card)

Boot Media
- One 32-pin PLCC socket for 1MB LPV FWH Flash ROM devices
- SATA

Storage OS
- Microsoft® Windows® Unified Data Storage Server (WUDSS)
- Linux kernel version 2.6.18-8 storage OS

Product Support
This complete solution includes schematics, layout, and full documentation. Full integration with AMD technologies, low-power requirements, and design flexibility help reduce costly time-to-market and enable more effective, efficient embedded designs.

About AMD
AMD (NYSE:AMD) designs and produces innovative microprocessors and low-power processor solutions for the computer, communications, and consumer electronics industries. AMD is dedicated to delivering standards-based, customer-focused solutions for technology users, ranging from enterprises and governments to individual consumers.

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