

The Second-Generation AMD Opteron™ Processor-Based AdvancedTCA® Blade Reference Design Kit



AMD in Telecommunications

AMD is committed to helping telecom equipment manufacturers (TEMs) and network equipment providers (NEPs) develop stable, modular systems that address this converging, quickly changing and performance-hungry market.

AMD's support of the ATCA® form factor through the development of the Second-Generation AMD Opteron™ processor-based Blade Reference Design Kit (RDK) is a key part of that commitment to speeding time to market and enabling low power, high performance telecom systems that can be tailored to specific customer requirements.

Why Select AMD64 Technology for a Telecom Platform?

The AMD Opteron™ processor, based on AMD64 technology with Direct Connect Architecture, provides leading edge system performance for the unique demands of the telecom market. The low latency and high I/O bandwidth in HyperTransport™ technology can allow increased network traffic in packets per second while the low latency memory interface allows time-critical voice, data, and content traffic to move quickly and freely through the system, supporting the increasing number of subscribers and increasing content demands of the market in general. AMD's focus on performance per watt efficiencies can lead to higher service levels with low costs of ownership. And AMD offers a proven stable, reliable and scalable foundation for the long-term requirements of networking infrastructure.

A Full Reference Design Kit

This feature-rich kit will help enable your team to design and manufacture a high-performance, NEBS-compliant ATCA blade and offers both a foundation for rapid deployment into the fast-growing ATCA market and quick customization for carrier-grade environments.

AMD's Second-Generation AMD Opteron™ processor-based ATCA Blade RDK can shorten product development cycles by providing companies with ready-to-go design collaterals and reference hardware.

RDK Collaterals Include:

- Complete RDK overview
- Product manual
- Production schematics/BOM
- Production layout files
- Gerber files

Get High Performance Systems to Market Fast with AMD Embedded Solutions

Ready to create high-performance, low-power ATCA standard-based telecommunications systems that give you an edge in the marketplace? Take a close look and experience the AMD64 technology advantage. For more information, please visit www.amd.com/embedded.



Product Features

Form Factor:

- Second-generation AMD Opteron™ processor-based AdvancedTCA® blade with two dual-core, Socket F (1207) processors
- Conforms to PICMG 3.0 R2.0 (Core), PICMG 3.0 Option 1

CPU/Chipset:

- AMD Opteron™ processor-based board featuring two dual-core, Socket F (1207) processors with speeds up to 1.8GHz
→2MB L2 cache per processor (1MB per core)
- Broadcom HT-2100 and HT-1000 chipset

Bus Interface:

- HyperTransport™ technology x16 link per CPU
- 667MHz DDR2 memory
- Supports one on-board AMC.1 card
- PCI Express® x8

Memory:

- Configurable up to 16GB with 72-bit registered ECC DDR2 667MHz memory per processor

Storage:

- 2.5" SAS micro drive mounted on board
- On-board Compact Flash carrier
- 16MB on-board static RAM is supported through the HT-1000 using PLX PCI9030 bridge—persistent through reset
- AMC Common Options

I/O

- Single auto-negotiating Gigabit with dual port Ethernet controller for the Base interface
- Dual port Ethernet controller for the Fabric interface
- One AMC.1 card bay—fabric is x8 PCI Express and Common Options Region supports 1 Gb Ethernet and SAS drive
- Two USB 2.0 ports on front panel
- RJ45 serial port on front panel
- 10/100/1000Mbps/sec Ethernet with dual ports (front)

BIOS

- AMI Embedded BIOS with boot from USB, HD, CD-ROM and network
- Console redirection, PhP, PCI auto-configuration

Flash Memory:

- 2MB Flash: 1MB for BIOS
- Redundant BIOS Flashes

OS Compatibility

- Red Hat Enterprise Linux® 3
- SuSE SLES 10
- SuSE 9.3 Pro
- Fedora Core 3
- MontaVista Linux Carrier Grade Edition (CGE)
- Wind River CGL

Power

- Max power dissipation—200W

Supervisory

- IPMI Controller

About AMD

Advanced Micro Devices (NYSE: AMD) is a leading global provider of innovative microprocessor solutions for computing, communications, and consumer electronics markets. Founded in 1969, AMD is dedicated to delivering superior computing solutions based on customer needs that empower users worldwide. For more information, visit www.amd.com.

Environmental Specifications

Operating

- Temperature: -5° to 55° C
- Humidity (RNC): 10 to 85% non-condensing
- Altitude: 4,572m / 15,000ft
- Shock: 50 g
- Vibration: 5-500Hz @ 0.5 g RMS random
- Flammability: IEC 60950

Storage and Transit (with HD)

- Temperature: -40° to 70° C
- Humidity (RNC): 10 to 95% non-condensing
- Altitude: 15,240m / 50,000ft
- Shock: 50 g
- Vibration: 5-500Hz @ 0.5 g RMS random

Regulatory Compliance

- Designed for NEBS/ETSI compliance

Second-Generation AMD Opteron™ Processor-Based ATCA® Board Layout

