Simplifying design. Streamlining time-to-market.

AMD64 technology for high-end embedded systems

Today's embedded system designers face a staggering number of challenges—from preserving space on the board, and maximizing data throughput to managing the heat and power demands of the latest cutting-edge processors. In addition, the time-to-market for new products depends on the availability of the right components and whether those components can be counted on for the life of the design.

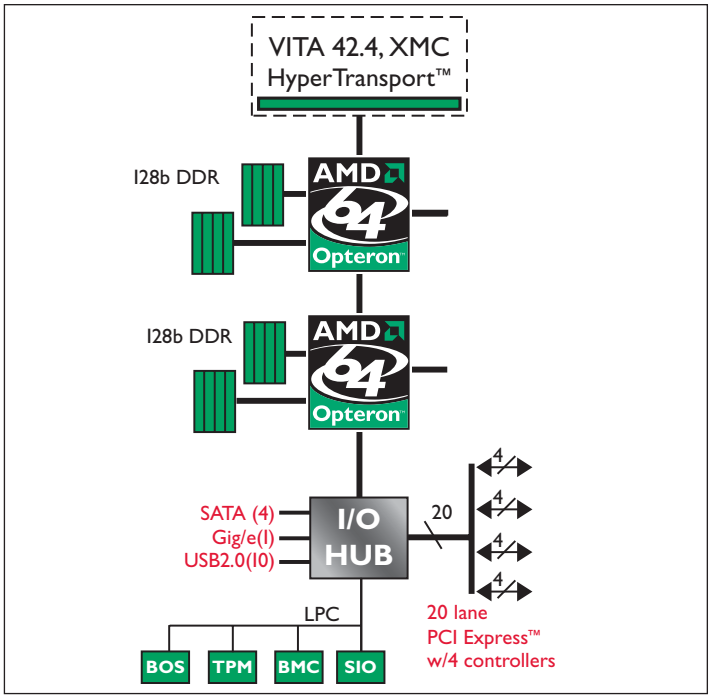
AMD is dedicated to driving innovation in the embedded market, offering an unparalleled choice in x86 processors and the extended processor life cycle required for embedded products.

The expanding scope of embedded design

These days, there are hundreds of thousands of products that depend on embedded computer designs. And now, there are new high-end embedded systems being designed that require more processor performance, memory bandwidth and I/O throughput than ever before.

At the same time, there is an increasing demand for designs that meet traditional embedded criteria, such as the shock and vibration specifications of field-capable military server systems or the reliability and environmental needs of the telecommunications industry. These applications require the highest computing performance available. And the designs often call for the "future-proofing" of 64-bit capability.

Many markets see an increased need for high-end embedded designs that require a specific balance of power and an expanding need for performance. This new generation of computers includes products for the storage and telecommunications industries; thin client servers and speech processing applications; platforms for the military, government and general industry that enable embedded control systems; highly specialized and general purpose mobile equipment; and for thousands of other singleboard computer applications. Markets that previously relied on proprietary designs are now taking advantage of the expanding performance, reliability and feature sets of "off-the-shelf" x86 processors and the large ecosystem built around these technologies.



The high-performance AMD Opteron™ processors streamline the designs and provide flexibility in bringing high-end embedded systems to market.

Delivering exceptional computing performance

AMD has a history of providing leading-edge processors and microcontrollers for traditional embedded markets and helping designers to standardize on the easy-to-develop x86 platform. And now, high-end embedded products can incorporate 64-bit computing with AMD64 technology.

As the definition of embedded design evolves, AMD64 technology is available to help bring new, high-end embedded products to market quickly and with the highest performance available today in either an x86 single- or dual-core processor.

Product Families

AMD Opteron™ processors, AMD Sempron™ processors and AMD Turion™ 64 Mobile Technology, all featuring AMD's Direct Connect Architecture and HyperTransport™ technology, help eliminate the bottlenecks of traditional x86-based systems. AMD64 technology is manufactured on 90nm SOI technology, enabling dramatically lower

A winning combination

WIN Enterprises, an industry leader in x86 embedded design and manufacturing, relies on the AMD64 platform to satisfy customer demands for performance, 64-bit capability and true dual-core technology.

"A number of our customers have been approaching us, asking for 64-bit processor capability on a small platform for quite a while. Now that the longevity piece is in place for AMD64 technology, we are able to meet a broader range of our customer requirements for embedded designs on x86 platforms. Additionally, the level of support we received from AMD through the development phase of the project dramatically helped speed up our delivery of a finished product."

– Chiman Patel,
CEO/CTO
WIN Enterprises

thermal output levels and power requirements, but with increased performance scaling which allows for high-end embedded designs with industry-leading performance-per-watt.

Carry your design into production and beyond

The AMD Longevity Program offers a select set of AMD64 processors with an extended standard availability period of five years. High-end embedded products can now be designed and brought to market with industry-leading x86 performance and the support of a dedicated team of individuals who understand your market and design challenges. What's more, customers can count on component availability for the life of the design.

Bringing embedded systems to life

Designing with AMD64 technology makes it easy to bring embedded systems to life. AMD processors are a cost-effective use of an industry-standard computing platform that offers extreme performance in both 32- and 64-bit modes with a wide range of power and performance combinations readily available. Designs built on AMD64 technology can immediately take advantage of the wide range of x86-based hardware and software products already available in the market today.

AMD continues to work closely with industry partners in developing this ecosystem so customers can ultimately enjoy greater freedom of choice. In fact, more than 1,300 software packages are now certified for AMD64, adding to the numerous chipsets, connectors, development tools, debuggers and associated other requirements of embedded system designers.

Engineering expertise at your service

AMD helps embedded customers make the most of AMD64 technology by offering comprehensive engineering support services. Since 2002, the Professional Design Support Service program has enabled customers to quickly bring designs to market through a fee-based subscription, giving them an edge in reducing development costs and speeding their product development.

AMD's comprehensive engineering support program allows embedded designers to tap into AMD's design expertise. The program is dedicated to helping customers get their designs to market faster through a variety of support services including:

- Dedicated account program managers
- Internet-based technical support
- Access to RDKs for faster design development
- Design Specification & Schematic Review
- Layout Review & Thermal Analysis
- Bring-up and Debug Support
- BIOS Support (Linux, Windows & Embedded OS)
- On-Site Technical Support

For more information on AMD's high-end embedded design programs, contact support.services_americas@amd.com or visit www.amd.com/amd64embedded

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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