



NEWS RELEASE

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AHA Develops Evaluation Board for Low-Cost TPC Solution

EVB allows designers to quickly evaluate performance benefits of the most powerful forward error correction IC.

Pullman, Wash. — Oct. 1, 2001 — Advanced Hardware Architectures (AHA), the industry's only provider of integrated circuits incorporating Turbo Product Code (TPC) forward error correction technology today introduced an evaluation board for test and evaluation of TPC technology during system development.

Communication systems designers will use the AHA4524 evaluation board to configure and test the performance of the AHA452x family of encoder/decoder devices for wireless communication products. Using the EVB, designers will confirm that wireless systems meet target specifications for bit error rate performance, and related system metrics. The evaluation board also provides an interface to bit-error rate test (BERT) equipment to facilitate automated testing.

The AHA4524 evaluation board (EVB) allows configuration and evaluation of the performance of the AHA452x TPC devices in either a communication system or laboratory environment. The EVB includes one AHA4524 device that supports full-duplex encoding and decoding with block sizes up to 4K bits.

AHA's groundbreaking TPC technology dramatically outperforms existing Reed-Solomon / Viterbi error correction technology. The AHA4524, which offers up to 4K block sizes and provides channel rates up to 31 Mbits/sec, is priced at less than \$7 each in large volumes. A lower-cost device, the AHA4522, implements up to 2K block sizes and is available for less than \$5 each in large volumes.

AHA4524 EVB: Convenience, Speed and Compatibility

For ease of use and robust evaluation, the AHA4524 EVB supports standalone encoding or decoding, as well as full duplex simultaneous encoding/decoding through preset configurations.

Plug-in compatible with the TI C5402 DSK Evaluation Module from Texas Instruments gives the designer the ability to develop digital signal processing (DSP) firmware for systems that use AHA452x family devices in conjunction with a TI DSP. The data source/sink can be provided externally from user equipment via coaxial SMA connectors.

Both the encoder and decoder of the AHA4524 EVB have independent clock and serial data inputs and outputs, a 31 Mbits/sec channel rate maximum.

Price and Availability

The AHA4524 EVB will be available in the fourth quarter of 2001. The basic evaluation board will be priced at \$2,500.

Built-in Design Flexibility: About AHA's TPC Technology

AHA's patented TPC technology, found in all AHA452x ICs, delivers up to 2dB of additional coding gain over such current solutions as Reed-Solomon / Viterbi and 3dB of coding gain over standalone Reed-Solomon coding.

Designers who use the AHA4524 IC can transform this coding gain into a range of options that allow them to increase capabilities or decrease system costs to best fit their application. Examples include but are not limited to:

- reduce required bandwidth,
- increase throughput,
- reduce transmitter power by 2x,
- increase range by 40 percent,
- reduce antenna size by 30 percent, or
- reduce the required noise figure of the receiver by 3 dB.

Background on the AHA452x Family of TPC-enabled Devices

AHA's patented TPC technology makes these integrated circuits most appropriate for a broad range of wireless communication applications.

The AHA452x chips can be used in modems for high-speed wireless Internet access applications, including point-to-multipoint terrestrial and satellite connections. They are also appropriate for next-generation powerline modems that enable home or business networks through standard electrical outlets, and wireless local loop (WLL) applications that bring high-bandwidth wireless access to areas that cannot be economically served by traditional phone lines.

Some of the freedoms that wireless solutions offer over cable or DSL Internet access solutions include:

- distance of the device from a central office becomes irrelevant,
- rapid deployment is feasible compared to trying to get "rack" space at a LEC or CLEC central office,
- ability to get service where phone or cable lines don't exist,
- rapid ability to re-configure a system as the number of users in an area grows.

Wireless communications provide access to the Internet independently, quickly and efficiently.

About AHA

Advanced Hardware Architectures develops and markets superior integrated circuits and intellectual property core technology for communications systems architects worldwide. AHA provides flexible, cost-effective solutions for today's growing bandwidth and reliability challenges. Headquartered in Pullman, Wash., AHA has been setting the standard in Forward Error Correction technology for more than a decade, and offers a variety of standard and custom IC solutions for the data communications industry.

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