

Experience the design flexibility of the AMBE-3000™ Vocoder chip plus evaluate AMBE®+2 Vocoder Performance, in one easy to use tool!

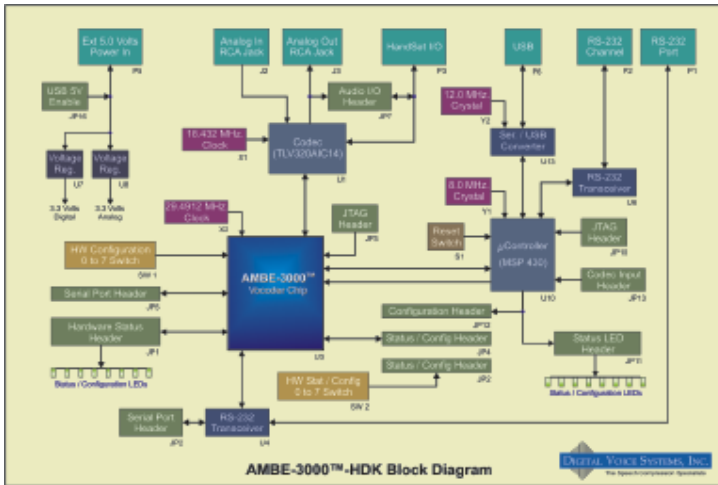
The Digital Voice Systems, Inc. (DVSI) AMBE-3000™ HDK is a comprehensive, evaluation, test and development platform that helps product designers and manufacturing engineers gain experience with low-bit-rate vocoders. Based on the AMBE-3000™ series vocoder chips the HDK is the ideal reference design for evaluation and test of DVSI's vocoder performance. This multipurpose vocoder tool enables users to explore the capabilities and benefits of the AMBE-3000™ low-bit-rate vocoder in real-time without investing in large amounts of engineering time and hardware prototypes.

The AMBE-3000™ HDK gives engineers the insight required to efficiently develop their own high performance low-bit-rate narrowband communication systems. The AMBE-3000™ HDK specifically uses inexpensive widely available circuit components with easily attainable development tools so that designers can understand how to ultimately produce low cost products with a quick time to market.

The heart of AMBE-3000™ HDK is DVSI's patented AMBE+2™ Voice Compression technology. Embedded in the AMBE-3000™ vocoder chip this voice compression is an affordable and power efficient vocoder solution that provides exceptional voice quality at bit rates from 2000 to 9600 bps. Forward Error Correction (FEC) is included to optimize robustness to background noise and channel bit errors. Also, the AMBE-3000™ vocoder chip includes a number of advanced features such as:

AMBE-3000™ HDK Features

- The AMBE®+2 Vocoder with high quality speech compression and FEC data rates that can be set from 2000 bps to 9600 bps.
- The development kit includes: circuit design details, sample control software and reference documentation.
- Vocoder and hardware configuration via dipswitches or jumpers or USB to PC interface.
- Encode decode files to/from a PC through the USB interface.
- Real-time full-duplex communication between two HDK boards using the RS-232 interface.
- Full Control of AMBE-30x0™ Vocoder Chip advanced capabilities such as Soft decision FEC, Voice Activity Detection (VAD), adaptive Comfort Noise Insertion (CNI) and DTMF tones.
- Can be power with a 5 Volt DC power adapter or through the USB connection to a PC.



Voice Activity Detection (VAD), adaptive Comfort Noise Insertion (CNI) and support for DTMF tones. This level of performance has resulted in the successful deployment of wireless communication systems in the most demanding environments.

The AMBE-3000™ HDK vocoder board is equipped with industry standard connections for fast and easy setup and operation. An RCA jack and a handset connection allow analog voice input/output for encoding/decoding real-time speech. A RS-232 serial port is the data channel that delivers the compressed bit stream between two AMBE-3000™ HDKs for real-time full duplex communication. With the USB interface users can connect the AMBE-3000™ HDK to a PC, to configure the channel interface, encode (record) an analog input to a compressed data file, and decode (playback) previously encoded files.

There are a number of ways to configure the AMBE-3000™ HDK hardware. The user can select the vocoder rate and control a variety of vocoder features from either a PC connected to the USB interface or through dip switches and jumpers. Additionally, the board provides test points for extensive circuit probing and monitoring of data. All these capabilities are ideal for comparing voice quality at various rates, analyzing the compressed voice data I/O stream and establishing customized interface requirements.

The AMBE-3000™ HDK is a complete hardware and software package solution, with off-the-shelf availability. The development kit includes the evaluation board, schematic details, software routines for the on-board Microcontroller (user is able to recompile the AMBE-3000™ HDK source code to achieve custom configurations), as well as reference circuit designs. Documentation includes the AMBE-3000™ HDK User's Manual that describes the hardware and software features and a Software Manual to explain details of the included software source code.

The AMBE-3000™ HDK is a cost-effective vehicle that reduces the time and up-front engineering expenses associated with new product development. The value of DVSI's AMBE-3000™ HDK goes beyond just simple hardware design. The integrated AMBE+2™ vocoder technology has been thoroughly evaluated and tested by international manufacturers under various conditions using a variety of languages and has been implemented worldwide. This field proven voice compression technology assures that the developed end product is utilizing the best low-bit-rate high quality vocoder available, leading any communication system to be an overall success.

DVSI's dedicated staff combine years of experience in vocoder technology, with expertise in Digital Signal Processing, computer software generation and hardware development. For more information regarding our high-performance voice compression solutions, contact DVSI today.

Technical Specifications

Analog Connections:

<i>Line-In</i>	3.5 mm Phono Audio Jack
<i>Line-Out</i>	3.5 mm Phono Audio Jack
<i>Handset</i>	RJ-14 Full Duplex Communication

Digital Connections:

<i>Channel Data</i>	DB-9S RS-232 Serial Port
<i>PC Connection</i>	USB Serial Port

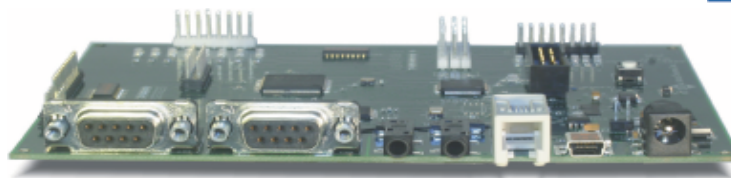
Power:

<i>Input Requirements</i>	5 V DC @ 120 ma
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Physical:

<i>Size</i>	5.844" x 4.36"
<i>Weight</i>	3.2 oz.

(Specifications subject to change.)



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