

## Software Only Multimedia Videoconferencing



The HD4000 is Emblaze-VCON's software-only workgroup conferencing system that combines the versatility of a software-only platform with high-quality videoconferencing. Utilizing the H.264 video standard, and clear, crisp, audio, the HD4000 allows organizations to build a group videoconferencing system that is an exact fit for their needs and specifications. The HD4000 incorporates advanced data conferencing capabilities, allowing you to turn any videoconference into a fully interactive workgroup meeting with the click of a button. When embedded in a high-performance PC, the HD4000 can become an integral part of a training room, conference room or classroom. The HD4000 is part of Emblaze-VCON's total rich media conferencing solution, enabling seamless communication and collaboration using all forms of interactive media.

### Advantages of Conferencing with HD4000

- Provides TV-like video quality using advanced video standards.
- Advanced data sharing capabilities with multiple user options
- H.264 video support up to 4 Mbps
- Native 16:9 wide screen display support
- Dual monitor support
- CD-quality audio using 20 KHz ultra-wide band audio
- Call forward, call pickup, call transfer, ad-hoc conferencing
- Web-based management for easier control and administration
- H.239 and HD DualStream™ for simultaneously sending and receiving video and data streams
- Supports encrypted conferences using the H.235 encryption standard

### Multi-purpose Solution

In addition to providing value as an advanced videoconferencing solution, the HD4000 can also be used as a high-performance multimedia workstation. In a small conference room with a single monitor, or a large training room with dual plasma displays, the HD4000 can be accessed to perform multiple functions. The HD4000 can be used during a meeting or training session to display presentations or VCR/DVD videos. When the HD4000 is connected to the local area network, it can access network files to display during a videoconference, or to share during a meeting. With its access to the Internet, the HD4000 can be used to join a web data conference or instant messaging session; regardless of whether or not the system is in a videoconference.

### Flexible and Easy To Use

As a software product, the HD4000 provides flexibility for customers who want to use their own hardware, but are also looking for a complete videoconferencing application for their conference rooms, classrooms or training rooms. Customers can combine the HD4000 with their own PC, speakers, displays, podiums, carts and cameras. With an easy-to-use interface, the HD4000 allows people to connect with the click of a single button. During a videoconference, the HD4000 application allows customers to access documents and applications located on the local PC or the network, the Internet, and movie/audio clips.



*Emblaze-VCON's HD4000 allows organizations to create workgroup conferencing systems that add multiple dimensions of communication to any boardroom, classroom or workgroup setting.*



# Minimum PC Requirements

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- g Pentium D 3.0 GHz (or higher) PC
- g 800 MHz BUS HyperThread CPU
- g 1 GB 400 MHz RAM
- g Windows XP Professional

- g ATI x300 PCIx output  
AverMedia PCI capture input card
- g Creative SoundBlaster Live 5.1  
(recommended)

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# Specifications

## Video Specifications

### Transmission Speed

H.323: 64 Kbps - 4Mbps

### Video Standards

H.261, H.263, H.263+/++  
 H.264 - up to 4Mbps

### Live Video Resolution

CIF (352 x 288 pixels)  
 SIF (352 x 240 pixels)  
 QCIF (176 x 144 pixels)  
 QVGA (320 x 240 pixels)  
 VGA (640 x 480 pixels)  
 Up to 720p (1280 x 720 pixels) incoming only

### Video Frame Rate

Up to 10 fps: 64 Kbps  
 Up to 20 fps: 96 to 192 Kbps  
 Up to 30 fps: 256 Kbps and higher

### Video Features

Video device discovery  
 Automatic NTSC/PAL detection  
 Unlimited number of video devices supported

### HD Simulcast™

Chair or Participant in any  
 Interactive Multicast session  
 Integrated Broadcast Viewer  
 Uses bandwidth-efficient IP multicast

### Audio Specifications

**Audio Features**  
 Full duplex echo cancellation  
 Automatic noise suppression (ANS)  
 Automatic gain control (AGC)  
 Audio device discovery  
 Audio tuning wizard  
 Unlimited number of audio devices supported  
 Voice Activity Detection (VAD)

## Audio Standards

20 KHz: AAC-LD  
 7 KHz: G.722, G.722.1  
 3.4 KHz: G.711, G.723.1, G.728, G.729  
 AMR (3G)

## Data Specifications

**Data Sharing Methods**  
 Documents (MS Office, PDF, etc.)  
 Video clips (AVI, MPEG, WMV, etc.)  
 Audio clips (MP3)  
 Graphic files (BMP, GIF, TIF, etc.)  
 Internet  
 Other (HTML, MS Project, etc.)

## HD DualStream™

Sharing of file, window, browser,  
 and Windows desktop  
 H.239 support  
 Tandberg DuoVideo support  
 Sending and receiving capability  
 1 live video source + 1 data source  
 Resolutions supported:  
 XGA, SVGA, VGA, CIF, QVGA, QCIF\*

## Networking Specifications

**Standards Supported**  
 ITU-T: H.323 v4.2  
 Annex Q (FECC)

## H.323 QoS Features

DiffServ  
 IP Precedence  
 Firewall port sync  
 NAT IP address mask  
 Port pinholing  
 Adaptive Bandwidth Adjustment  
 Packet loss recovery (FEC)  
 Packet ordering  
 Packet duplication control  
 Jitter correction  
 Lip sync correction  
 Overhead prediction  
 Max packet size adjustment

## Other Specifications

### Dialing Modes

Manual  
 Speed dial  
 Personal address book  
 Online directory  
 Multicast chair  
 Broadcast viewer

### Security

Encryption using H.235 (AES)  
 Using Emblaze-VCON SecureConnect  
 DES, 3DES and AES support  
 AES is NIST validated  
 Supports Emblaze-VCON Frontier  
 — Firewall traversal  
 — Network address translation  
 Supports restricted access users

### Control

International remote control (Option)  
 Wireless keyboard (option)  
 Embedded web-based control

### Directory Services

1000+ local number directory  
 10,000+ global number directory  
 H.350 support (MXM mode)  
 LDAP online directory support  
 - OpenLDAP  
 - Microsoft ILS, SiteServer, Active  
 Directory and Exchange  
 - Sun iPlanet  
 - Netscape Directory  
 Search and filter queries

### Language Support

English, French, German, Italian,  
 Spanish (Spain and Latin),  
 Portuguese (Brazil), Chinese and  
 Japanese

