

**Set-top Videoconferencing System and Integrator's Codec****Advantages of Conferencing with HD1000**

- Custom integration design and extensive set of APIs
- Provides exceptional video quality using the H.264 video standard
- Incorporates HDSimulcast™ technology for advanced streaming capabilities
- HD DualStream™, using H.239, allow users to send data and video simultaneously
- Web-based manager makes the HD1000 easy to control and administer
- Emblaze VCON Media Xchange Manager® management for advanced videoconferencing functions
- Encryption support with H.235 encryption standard (AES)

Emblaze-VCON's HD1000 is a high quality videoconferencing engine for integration into a custom multimedia room environment. When combined with external audio mixers, video switches and touch-screen control devices, virtually any rich media communication solution can be created. The HD1000 produces TV-quality video with extremely low latency and IP conferencing data rates up to 2 Mbps. With an embedded MCU and streaming capabilities, as well as a suite of integration APIs, the HD1000 can be used to create any custom application in an array of industries such as healthcare, large education facilities and corporate boardrooms. The high-quality, lifelike video and crisp, clear audio guarantee that meeting participants are experiencing the best videoconferencing quality available.

**Advanced Features**

The HD1000EX's embedded MCU can connect up to 4 sites. Participants can dial into a multipoint videoconference, or the MCU administrator can set up a dial-out conference, instantly connecting all parties. With chair control, the conference administrator can ensure the conference runs smoothly. Using Emblaze-VCON's HD DualStream technology, participants can share data and video simultaneously during a multipoint conference, as well as view data and video sent by a remote site on a single monitor.

The HD1000 incorporates multiple ways of streaming live videoconferences both over the corporate network and over the Internet, during a point-to-point or multipoint conference. Additionally, users can participate in high-bandwidth videoconferences, while streaming those conferences over the Internet at a lower and more appropriate bandwidth. These streaming capabilities can be accessed via the HD1000 web manager, allowing the network administrator to begin and end streaming.

**Integration APIs**

The HD1000 serial and IP-based APIs allow for easy integration into a variety of applications. The types of functions exposed via the HD1000 serial and IP-based APIs are:

- |                   |                                 |
|-------------------|---------------------------------|
| Call initiation   | Network QoS parameters          |
| Call termination  | System reboot                   |
| Call parameters   | Multicast settings              |
| System parameters | Debugging messages              |
| Streaming control | Embedded MCU control (HD1000EX) |



*Integrators can use the HD1000 to create custom applications in an array of industries such as healthcare, large education facilities, and corporate boardrooms.*

## What's in the box?

- g HD1000 codec
- g Power cable
- g Audio and video cables
- g LAN cable
- g RS-232 serial cable
- g IR remote control
- g Microphone
- g User's guide

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### Video Specifications\* Transmission Speed

64 Kbps - 2Mbps

**Video Standards**  
H.261, H.263, H.263+/, H.264

**Video Inputs**  
Main camera  
S-video (2nd camera)  
Composite/RCA/Phono (2nd camera)  
Composite/RCA/Phono (DVD/VCR)

**Video Outputs**  
S-video (main monitor)  
Composite/RCA/Phono (main monitor/VCR/DVD)  
Composite/RCA/Phono (2nd monitor)  
XGA, D-type 15 (main/2nd monitor)

**Video Formats & Resolution**  
Interlaced CIF (352 x 576 pixels)  
Interlaced SIF (352 x 480 pixels)  
CIF (352 x 288 pixels)  
SIF (352 x 240 pixels)  
QCIF (176 x 144 pixels)

**Video Frame Rate**  
Up to 15 frames/sec: 64Kbps to 384Kbps  
Up to 30 frames/sec: 384Kbps and higher  
Up to 60 fields/sec: 1 Mbps and higher

**Supported Cameras**  
Canon VC-C4  
Canon VC-C50I  
Sony D100  
Sony EVI-D30/31

**Audio Specifications**  
**Audio Standards**  
G.711, G.723.1, G.728, G.729, G.722

**Audio Inputs**  
Microphone omni (mini stereo)  
Line-level RCA, L/R (VCR)  
Line-level RCA for Aux mono input

**Audio Outputs**  
Line-level RCA, L/R (TV)  
Line-level RCA, L/R (VCR recording)

**Audio Features**  
Full duplex echo cancellation  
Automatic noise suppression (ANS)  
Gain control  
Microphone and VCR input audio mixing  
Ability to turn off internal echo canceller  
DTMF tone generation

\* Up to 4Mbps on Ex  
\*\* Available only on EX

### Data Specifications

**Data Sharing**  
Utilizes desktop/laptop presentations utility

**Data Ports**  
RS-232 data port (for Serial API or PTZ camera control)

**Data Video Resolution**  
XGA (1024 x 768)  
SVGA (800 x 600)  
VGA (640 x 480)  
up to 4CIF for PAL/NTSC monitors

**HD DualStream™**  
H.239 support  
1 live video source + 1 data source  
Supported in MCU mode  
Supported for both video and data streaming

**HD Simulcast™**  
Multicast Streaming Video  
Multicast to Broadcast Viewer, Quicktime, and other multicast viewers with integrated SDP listeners

**Unicast Streaming Video**  
Data rate downspeeding  
Unicast to Quicktime viewers  
Multi-unicast:  
Up to 25 unicast streams at 384 Kbps during multicast session  
Up to 10 unicast streams at 384 Kbps during 384 Kbps + multicast

**Emblaze-VCON Interactive Multicast**  
Participate in any Emblaze-VCON Interactive Multicast session  
Uses bandwidth-efficient IP multicast

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

**Networking**  
Integrated 10/100 Ethernet NIC  
DHCP  
WINS  
DNS  
FTP  
HTTP with DAA  
Telnet

### Software Upgrades

Via LAN  
Notification of upgrade availability

**Directory Services**  
1000+ local number directory

**H.323 QoS Features**  
DiffServ  
IP Precedence  
Firewall port sync  
NAT IP address mask  
Port pinholing  
Adaptive Bandwidth Adjustment  
Packet ordering  
Packet duplication control  
Jitter correction  
Lip sync correction  
Overhead prediction

**Embedded MCU Specifications\*\***  
4 participants @ 384 Kbps/part.  
3 participants @ 768 Kbps/part.  
Voice-activated switching  
Speed matching  
Dial-in or dial-out  
Cascading up to 10 sites  
H.243 chair control

### Other Specifications

**Security**  
Encryption using H.235 (AES)  
MTU-allows to set the MTU packet size to match the need of the network.  
(Default setting is 1200 bytes)

**Browser-based Management**  
DAA (Digest Access Authentication)  
Dial/Hang-up  
Start/stop streaming  
Phone Book management  
IP address  
Gatekeeper registration  
LAN configuration  
Call status  
View streaming  
Camera control  
Diagnostics

**Control**  
Internal IR receiver  
External IR receiver (automatically disables the internal receiver)

**Physical Dimensions**  
4.4 cm x 32.7 cm x 19.4 cm  
(1.73 in x 12.87 in x 7.63 in)  
2.350 kg (5.2 lb)

**Language Support**  
English, French, German, Italian, Spanish (Spain & Latin America), Portuguese (Portugal & Brazil), Chinese (Simplified & Traditional), Japanese, Russian, Swedish, Finnish, Turkish, Korean

