

HD2000



High definition integrator's videoconferencing codec

Key Features

- Designed for custom room integrators
- Extensive set of APIs for remote management
- H.323 v4 videoconferencing
- Multi-unicast streaming
- Embedded MCU
- External Data Presentation Mode
- Web-based management
- XGA support for both people and content

Key MXM Features

- Call transfer
- Ad-hoc conferencing
- Hunting groups
- Simplified gateway dialing
- Remote software upgrade
- Remote configuration
- Remote call initiation
- Remote reboot
- Endpoint property setting lockout

The HD2000 is VCON's high definition 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 HD2000 produces TV-quality video with extremely low latency and IP conferencing data rates up to 4Mbps. With an embedded MCU and streaming capabilities, as well as a suite of integration APIs, the HD2000 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, life-like video and crisp, clear audio guarantee that meeting participants are experiencing the best videoconferencing quality available.

- Custom integration design including rack mount codec and extensive set of APIs
- Provides exceptional video quality using the latest H.264 video standard
- Multipoint conferencing capabilities via an embedded 4-port MCU
- Incorporates HD Simulcast™ technology for advanced streaming capabilities
- HD DualStream™, using H.239, allows users to send data and video simultaneously
- Web-based manager makes the HD2000 easy to control and administer
- VCON Media Xchange Manager® management for advanced videoconferencing functions
- Encryption support with H.235 (AES)

Advanced Features

The HD2000's embedded MCU can connect up to 4 sites using video and audio transcoding as well as speed matching. Participants can dial into a multipoint videoconference, or the 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 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 HD2000 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 HD2000 web manager, allowing the network administrator to begin and end streaming.

Integration APIs

The HD2000 serial and IP based APIs allow for easy integration into a variety of applications. The types of functions exposed via the HD2000 serial and IP-based APIs are:

Call initiation
 Call termination
 Set call parameters
 Set system parameters
 Streaming control

Set network QoS parameters
 System reboot
 Multicast settings
 Debugging messages
 Embedded MCU control



Integrators can use the HD2000 to create custom applications in an array of industries such as healthcare, large education facilities and corporate boardrooms.

What's in the box?

- HD2000 codec
- Power cable
- Audio and video cables
- LAN cable
- (1) RS-232 serial cable
- IR remote control
- IR extender cable and receiver (1.8 meters)
- Microphone
- Getting started guide

Specifications

Video Specifications

Transmission Speed
64Kbps - 4Mbps

Video Standards

H.261, H.263, H.263+,
H.263++, H.264

Video Frame Rate

30 frames/sec: 64Kbps and higher
60 fields/sec: 1Mbps and higher

Video Formats & Resolution (PAL/NTSC)

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)

HD DualStream™

H.239 support
1 live video source+1 data source
Supported in MCU mode
Supported in streaming mode: both video
and data source streamed

Video Inputs

Main camera
S-video, 4 pin mini DIN (2nd camera)
Composite, RCA/Phono (2nd camera)
Composite, RCA/Phono (VCR)

Video Outputs

S-video, 4 pin mini DIN (main monitor)
Composite, RCA/Phono (main
monitor/VCR/DVD)
Composite, RCA/Phono (2nd monitor)
XGA, Dtype 15 (main monitor/2nd mon)

Cameras Supported

Canon VCC4
Sony D100
Sony EVI-D30/31

Data Specifications

Data Ports

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

Data Sharing

Utilizes desktop/laptop presentations
utility

Data Video Resolution

XGA (1024x768)
SVGA (800x600)
VGA (640x480)
up to 4CIF for PAL/NTSC monitors

Audio Specifications

Audio Standards

G.711, G.722, G.723.1, G.728, G.729

Audio Inputs

Microphone onmi (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
Auto noise suppression
Gain control
Microphone and VCR input audio mixing
Ability to turn off internal echo canceller
DTMF tone generation

Embedded MCU Specifications

4 participants @ 384Kbps/part.
3 participants @ 768Kbps/part.
Voice activated switching
Speed matching
Audio and video transcoding
Dial in or dial out
Cascading up to 10 sites
H.243 chair control

Streaming Specifications

HD Simulcast™:

Multicast Streaming Video

Multicast to VCON Broadcast Viewer,
Quicktime viewer 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 384Kbps
during multicast session
Up to 10 unicast streams at 384Kbps
during 384Kbps call + multicast

VCON Interactive Multicast

Participate in any 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

LAN/IP
Software sends message to user when
new upgrade is available

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

Other Specifications

Encryption

H.235 (AES)

Browser-based Management

Uses DAA (Digest Access Authentication)
Dial/Hangup
Start/stop streaming
Phone book management
IP address
Gatekeeper registration
LAN configuration
Call status
View Streaming
Camera and volume control

Control

Internal infrared receiver
External infrared receiver (automatically
disables the internal IR receiver)

Physical Size

4.4cm x 43cm x 27.4cm
2.5kg in weight

Language Support

English, French, Italian, Spanish (2),
Portuguese (2), German, Chinese,
Japanese, Russian, Swedish



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