



## HD100

*High definition videoconferencing engine for integrators*

### Feature Highlights

- Designed for custom room integrators
- H.323 v4 videoconferencing
- H.323 or multicast
- Multi-unicast
- Embedded MCU
- Streaming capabilities
- External Data Presentation Mode

The HD100 is a 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 HD100 produces high quality video with extremely low latency and IP conferencing data rates up to 2Mbps. With an embedded MCU and streaming capabilities, as well as a suite of integration APIs, the HD100 can be used to create any custom application in an array of industries such as healthcare, large education facilities and corporate boardrooms.

- Compact form-factor ready for integration
- H.323 v4 and VCON Interactive Multicast
- Embedded 4-port MCU with speed matching and audio/video transcoding
- Multicast and unicast streaming
- Integration APIs for custom integration
- VCON Media Xchange Manager™ management and administration agent
- VCON PacketAssist™ architecture for advanced Quality of Service (QoS) over IP
- Embedded web server for remote management
- Compact flash memory for easy software upgrade

### Exceptional Video

Using a next-generation DSP design, the HD100 provides unparalleled video quality and extremely low latency. Calls connect within milliseconds and the video has TV-like quality, with high resolution and virtually no pixelization. This is due to support for IP data rates up to 2Mbps and interlaced CIF resolution at 60 fields per second. Additionally, the H.263++ video algorithm provides features such as a deblocking filter, unrestricted motion vector and modified quantization.

### Integration APIs

The HD100 serial and IP based APIs allow for easy integration into a variety of applications. The types of functions exposed via the HD100 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



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## HD100

### What's in the Box?

HD100 codec including videoconferencing demo with GUI and sample applications  
 Power cable  
 Audio and video cables  
 Canon VC-C4 camera control cable  
 LAN cable  
 (2) RS-232 serial cables  
 IR Remote control for sample applications  
 Microphone  
 Getting Started Guide

### Specifications

#### Transmission speed

64Kbps – 2Mbps

#### Standards Supported

ITU-T: H.323 v4  
 Annex Q (FECC)

#### Video Standards

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

#### Audio Standards

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

#### Networking

Integrated 10/100 Ethernet NIC  
 DHCP  
 WINS  
 DNS  
 FTP  
 HTTP  
 Telnet

#### Video Resolution

Interlaced CIF (352 x 576 pixels)  
 CIF (352 x 288 pixels)  
 QCIF (176 x 144 pixels)

#### External Data Presentations

4CIF resolution (704 x 576)  
 Utilizes desktop/laptop presentations utility

#### Video Frame Rate

15 frames/sec: 40Kbps - 256Kbps  
 30 frames/sec: 256Kbps and higher  
 60 fields/sec: 1Mbps and higher

#### Audio Features

Full duplex echo cancellation

#### Video Inputs

(1) Composite  
 (1) S-Video

#### Video Outputs

(1) S-video  
 (1) Composite  
 (1) XGA (future use)

#### Audio Inputs

(1) Mic-level  
 · Bias 5V  
 · High Impedance 2KOhm  
 (1) Line-level (RCA)

#### Audio Outputs

(2) RCA

#### Control

(1) RS-232 (serial API)  
 (1) RS-232 (camera control)  
 Infrared receiver

#### Memory/Storage

Removeable compact flash can store software versions

#### Software Upgrades

LAN  
 Compact flash

#### Embedded MCU

4 participants @ 384Kbps/part.  
 3 participants @ 768Kbps/part.  
 Voice activated switching  
 Speedmatching  
 Audio and video transcoding  
 Dial in or dial out

#### Directory Services

1000+ local number directory

#### Multicast Streaming Video

Multicast to Quicktime viewers

#### Unicast Streaming Video

Unicast to VCON Broadcast Viewer, Quicktime viewer and other multicast viewers with integrated SDP listeners  
 Multi-unicast:  
 Up to 25 unicast streams at 384Kbps during multicast session  
 Up to 10 unicast streams at 384Kbps during 384Kbps call + multicast session

#### VCON Interactive Multicast

Participate in any VCON Interactive Multicast session  
 Low network utilization

#### 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  
 Max packet size adjustment

#### Browser-based Management

Dial  
 Hangup  
 Start/stop streaming  
 Phone book management  
 IP address  
 Gatekeeper registration  
 LAN configuration  
 Call status

#### Physical Size

162mm x 110mm x 61.5mm  
 .535 Kg in weight

#### Language Support

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

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