opticomm emcore empower with light™

toner cable equipment, inc.
www.tonercable.com

# HD4-E & HD4-D

## High Definition H.264 HDMI, VGA, Component Video & Audio Encoder/Decoder


### Features

- Baseline, Main or High Profile H.264 encoding
- AAC-LC and MPEG 1 Layer II audio encoding
- Gigabit SFP fiber or Copper RJ45 TS interface
- Resolutions up to 1920x1200 or 1080P
- TS/IP unicast and multicast output
- HDMI, VGA or Component video inputs on encoder
- HDMI output on decoder
- HDMI embedded audio or analog stereo audio inputs
- Latency settings of 250ms, 130ms and optional 80ms
- Supports SD or HD TS stream output with corresponding definition of input signal
- IP output compliant with UDP/RDP protocol
- Configuration and monitoring through easy to use Web UI

### Applications

- Education/Distance Learning
- IPTV Broadcast Systems
- Medical OR
- Command and Control
- Digital Signage & Kiosk Displays

### High-Definition MPEG 4 (H.264) Video / Audio over IP

EMCORE's HD4-E & HD4-D are a broadcast quality high-performance, compact and cost-effective MPEG-4 H.264 HD encoder and decoder. They are capable of encoding/decoding video resolutions up to 1080P and 1920x1200@60 along with audio over IP networks.

The HD4-E supports HDMI, VGA and Component Video inputs along with analog stereo audio. Broadcast quality encoding delivers vibrant and crisp video along with audio at extremely low bit rates. The HD4-D accepts an IP input and decodes H.264 to HDMI and audio, making the HD4 encoder/decoder the perfect choice for distributing the highest quality video and audio over standard Ethernet networks.

The HD4 encoder and decoder can use Baseline, Main or High Profile encoding, as well as provide unicast or multicast IP streams. Additionally, the HD4 encoder also acts as a simultaneous decoder allowing video and audio to be streamed in both directions simultaneously over the LAN. The same encoder can be connected to itself for monitoring purposes, or any encoder in the network can be connected to any other encoder for bi-directional video/audio over IP.

The HD4 is a feature rich, cost-effective and versatile encoding solution that can be used in a variety of applications ranging from IPTV to mission critical command/control applications.

### System Design

Enclosed in a ruggedized aluminum housing, the HD4-E & HD4-D are perfectly suited towards applications that are space constrained or for mobile applications. For systems that require rack mounting, the HD4-E & HD4-D can be mounted in either a 1.5U kit which holds up to 2 units or a 4U kit which holds up to 9 units. The HD4-E & HD4-D has an easy to use web UI that allows remote monitoring as well as remote configuration and adjustment of all system parameters. Additionally, the HD4 web UI has the ability to detect any HD4 encoder or decoder in the LAN and provides the ability to connect any encoder to any decoder or a single encoder to multiple decoders in the LAN.

969 Horsham Road • Horsham, Pennsylvania 19044 USA • Phone: 215-675-2053 Fax: 215-675-7543 • info@tonercable.com

toner
cable equipment, inc.
www.tonercable.com

opticomm emcore empower with light™

# HD4-E & HD4-D

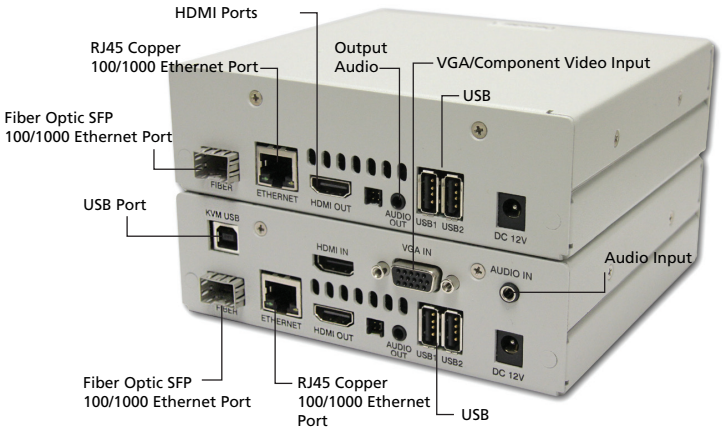
## High Definition H.264 HDMI, VGA, Component Video & Audio Encoder/Decoder

### Models

| Model | Description |
|---|---|
| HD4-E | H.264 HDMI, VGA, Component Video and analog stereo audio encoder, RJ45 or Fiber Optic SFP 100/1000 Mbps network interface, Stand-alone with power supply |
| HD4-D | H.264 HDMI and analog stereo audio decoder, RJ45 or Fiber Optic SFP 100/1000 Mbps network interface, Stand-alone with power supply |

### Connection Ports

HD4 Encoder/Decoder




### Compliance

FC CE

### Inputs

| Specifications | Values |
|---|---|
| Video | HDMI(up to 1920x1200 or 1080P), VGA (up to 1600x1200) |
| Audio | Embedded in HDMI or analog stereo audio |

### Outputs

| Specifications | Values |
|---|---|
| Network Protocol | TCP/IP Unicast & UDP/IP Multicast DHCP or Static IP |
| Ethernet Connectors | TS/IP 100/1000 SFP fiber or copper RJ45 |
| Transport Stream | MPEG 2 |

### Video Encoding

| Specifications | Values |
|---|---|
| Compression | H.264 Baseline, Main and High Profile |
| Resolutions | HDMI: 480i, 576i, 720p@50/59.94/60, 1080i@50/59.94/60, 1080P@25/29.97/30/50/59.94/60<br>HDMI & VGA: 800x600@60, 1280x720@60, 1024x768@60, 1280x1024@60, 1600x1200@60, 1920x1200@60<br>Component Video: 480i, 480P, 720P, 1080i@60 |
| Bit Rate Adjustment | 256 Kbps to 30 Mbps |
| Video Bit Rate Type | CBR, VBR, Capped VBR |

### Audio Encoding

| Specifications | Values |
|---|---|
| Compression | MPEG 1 Layer II, AAC-LC |
| Sampling | MPEG 1 Layer II: 128, 192, 256, 384 Kbps<br>AAC-LC: 128, 192, 256, 384, 512 Kbps |
| Channels | Analog stereo |

### General

| Specifications | Values |
|---|---|
| Input Power | 12 VDC |
| Power Consumption | 15 Watts typical |
| Weight | 5 lbs |
| Dimensions | 1.75" H x 6" W x 6" D<br>(44mm x 152mm x 152mm) |
| Operating Temperature | 32 to 158° F (0 to 70° C) |
| Operating Humidity | 10% - 80% Relative Humidity |
| Storage Temperature | -40 to 185° F (-40 to +85° C) |
| Storage Humidity | 0% - 90% (non-condensing) |

### Monitoring & Control

| Specifications | Values |
|---|---|
| Front Panel | Status LED's |
| Remote | Network management software for full control & system diagnostics |




969 Horsham Road • Horsham, Pennsylvania 19044 USA • Phone: 215-675-2053 Fax: 215-675-7543 • info@tonercable.com