



# cable equipment, inc. www.tonercable.com

## **HDD-M4-1-RM**

### Video & Audio IP Decoder



#### **Features**

- Decode MPEG-2 / MPEG-4 signals from various sources including DVB-S/S2/T/C, ASI and IP
- Enables IP/ASI conversion and IP stream descrambling
- Multi-channel IP unicast and multicast (SPTS outputs for IPTV)
- Program filtering
- Pro-MPEG FEC (SMPTE-2022) support
- Multiple outputs, including HDMI, HD/SD-SDI, ASI, YPbPr CVBS, and IP
- NTSC, PAL, and SECAM compatible
- Optional tuner input for DVB-S / S2 / T / C
- Configuration and monitoring through front panel or SNMP network manager.
- BISS I and E support

#### **Applications**

- **IPTV Broadcast Systems**
- MDU Video Distribution
- Digital Signage & Kiosk Displays

#### SD / HD MPEG 2 or H.264 AVC Video / Audio Decoding

EMCORE's HDD-M4-1-RM is an advanced high-performance MPEG-2 / MPEG-4 decoder that performs real-time receiving and decoding of HDTV & SDTV content over DVB and broadband IP networks.

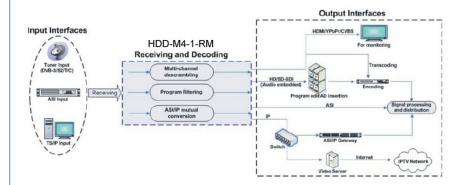
The HDD-M4-1-RM supports input options such as DVB-S/S2, DVB-C, DVB-T, DVB-ASI and IP allowing it to receive and decode programs from different content sources. The output options are HDMI, HD-SDI, SDI, DVB-ASI, CVBS, YPbPr, AES3, stereo analog audio and IP (unicast or multicast) which simplifies device integration.

The user-friendly HDD-M4-1-RM decoder is an ideal solution for signal conversion and distribution over IP for the most demanding broadcast or IPTV applications.

#### System Design

Enclosed in a ruggedized aluminum housing, the HDD-M4-1-RM is perfectly suited towards applications that are space contrained and require equipment with lower power consumption and heat output. The front faceplate has push-button controls for configuration as well as status LED's. SNMP network management support allows remote interfacing for control and system diagnostics.

#### Application Diagram







## HDD-M4-1-RM

## Video & Audio IP Decoder

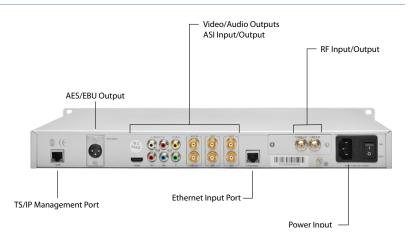
TS Stream Input Interfaces

Specifications Values

#### Models

| Model       | Description  |
|-------------|--|
| HDD-M4-1-RM | MPEG-2 & MPEG-4 (H.264/AVC) Video/Audio Decoder, 1RU Rackmount |

#### **Connection Diagram**



#### Compliance



#### Specifications Subject To Change Without Notice

#### Rev 05-13

| DVB-S/S2 | QPSK, 8PSK (1-45 Mbps)              |
|----------|-------------------------------------|
| DVB-T    | COFDM, 2K& 8 K FTT (0.45-7 Mbps)    |
| DVB-C    | QAM (16/32/64/128/256) (3-7 Mbps)   |
| DVB-ASI  | BNC, 75 Ohm                         |
| TS/IP    | 1G, MPEG-2/MPEG-4 TS over UDP & RTP |

#### Outputs

| Specifications | Values   |
|----------------|--|
| Video          | 1 HDMI, 2 HD/SD-SDI, 2 DVB-ASI, 1 YPbPr, 2<br>CVBS (1 BNC, 1RCA) |
| Audio          | 1 AES3 (XLR), 1 stereo pair (RCA)                                |

#### Video Decoding

| Specifications | Values   |
|----------------|--|
| Compression    | MPEG-2, MPEG-4/H.264 AVC (SD & HD)                                       |
| Resolutions    | 1080i @ 60/50 Hz<br>720p @ 60/50 Hz<br>576i @ 50 Hz<br>480i/480p @ 60 Hz |
| Formats        | NTSC, PAL, SECAM   |
| Broadcast Type | Unicast & multicast  |

#### **Audio Decoding**

| Specifications | Values                        |
|----------------|-------------------------------|
| Compression    | MPEG-1 and MPEG-2 Layer I, II |

#### General

| Specifications        | Values   |
|-----------------------|--|
| Input Power           | 90~250 VAC, 50/60 Hz                                       |
| Power Consumption     | 30 Watts (max)   |
| Weight                | 8.16lbs (3.7kg)  |
| Dimensions            | 1.73" (1RU) H x 19" W x 10.79" D<br>(44mm x 484mm x 274mm) |
| Operating Temperature | 32 - 113° F (0 - 45° C)                                    |
| Operating Humidity    | 10% - 80% Relative Humidity                                |
| Storage Temperature   | 23 - 122° F (-5 to 50° C)                                  |
| Storage Humidity      | 0% - 90% (non-condensing)                                  |

#### **Monitoring & Control**

| Specifications | Values  |
|----------------|---|
| Front Panel    | Keyboard, LCD display, Status LED's                                       |
| Remote         | TCP/IP, Network management software for full control & system diagnostics |

©Toner Cable Equipment, Inc.