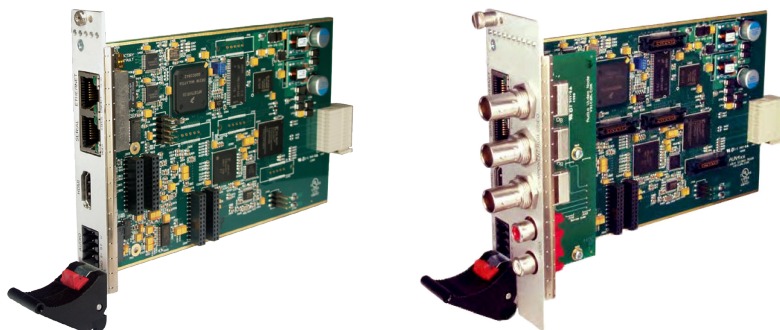# MediaMaster™ Video On Demand System
1-Channel H.264 SD/HD Encoder Blade   MM-1288H4

Specifications

Height: 5.2 in (13.1 cm)
Width: 0.8 in (2 cm)
Depth: 6.9 in (17.4 cm)
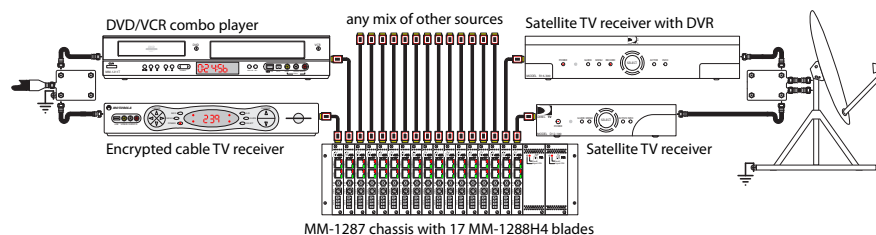**Power:** from chassis

Description

This is the high-definition capable version of our MM-1288S4 H.264 multicast encoder blade. It accepts SD or HD video input via HDMI or optional component (analog) video and outputs encoded video to the network at 5 to 20 Mbit/s.

The blade converts the video and audio to a single-program MPEG-2 transport stream (MP2TS) containing H.264 video and either AAC or MP2 audio, which it streams out the Ethernet port via multicast or unicast, using either raw UDP or RTP encapsulation.

Various hardware decoders and PC software programs can accept these streams, allowing many possible configurations. The multicast option makes this device especially useful for streaming video from any source that will be used simultaneously by many users. Typical sources are cable TV tuners or local-origination video cameras.

Typical Application

Our blade encoders are especially suited to head-end use. You can use any mix of MM-1288 series blades in an MM-1282 or MM-1287 chassis, with any mix of sources feeding those blades:

DVD/VCR combo player   any mix of other sources   Satellite TV receiver with DVR
Encrypted cable TV receiver   Satellite TV receiver
MM-1287 chassis with 17 MM-1288H4 blades

The HDMI-only version of the board takes a single chassis slot, while the analog-capable version takes up two slots.

Connectors

- HDMI input w/ HDCP; BNC component available
- Phoenix Contact audio connector; RCA optional
- 10/100BaseT Ethernet (streaming and control)
- RS-232 serial (RJ-45) for alternate local control

Output Format

- MPEG-2 transport stream, H.264 video
- 480i stock, up to 1080p available; see table
- 5 to 20 Mbit/s

Network Requirements

- IGMP snooping switches for LAN streaming
- PIM-SM enabled routers for WAN streaming

Related Products

- MM-127*x* IPTV decoders
- MM-1288S2 and MM-1288S4 SD-only blades
- MM-1282 chassis
- MM-1287 chassis

Available Configurations

The MM-1288H4 blades will accept up to 1920×1080 video at up to 60 frames per second, but depending on licensing options, they will *output* lower quality video. The stock configuration will only put out SD video, 720×480 interlaced at up to 59.94 fields per second. (MM-1288H4-480i)

You can order the blades with any supported level of output capability:

Part Number	Maximum Output Capability
MM-1288H4-480i	SD 720×480 interlaced at up to 59.94 fps (stock configuration)
MM-1288H4-720p	HD 1280×720 progressive; 50, 59.94, or 60 fps
MM-1288H4-1080i	HD 1920×1080 interlaced; 50, 59.94, or 60 fps Also allows 1080p24 progressive
MM-1288H4-1080p60	HD 1920×1080 progressive at up to 60 fps

Alternately, you can buy the **-480i** version and get a software upgrade key for it later by adding **-K** to the part numbers above:

Part Number	Key Effect
MM-1288H4-K-720p	Upgrade the **-480i** blade to **-720p**
MM-1288H4-K-1080i	Upgrade the **-480i** blade to **-1080i**
MM-1288H4-K-1080p60	Upgrade the **-480i** blade to **-1080p60**

The blade is also available in a 2-slot version that adds a set of 3 BNC inputs for YPbPr or RGB component video, plus a pair of RCA stereo audio inputs. This configuration can also accept composite video. Add **-C** to the product number to add this option to your blades.

Part Number	Variation
MM-1288H4-C-480i	MM-1288H4-480i plus component/composite inputs
MM-1288H4-C-720p	MM-1288H4-720p plus component/composite inputs
MM-1288H4-C-1080i	MM-1288H4-1080i plus component/composite inputs
MM-1288H4-C-1080p60	MM-1288H4-1080p60 plus component/composite inputs