

# Apollo I™ HDMI/DVB-T

Real Time Single Channel HDMI to DVB-T Modulator with MPEG-2 and H.264 Encoder with 1080i/p or 720p Support. One HDMI or YPbPr/CVBS Channel In, One DVB-T Channel Out, Plus USB Recording and Playback. Designed for Real Time MPEG-2/H.264 Encoding of Any HDCP Compliant HDMI Signal and Sending it Out Via Built In Frequency Agile DVB-T Modulator. Output Resolution is 1080i/p or 720p at 16x9. Designed to Present Information to Many Viewers from a Computer via DVB-T Tuners Built Into Most Televisions in Europe, Australia, Russia, and parts of Africa! Ideal Product to Present Bus Station Schedules, Class Schedules, or Any Other Information That Originates in a Computer. Supports MPEG-1 Layer II Audio in Via "Dual" Mini DIN Connector.



## Features

- Accepts 1080p, 1080i, 720p, and 480i HDMI in
- Encodes HDMI to a high definition MPEG-2 or H.264 stream – 1080p (H.264 only) 1080i, or 720p
- Inputs (One channel at a time):
  - HDMI
  - YPbPr
  - CVBS
- Outputs:
  - Single DVB-T RF output
  - Records to .ts files on a Flash drive through USB port for playback later
- Can also create .ts files with previously recorded video, images, and audio, included TS Creator software
- Audio encoding: MPEG-1 Layer II, MPEG-2 AAC, MPEG 4 AAC, optional Dolby Digital® AC-3
- LCN (Logical Channel Number) support
- Excellent modulation quality MER≥42dB
- RF frequency range of 30~960 MHz
- Top-panel LCD and control buttons
- Easy to use menus, including inputs, encoding, channel, and RF options
- Compact size – 9.37 inches/238 millimeters long

## Applications

- MDU venue monitoring
- Engineering labs
- In Store Demos of DVB-T receivers
- Digital signage on existing CCTV systems
- Test equipment for RF modulators
- Hotel and lodging video systems with spare channels

## Overview

HDMI has quickly become one of the major standards for uncompressed video in the consumer world. Many input devices support HDMI, such as cameras and recorder/ players – and many more are yet to come. DVB-T is the standard for terrestrial broadcast in Europe, Australia, Russia, and parts of Africa. Often people want to share these outputs with many people via DVB-T tuner equipped televisions.

The Apollo I is an HDMI to DVB-T modulator with MPEG-2 and MPEG-4 AVC/H.264 HD/SD encoding. It accepts one HDMI input or one analog (component or composite) input. The output is one DVB-T output.

The system also works as a USB recorder and player for digital signage, surveillance, etc. It encodes the source videos to .ts files and saves them to a USB flash drive. Users can also use the included “TS Creator” software to create .ts videos with previously recorded video, images, and audio.

The signal sources can be from satellite receivers, closed-circuit television cameras, Blue-ray players, antennas, etc. The output signals can be received by TVs, set-top boxes, etc. The system is operated via front panel controls or remote NMS web-based management.

You can now create an in-house cable system to play crystal clear HD over your coax cable.

The Apollo I is also an ideal product to present bus station schedules, class schedules, or any other information that originates in a computer. It is also useful in MDU digital insertion of security cameras for monitoring pools and parking facilities.

This is a great alternative to the more expensive brands.



**Computer Modules, Inc.**

**11409 West Bernardo Court**

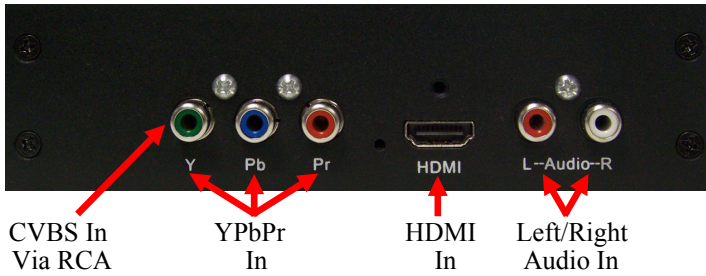
**San Diego, CA 92127**

**Tel: 858-613-1818 Fax: 858-613-1815**

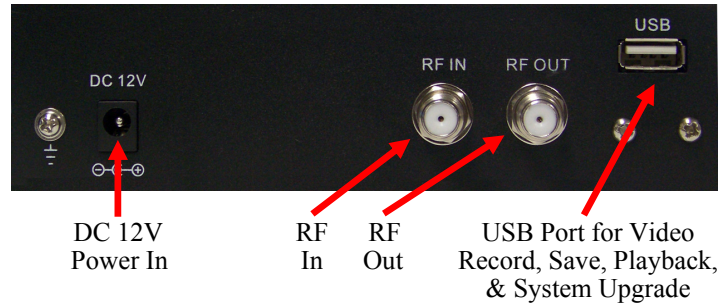
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# Inputs/Outputs

## Front



## Back



# Specifications

### HDMI Video Encoding

Input:	One HDMI input
Encoding:	MPEG-2, MPEG-4 AVC/H.264
Resolutions:	1920x1080 60p, 1920x1080 50p (for MPEG-4/H.264 only), 1920x1080 60i, 1920x1080 50i, 1280x720 60p, 1280x720 50p

### HDMI Audio Encoding

Encoding:	MPEG-1 Layer II, MPEG-2 AAC, MPEG-4 AAC Optional Dolby Digital® AC-3
Interface:	HDMI
Sample Rate:	48 KHz
Bit Rates:	64 kbps, 96 kbps, 128 kbps, 192 kbps, 256 kbps, 320 kbps, 384 kbps

### YPbPr/CVBS Video Encoding

Input:	One YPbPr input or one CVBS input
Encoding:	MPEG-2, MPEG-4 AVC/H.264
Resolutions:	<b>YPbPr:</b> 1920x1080 60i, 1920x1080 50i; 1280x720 60p, 1280x720 50p <b>CVBS:</b> 720x576 50i (PAL); 720x480 60i (NTSC)
Bit Rates:	0.500~19.500 Mbps

### YPbPr/CVBS Audio Encoding

Encoding:	MPEG-1 Layer II, MPEG-2 AAC, MPEG-4 AAC Optional Dolby Digital® AC-3
Interface:	One Stereo/Two Mono
Sample Rate:	48 KHz
Bit Rates:	64 kbps, 96 kbps, 128 kbps, 192 kbps, 256 kbps, 320 kbps, 384 kbps



### DVB-T Modulation

Standard:	DVB-T COFDM
Constellation:	6M, 7M, 8M
Bandwidth:	QPSK, 16 QAM, 64 QAM
Code Rate:	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval:	1/32, 1/16, 1/8, 1/4
Transmission Mode:	2K, 8K
MER:	≥42dB
RF Frequency:	30~960 MHz, 1 KHz step
RF Output Level:	-16~ -36 dbm (71~91 dbμV), 0.1db step

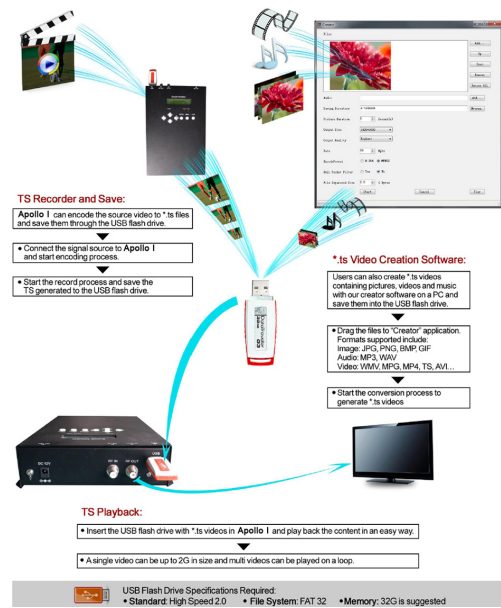
### System

Management:	Local control: LCD + control buttons
LCN Insertion:	Yes

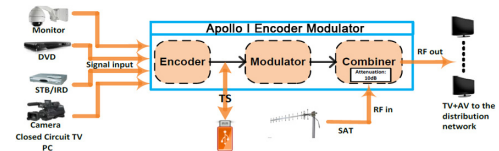
### Physical and Power

Dimensions:	5.64 x 9.37 x 2.05 inches (W x D x H) 144 x 238 x 52 mm (W x D x H)
Weight:	2 lbs. (0.97 kg)
Power Supply:	DC 12V
Operating Temperature:	0°C ~ +45°C (32°F ~ 113°F)
Conformities:	CE, RoHs  

# USB Recorder and Player



# Application Example



# Ordering Info

Apollo I HDMI/DVB-T  
Other versions available: HDMI to QAM



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