

# Apollo II™

Real Time VGA Plus Audio to QAM or DVB-C Converter with 1080i or 720p MPEG-2 Encoder (1280 x 720 Input). Designed for Real Time MPEG-2 Encoding of Any VGA or DVI Screen and Sending it Out Via Built In Frequency Agile QAM/DVB-C Modulator. Output Resolution is 1080i or 720p at 16x9. Designed to Present Information to Many Viewers from a Computer via QAM or DVB-C Tuners Built Into All Televisions! 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 720p/1080i/480p/480i VGA, Component, or S-Video/Composite video
- VGA connector in with loophrough
- Supports analog stereo, digital optical, and coax audio inputs
- Encodes VGA to a high-definition 720p or 1080i MPEG-2 stream
- Outputs a fully frequency agile QAM 64/256 digital cable channel 2-135
- Amplifies for distribution over an on-site broadband cable system with adjustable output level to 29 dBmV, compatible with all cable format broadband systems
- Front-panel buttons and easy to use menus, including inputs, encoding, channel, and RF options.
- Create single-part virtual channels, such as 116, 645 to match Guide channels
- Integrates with RS-232 control and feedback with simple ASCII commands
- Saves power and rack space using efficient design, fan-free cooling, and compact enclosure
- Powers up in less than 4 seconds, no OS overhead
- Includes compact switching power supply
- Ships with 1 RU single rack mount
- Meets RoHS safety and California energy standards
- Free option to drive two to four modulators from a 12 VDC 4A power supply

## Applications

Computer-based presentations over HD television monitors for:

- Corporate presentations or training
- Trade shows
- Digital signage – universities, hotels, retail
- Education

## Overview

VGA is the standard video display format for computers. If one is trying to display VGA display content on a cable system there are some impediments, since the two systems use different formats.

Our Apollo II is designed to bridge the gap between these two worlds.

It consists of three elements: 1) Analog to digital video converter; 2) MPEG-2 encoder; and 3) QAM/DVB-C modulator.

The Apollo II™ Scaler Modulator is among the first HD modulators specifically designed for digital signage integration. The onboard in-stream scaler ingests video at PC resolution, converting the output to 1080i or 720p video. In addition the scaler features up and down-scaling, zoom, shrink, and positioning.

The target application for this product is “digital signage” since QAM/DVB-C is a very inexpensive “one to many” content delivery technology. VGA is a very inexpensive way to create quality and relevant information.



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## Scaling

Input	RGBHV or Component
Ingest	Scales to 1080i/720p, 59.94 Hz video for encoding
Processing	Change size, shape, and positioning
Resolutions Supported	1920 x 1080i, 29.97/30 Hz, 25 Hz 1440 x 900 at 60 Hz 1280 x 1024 at 60 Hz 1360 x 768 at 60 Hz 1280 x 768 at 60 Hz 1280 x 720p, 59.94.5, 60 Hz 1152 x 864 at 75 Hz 1024 x 768 at 60, 75 Hz 800 x 600 at 60, 75 Hz 720 x 576p, 50 720 x 480p, 59.94/30 Hz, 25 Hz 640 x 80 at 60, 75 Hz

## Inputs/Outputs



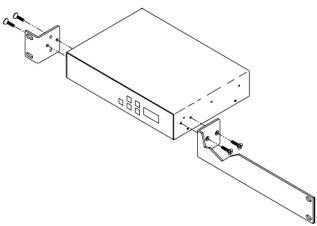
DB15 Loopthrough  
VGA IN

QAM/DVB-C  
Out

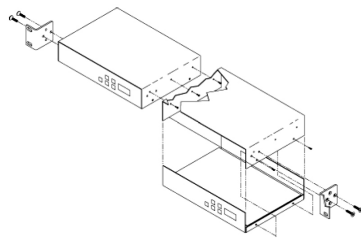


Ships with  
VGA cable

## Optional Rack Mounts



Single Unit Rack Mount



Dual Unit Rack Mount

## Ordering Information

- Apollo II – Ships with VGA cable
- Apollo II/RM – Apollo II with single unit rack mount
- Apollo II/RM2 – Apollo II with dual unit rack mount
- Apollo II/-SC – Apollo II without scaler

## Specifications

### Video Inputs

RGB	RGBHV DB-15 female, feeds to in-stream scaler, accepts up to 1920 x 1080 VGA (1080p input will be scanned as 1450 x 1080)
Component	RCA Pr, Pb, Y (1080i/720p/480p/480i), available if RGB not wired
S-Video	Y (Composite), C (Blue Pb) 480i, 29.97 Hz, available if RGB/Component not wired
Composite	RCA female (480i), can be switched with HD input manually, via RS-232, or with EAS GPI inputs

### Audio Inputs

Digital Audio SPDIF	Coax and TOS link optical output, PCM 48K sample rate
Audio Left and Right	Stereo RCA female jacks Apollo remembers which audio input is assigned to HD and Video inputs

### Video Output

RGB	RGBHV DB-15 female, buffered, from VGA input
RF Out	F', female, 75 ohm impedance

### Encoding

Video Encoding Standards	MPEG-2 Profile: MP@HL for HD, MP@ML for SD1080i, 720p, 480p, and 480i resolution, depending on input
Video Encoding Bitrate	18 or 25 Mbps
Audio Encoding	MPEG-1 Layer II
Latency	240 ms including tuner spool-up, 720p/1080i may vary slightly depending on tuner

### Modulation

QAM/DVB-C	Switchable 64/256 QAM, J83 Annex B, Interleaving Modes (128,1) MER 38 dB typical
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### Front Panel Controls

Controls	Select and directional buttons for menu setup
Menu LCD	2 lines of 20 blue characters each

### Physical & Power

Rack Mount	One half RU
Dimensions – Inches	8.5" (W) x 1.73" (H) x 6.0" (D)
Dimensions – Millimeters	216 (W) x 62 (H) x 153 (D)
Weight	1.5 lbs (0.68 Kilograms)
Power	2.1mm coaxial jack (inside center conductor positive) 0.8 A maximum, 11.5 to 13.5 VDC, 12 VDC typical
Operating Temperature	+32C to 122° F, (0° to 50° C), Convection cooled
Conformities	FCC Class B, ROHS, meets California standards



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