

# YUV2QAM

## Dual Channel High Definition Encoder with QAM Modulator and RF Up-Conversion

The YUV2QAM is a dual-channel, high and standard definition MPEG 2 broadcast distribution encoder with built in QAM modulation and RF up-conversion.



The YUV2QAM is a dual-channel, high definition MPEG 2 broadcast distribution encoder with QAM modulation and RF up-conversion built in. Its primary application is for use with clear QAM distribution to ATSC televisions. The YUV2QAM automatically detects video and audio, encodes, multiplexes and generates program information (PSIP); it then modulates and up-converts two channels for distribution via coax. Closed captioning and support for Emergency Alert (EAS) are standard. Applications include private cable, hospitality, medical, education and cable television.



### applications

- **ATSC Distribution**
- **DVB Distribution**
- **Private Cable**
  - Hospitality
  - Medical
  - Education
- **Cable Television MSOs**

### benefits

- **2-Channel High definition encoding:** The YUV2QAM automatically detects two channels of video and audio via RCA input, encodes and multiplexes the signal into a multiple program transport stream with either DVB or ATSC table compliance.
- **Automatic video detection:** Video rates are automatically adjusted based on RCA video input resolution, audio passthrough or encode and QAM modulation target.
- **QAM modulation and RF up-conversion:** For cable television applications, the unit modulates the signal using QAM Annex A and B and up-converts two video and audio services multiplexed on one carrier frequency for distribution via coax networks.
- **ASI and GigE output:** For non-RF applications, the YUV2QAM delivers ASI (75 Ohm source per EN500083-9) and GigE (MPEG2 or optional RTP multicast transport egress).
- **Program information:** The YUV2QAM is compliant with the ATSC A69 Program and System Information Protocol (PSIP).

- **Closed captioning and EAS:** Support for closed captioning and Emergency Alert (EAS) is standard.
- **DVB SI:** The YUV2QAM is compliant with ETSI EN 300 468 Service Information specification.
- **Flexible configuration & control:** Controlling and configuring the YUV2QAM is easy using the integrated front panel keypad and LCD and web page for configuration and monitoring.



# YUV2QAM Dual High Definition Encoder/QAM Modulator

## Automatic Rate Adjustment Range

720 P: 12-23 Mbs  
1080i: 14-25 Mbs

(Rates are calculated based on Component video input resolution, video complexity and QAM target)

## Component Input

Connector:  
RCA 75 Ohm

Interface:  
RCA YPbPr, RCA unbalanced L+R audio

Supported Audio:  
Dolby Digital 2.0 (AC3) dual stream encoders included  
MPEG1 Layer 2 dual stream encoders included  
Dolby E, Dolby 5.1 and Dolby Digital 2.0 (AC3) passthrough

## CC Input

Connector:  
RCA 75 Ohm

Interface:  
Terminated Input for :  
EIA-608 CC signal reception w/ up convert to EIA-708  
for DTV compliance  
Wide Screen Signaling (WSS)

## Emergency Alert System (EAS) Input

Video:  
Connector:  
RCA 75 Ohm

Interface:  
Terminated NTSC or PAL D1 Composite Input with loop

Audio:  
Connector:  
Vertical single RCA jack

Interface:  
Mono audio channel with loop

## EAS Triggering

Interface:  
GPI  
Web UI  
XCP

## ASI Output

Connector:  
BNC 75 Ohm

Interface:  
Asynchronous Serial Interface (EN 50083-9)

Packet Format:  
188 byte packets

Data rate:  
up to 210Mbps

Output Format:  
MPTS

## IP Output

Connector:  
RJ45 Electrical Ethernet

Interface:  
Internet Protocol

Data Rate:  
up to 210Mbps

Syntax:  
MPTS

## RF Output

Connector:  
F-style RF female jack

Frequency:  
50 to 862 Mhz

Bandwidth:  
6 Mhz Annex B  
8 Mhz Annex A

Main Power:  
45 dBmV to 56 dBmV in 2 dB

Monitor Power:  
-10 dBmV from Main

## Technical Specifications

### IF Output

Connector:  
F-style RF female/jack

Frequency:  
Selectable 44 MHz (USA) and 36.125MHz (Europe)

### Signal Specifications

Modulation Schemes Supported:  
Annex A  
Annex B

MER: 38.0 dB min.

QAM constellations:  
Annex A: 64, 256  
Annex B: 64, 526

### Physical

Operating Temp.:  
0 to +50 °C/+32 to +122°F

Power Supply (nominal):  
100 - 240 VAC

Power Consumption (nominal):  
33.6 W (120V @ 280mA)

Weight:  
6 lbs

Measurements (H X W X D)  
1.73" X 19" X 13.322"

### User Interface

Front Panel Controls

Browser-based Web Interface

