

**Furano IP/HDMI-HD SDI™**  
**High Bit Rate 1080p SD or HD 4:2:2 MPEG-2**  
**and H.264 Broadcast Contribution Decoder**  
**and Transcoder with Magnum Semi Chip for**  
**Superb Quality Output with 100 ms Latency.**  
**ASI or IP In and Component, Composite,**  
**HDMI, SD-SDI, and HD-SDI Out. Full**  
**Control from Front Panel Buttons and**  
**Included LCD. Supports All Industry**  
**Standard MPEG-2 and H.264 Video Formats.**  
**Audio Support Includes AAC and AC-3. Full**  
**Support for SNMP Management.**



## Features

- Decodes ASI and/or IP to Analog, HDMI, or HD/SD-SDI video
- Companion decoder for our Futura III™ encoders
- Inputs: DVB-ASI input, IP input (UDP/IP or RTP/IP)
- Transcoder with MPEG-2 to H.264 or H.264 to MPEG-2
- Outputs: HDMI, HD/SD-SDI video, Composite (CVBS), Component (optional)
- Ultra Low latency – 100 milliseconds
- 4:2:2 (10 bit) AVC decoder
- Digital, Analog and SDI/HD-SDI embedded audio outputs with 4 audio pairs
- Aspect ratio conversion (4:3, 16:9)
- Magnum chip based – results in incredible quality
- Control of Frame rate, Image enhance, Phase Noise, Correction of Color, Control of Gamma
- Audio decoding: Dolby® Digital® (AC-3), MPEG-1 Layer II, AAC-LC, HE-AAC
- CBR or VBR outputs
- User selectable resolution and bit rate
- Resolutions: 480i 29.97, 576i 25, 720p 50/59.94, 1080i 25/29.97, 1080p 25/29.97
- Supports NTSC or PAL
- Control and monitoring via web browser, front panel, or SNMP

## Applications

- MPEG-2/4/H.264 HD Decoder
- Decoding analog, HDMI, or HD/SD-SDI video after transmitting over IP
- Converting IP streams to HD-SDI

## Overview

MPEG-2 is still the de facto standard codec for Broadcast, Satellite, and Cable content distribution in many parts of the world. H.264 is the emerging standard for broadcast "contribution".

Important events are generally created with 4:2:2 quality since the content may be needed far into the future.

The Furano IP/HDMI-HD SDI™ is a Broadcast oriented low latency MPEG-2 and H.264 decoder with the ability to transcode that supports all of the standard broadcast formats used throughout the world, including all North American standards.

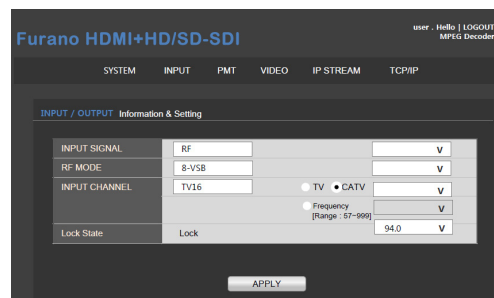
The unit supports ASI and IP input, and HD-SDI, HDMI, and CVBS outputs. The ten bit decoding results in richer color spaces and super crisp video.

Support for embedded audio includes Dolby® Digital® (AC-3), MPEG-1 Layer II, AAC-LC, and HE-AAC.

The Furano is Magnum chip based. Magnum Semiconductor now produces one of the world's best quality encoder chips.

This unit implements 4:2:2 decoding or transcoding at 100 milliseconds latency. This is unusual since low latency is hard to implement. 4:2:2 color space is often specified for contribution type video distribution.

## Sample GUI

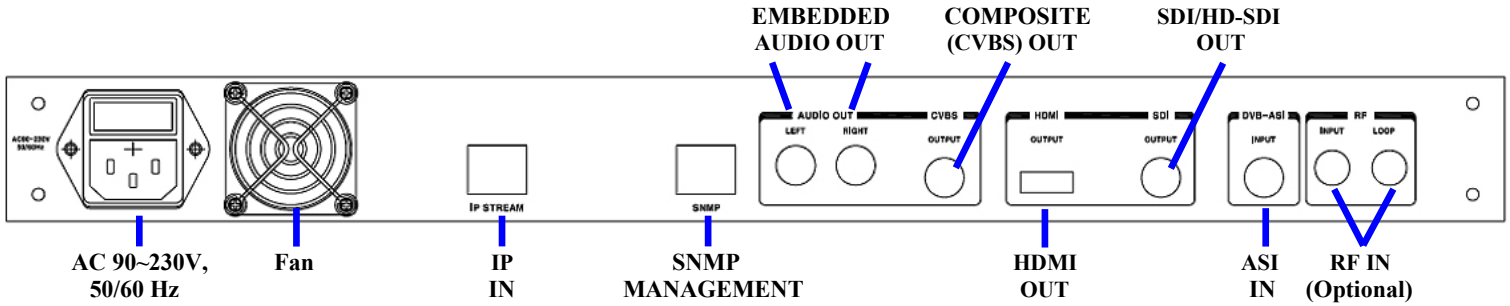


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# Rear View



## Specifications

### DVB-ASI Input

Transport Stream:	DVB-ASI, one port
Packet Format:	188 Bytes
Connector:	BNC (75Ω)
TS Bit Rates:	MPEG-2: 2.5~55 Mbps MPEG-4 AVC: 2.5~55 Mbps

### IP TS Input

IP Stream:	One port
Connector:	RJ-45
Ethernet Type:	10/100/1000 Base-T
Format:	UDP/IP, RTP/IP
IP Address Format:	Multicast, Unicast
TS Bit Rates:	MPEG-2: 2.5~55 Mbps MPEG-4 AVC: 2.5~55 Mbps

### RF Input (Optional)

Frequency Range:	54~864 MHz (Options for 8VSB, QAM, DVB-T, DVB-S)
Input Channel:	One channel
Impedance:	75Ω
Input Level:	-25~25 dBmV
Return Loss:	≥ 17 dB
Noise Figure:	VHF 7dB, UHF 9dB

### Video Decoding and Transcoding

Decoding/ Transcoding:	MPEG-2 HP@HL, MP@HL, MP@ML MPEG-4 AVC HP@L4, MP@L3
Bit Rates:	MPEG-2: 2~50 Mbps MPEG-4 AVC: 0.5~50 Mbps
Chroma Formats:	4:2:0 (8 bit), 4:2:2 (10 bit)
Bit Rate Modes:	CBR, VBR
Latency:	100 milliseconds

### Regulatory Certificates



## Ordering Info

Furano IP/HDMI-HD SDI  
 Furano IP/HDMI-HD SDI/CVBS: With optional component (YPbPr) output  
 Furano IP/HDMI-HD SDI/RF: With optional RF input – choice of 8VSB, QAM, DVB-T, or DVB-S

### Audio Decoding

Sampling Rate:	32, 48 KHz
Dolby® Digital® AC-3 (5.1 Ch):	128, 192, 256, 384, 448, 512, 576, 640 Kbps
MPEG-1 Layer II:	192, 224, 256, 320, 384 Kbps
MPEG-4 AAC-LC:	32~384 Kbps
MPEG-4 HE-AAC v1:	32~192 Kbps
MPEG-4 HE-AAC v2:	32~96 Kbps

### Audio Output

Analog Output:	Output: One stereo Frequency Range: 20 Hz ~ 20 KHz Impedance: 600 Ω
Digital Output:	Output: Embedded SDI/HDMI (4 stereo/8ch) Sampling Rate: 32, 48 KHz
Optical Input:	SPDIF (7.1 Channel) (Pass Through)

### Video Output

Analog Output:	Composite (CVBS), Optional Component
Digital Output:	HDMI, SDI (NTSC or PAL)
Resolutions:	480i 29.97, 576i 25, 720p 50/59.94, 1080i 25/29.97, 1080p 25/29.97
Aspect Ratio:	4:3, 16:9

### Ethernet

Connector:	RJ45
Interface Type:	10/100 Base-T
Protocols:	SNMP

### Control and Monitoring

Local:	Front panel operation, LCD display
Remote:	SNMP, HTTP (Web Interface)

### Physical and Power

Power Supply:	AC 90~230V, 50/60 Hz
Power Consumption:	Max. 100W
Dimensions – WxHxD:	19x1.7x15 inches (48 x44x383 mm)
Weight:	8.82 lbs (4 Kg)
Operating Temperature:	14 to 122 °F (-10~50°C)
Conformities:	FCC, CE, LVDS, RoHS