Futura III ASI+IP™


Features
- Encodes Analog, HDMI, or HD/SD-SDI video to ASI and/or IP outputs
- Excellent IP converter – Ultra low latency and stable IP output
- Inputs: Component, Composite, HDMI, HD/SD-SDI video
- Supports EIA-708 Closed caption insertion via HD-SDI (SMPTE 334)
- Simultaneous Outputs: Two DVB-ASI outputs, one IP output (UDP/IP or RTP/IP)
- Ultra Low latency – 150 milliseconds
- Full HD 1080p supported
- Supports 4:2:0 (8 bit) and 4:2:2 (10 bit)
- Digital, Analog and SDI embedded audio (8 channel) inputs
- 5.1 channel Dolby Digital (AC-3) encoding support
- 7.1 channel SPDIF audio optical input (pass through)
- Supports 4 pairs of audio passthrough for multi language
- 4 channel AES/EBU Digital Audio
- 4 stereo (8 channels) analog input with D-sub connector
- Provides internally generated PSI and PSIP
- Various functions with integrated Advanced Scaler
- Magnum chip based – results in incredible quality
- Control of Frame rate, Image enhance, Phase Noise, Correction of Color, Control of Gamma
- Selectable MPEG-2 HD or MPEG-4 AVC HD real-time video encoding
- Audio encoding: Dolby® Digital® (AC-3), MPEG-1 Layer II, AAC-LC, HE-AAC
- CBR or VBR outputs
- User selectable resolution and bit rate
- Resolutions: 480i 29.97/30, 576i 25, 720p 50/59.94, 1080i 25/29.97/30, 1080p 25/29.97/30
- Chroma formats: 4:2:0 and 4:2:2
- Supports PAT, PMT, SDT, NIT, VCT (TVCT, CVCT) and a dynamic PSIP insertion ASI port
- Control and monitoring via web browser, front panel, or SNMP

Applications
- Satellite Sports Contribution
- IP News and Sports Contribution
- Fiber News and Sports Contribution

Overview

MPEG-2 is now 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 content delivery, however.

The Futura III ASI+IP™ is a contribution delivery Broadcast oriented MPEG-2 and H.264 encoder that supports all of the standard broadcast formats used throughout the world, including all North American standards. It supports PSIP tables and has an ASI port for dynamic PSIP.

The unit supports HD-SDI, HDMI, YPbPr, and CVBS input and two identical ASI outputs, plus one IP output. The Futura III ASI+IP delivers MPEG-2 and H.264 video at bit rates of 2.5 to 60 Mbps. Ten bit conversion results in richer color spaces and super crisp video.

Audio support includes Dolby® Digital® (AC-3), MPEG-1 Layer II, AAC-LC, and HE-AAC.

The Futura III ASI+IP is Magnum chip based. Due to their long experience at C3, Magnum Semiconductor personnel created one of the world’s best quality encoder chips.

DVEO cares about ease of use. The operator console is intuitive and easy to use. A web interface is also available.

Sample GUI

Video Settings

Computer Modules, Inc.
11409 West Bernardo Court
San Diego, CA 92127
Tel: (858) 613-1818 Fax: (858) 613-1815
www.dveo.com
Specifications

Video Input
- Analog: Component (YPbPr), Composite (CVBS); Level: 1 Vp-p
- Digital: HDMI, SDI, HD-SDI
- Resolutions: 480i 29.97, 576i 25, 720p 50/59.94, 1080i 25/29.97/30, 1080p 25/29.97/30
- Aspect Ratios: 16:9 (Digital only), 4:3

Audio Input
- Analog: Inputs: Four Stereo (Eight channels)
  - Frequency Range: 20 Hz ~ 20 KHz
  - Impedance: 600 Ω/20 KΩ
- Digital: Inputs: Four AES-EBU, Embedded SDI/HDMI (4 Stereo 8 Channel)
  - Sampling Rate: 32, 44.1, 48 KHz
  - Connector: BNC (75Ω)/HDMI-19PIN

Video Encoding
- Encoding: MPEG-2, HP@HL, MP@HL, MP@ML, MPEG-4, H.264 HP@L4, MP@L3
- Encoding Rate: 1.6–50 Mbps; MPEG-4 H.264: 0.6–50 Mbps
- Chroma Formats: 4:2:0 (8 bit), 4:2:2 (10 bit)
- Bit Rate Modes: CBR, VBR
- Latency: 150 milliseconds

Audio Encoding
- Input Sampling Rate: 32, 44.1, 48 KHz
- Output Sampling Rate: 48 KHz
- Encoding: MPEG-1 Layer II (2ch): AC-3 (2ch), AC-3 Pro (2ch, 5.1ch)
  - AAC LC (2ch, 5.1ch): HE-AAC v1 (5.1ch), HE-AAC v2 (2ch)
- Audio Mix: 4 Stereo (8 ch) or 5.1 ch
- AC-3: 128, 192, 256, 384 Kbps
- AC-3 Pro: 96, 112, 128, 160, 192, 224, 256, 320, 384 Kbps
- AC-3 Pro 5.1: 224, 256, 320, 384, 448, 576, 640 Kbps
- MPEG-1 Layer II: 64, 96, 112, 128, 160, 192, 224, 256, 320, 384 Kbps
- MPEG-4 AAC-LC: 32–384 Kbps
- MPEG-4 AAC-LC 5.1: 96, 112, 128, 160, 192, 224, 256, 320, 384 Kbps
- MPEG-4 HE AAC v1 5.1: 96, 112, 128, 160, 192, 224, 256 Kbps
- MPEG-4 HE AAC v2: 32–96 Kbps
- Delay: 100 ~ 400 milliseconds

Audio Output
- Inputs: Four AES-EBU, Embedded SDI/HDMI (4 Stereo 8 Channel)
- Sampling Rate: 32, 44.1, 48 KHz
- Connector: BNC (75Ω)

Optical Input: SPDIF (7.1 Channel) (pass through)

Dynamic PSIP Input
- Transport Stream: One ASI port
- Connector: BNC (75Ω)
- Packet Format: 188 Bytes
- Input Level: 800mVp-p

ASI Output
- Transport Stream: Two ASI ports
- Connectors: BNC (75Ω)
- TS Bit Rate: MPEG-2: 2.5–60 Mbps; MPEG-4 AVC: 2.5–60 Mbps
- Packet Format: 188 Bytes

IP Output
- Output: One port
- Connector: RJ-45
- Ethernet Type: 10/100/1000 Base-T
- Format: UDP/IP, RTP/IP
- IP Address Format: Multicast, Unicast
- TS Packet Rate: 188, 204 Bytes with FEC (2022-4)

Ancillary Data Type Standards Used
- NTSC CC: CEA 608, ETSI TS 101 154 V1.9.1 and A/53 Part 4 2009
- XDS Data: 100/100 Base-T
- AFD and Bar Data: ETSI TS 101 154 V1.9.1 and A/53 Part 4 2009
- VITC Data: SMPTE 12M including 12M-1 and 12M-2 (VANC)

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)
- LCD Video Preview: Dimensions (WxH): 1.6 x 1.2 inches (40.56 x 30.48 mm)
  - Pixels: 480 x 240
  - Format: SD (4:3)

Physical and Power
- Power Supply: AC 90–230V, 50/60 Hz
- Power Consumption: Max. 100W
- Dimensions – WxHxD: 19 x 1.7 x 15 inches (482 x 44 x 383 mm)
- Weight: 8.82 lbs (4 Kg)
- Operating Temperature: 14 to 122 °F (-10~50°C)

Ordering Info

Futura III ASI+IP

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