

Spark-E II™

Versatile, Compact (5.9 Inches), High Profile, Cost Effective, Linux® Based, Portable, Single Channel H.264/AVC Encoder and Live Streaming Appliance with On Board Storage to USB Port Memory Device. Encodes Incoming 3G SDI HD-SDI, HDMI, VGA, or SD Analog (YPbPr or CVBS) Video and Audio into H.264 Compressed IP Transport Streams with Various Resolutions and “Wrappers”. Audio Output is AAC-LC or MP4. Converts Computer Output to H.264 Streams. Ideal for Streaming Live Productions and Events such as Concerts, Electronic News Gathering (ENG), Educational Webcasts, etc. to Wowza®, Adobe®, or other Streaming Appliances. Supports HLS and RTMP.

Features

- Supports both HD and SD H.264/MPEG-4 AVC encoding
- Inputs: 3G SDI HD-SDI, HDMI, VGA, CVBS, or YPbPr (one input channel at a time)
- Input resolutions up to 1080p60
- Output resolutions up to 1080i60
- Outputs: Multiple simultaneous IP streams through GigE port (RJ45)
- IP output protocols: UDP, HLS, RTSP, RTMP (local and publish)
- Low latency – 495 milliseconds
- Configurable bit rate up to 10 Mbps
- Multi rate, multi protocol support: Transport stream outputs can use different network protocols for transmission
- Able to scale down incoming HD streams to SD
- Supports H.264 High Profile @ Level 4.0 (HP@L4)
- Supports 1080i, 1080p, 720p, 480i
- Audio Output: AAC, MP3
- Mono or Stereo output
- Video pre-processing:
 - HDMI, DVI, DVI-A/VGA, CVBS, S-Video, YPbPr: Brightness, Contrast, Hue Saturation
 - CVBS and S-Video only: Sharpness
- Tested to work with industry standard decoders
- Web-based GUI

Applications

- Digital Signage from computer with HDMI or VGA out
- Streaming video to CDNs and web sites like Ustream®, Akamai®, Edgecast®, Octoshape™, Verizon®, etc.
- Live streaming at Religious Services, Festivals, Fairs, Lectures, Weddings, Funerals, via Wowza®, etc.
- Occasional Live streaming by Broadcasters
- Backhaul/Monitoring for Broadcasters
- Digital News Gathering
- Law Enforcement (surveillance, etc.)
- Centralcast
- Telemedicine
- On Line learning
- Hotel TV systems



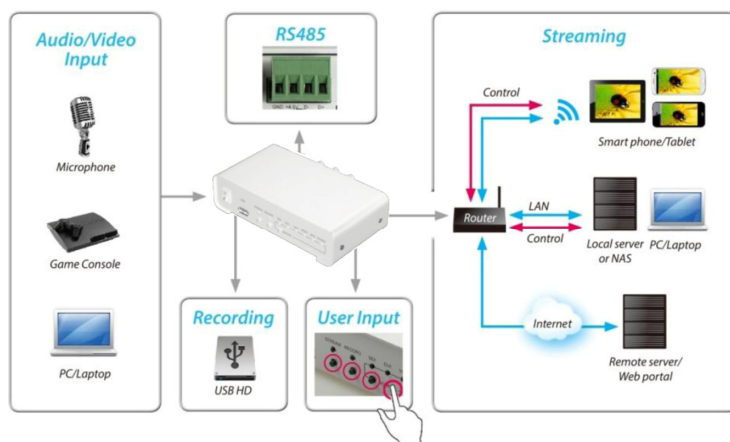
Overview

The **Spark-E II™** is a compact, cost effective, single channel H.264 encoder and live streamer designed for encoding 3G-SDI/HD-SDI, analog, or HDMI input from cameras, HDMI or VGA input from computers, or video content from analog sources. It encodes this content to multiple H.264 standard streams and outputs them to an IP network. Resulting streams can be viewed with standard transport stream compatible set-top boxes or software clients such as VideoLAN VLC or JW Player.

The Spark-E II provides for choices for resolutions, protocols, wrappers, and containers.

This compact unit weighs just one pound, making it ideal for field production and streaming of college lectures and religious services.

Application Example



Computer Modules, Inc.

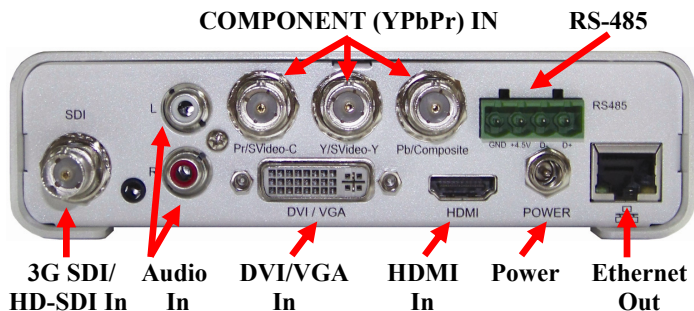
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San Diego, CA 92127

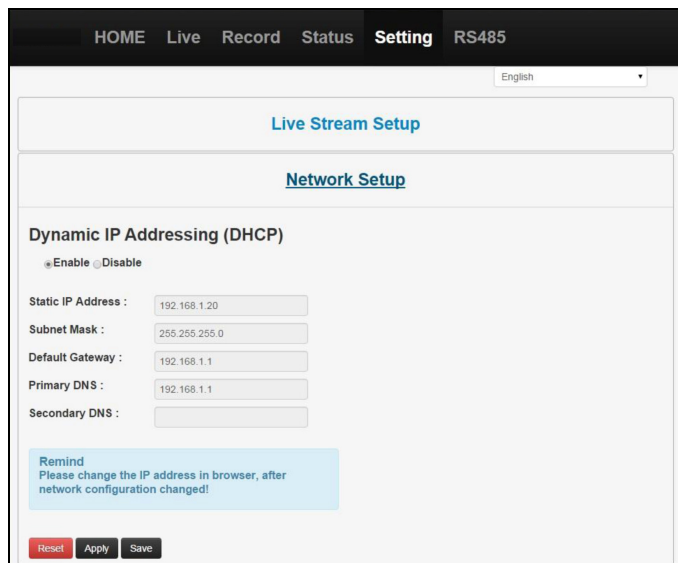
Tel: 858-613-1818 Fax: 858-613-1815

www.dveo.com

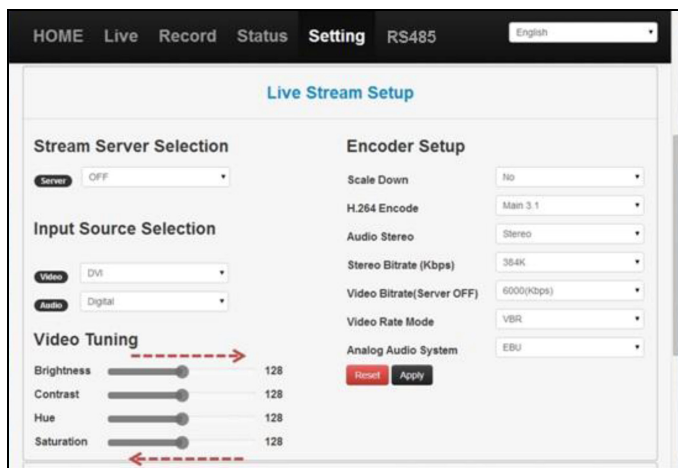
Inputs/Outputs



Sample of GUIs



Network Setup



Encoder Setup

Ordering Information

Spark-E II

Specifications

Inputs

Video	One BNC 3G/HD/SD-SDI input One HDMI input One DVI-I input for DVI-D/HDMI and DVI-A/VGA One each BNC Analog input for YPbPr, Composite (CVBS), or S-Video (PAL or NTSC)
Audio	1x Stereo audio through One RCA for Analog L/R audio SDI/HDMI/DVI-D embedded audio One 3.5 mm phone jack

Video Encoding

Video Compression:	H.264/AVC: Main 3.0, Main 3.1, High Profile Level 4.0
Input Resolutions:	1920x1080* (p60/p50/p30/p25/i60/i50), 1440x1050 (p60), 1440x900 (p60), 1360x768 (p60), 1280x1024 (p60), 1280x960 (p60), 1280x800 (p60), 1280x720 (p60), 720x576 (p50), 720x480 (p60)
Output Resolutions:	1920x1080 (p30/p25/i60/i50), 1440x1050 (p30), 1440x1080 (p30), 1440x900 (p30), 1360x768 (p30), 1280x1024 (p30), 1280x960 (p630), 1280x800 (p30), 1280x720 (p30), 960x540 (p30), 720x576 (p50), 720x480 (p30), 320x240 (p30) *Output includes down scaling
Encoding Bit Rates:	Configurable bit rate up to 10 Mbps Record Only: Up to 16000 Kbps Stream Only: Up to 12000 Kbps Stream On + Recording: Up to 6000 Kbps
Video Modes:	VBR, CBR
Video Pre-processing:	HDMI, DVI, DVI-A/VGA, CVBS, S-Video, YPbPr: *Not available for 3G/HD/SD-SDI Brightness, Contrast, Hue Saturation CVBS and S-Video only: Sharpness
Recording Formats:	MP4, TS
Latency:	495 milliseconds

Audio Encoding

Audio Compression:	AAC-LC
Stereo Bitrate:	Up to 384 kbps
Mono Bitrate:	Up to 192 kbps
Sampling rates:	48 KHz, 16 bit
Bit Rates:	Configurable bit rate range from 32 Kbps to 384 Kbps

IP Output

Connector:	RJ45 for 10/100 Mbps Ethernet interface
IP Address Modes:	Dynamic (DHCP) and Static (fixed)
Output:	Single HD or SD stream
Output "wrappers":	TS over TCP/UDP (unicast & multicast), HLS, RTSP over HTTP/TCP/UDP (RTSP Elementary Stream), RTMP (Local & Publish)

Administration

Access:	Web interface, RS-485
Software upgrades:	Via IP network
Storage:	One USB 2.0 port for USB storage
Signal Detection:	Automatic
LED Indicators:	Booting, Signal Locked, No Signal Input, Video Recording, Video Streaming

Physical & Power

Size (W x D x H):	5.9 x 4 x 2.625 inches (150 x 102 x 67 mm)
Weight:	1 lb. (0.454 kg)
Power:	DC 12V (With DV Adapter)
Conformities:	UL, FCC, CE, RoHS