SPARK™ II: Live + Record

- Versatile, Compact (5.9 Inches), High Profile, Cost Effective, Portable, Single Channel H.264/AVC Encoder and Live Streaming Appliance with On Board Storage to USB Port Memory Device.

- Based on standard Linux®.

- Encodes Incoming 3G SDI HD-SDI, HDMI, VGA, or SD Analog (YPbPr or CVBS) Video and Audio and into one H.264 Compressed IP Transport Stream with Various Resolutions and "Wrappers".

- Ideal for streaming live production events such as concerts, Electronic News Gathering( ENG), Educational Webcasts, etc. to Wowza®, Adobe®, or other streaming appliances.

- Supports HLS and RTMP.

- Converts computer output to H.264 stream

**Features**

- Supports both HD and SD H.264/MPEG-4 AVC encoding. Now supports SRT.

- Inputs: 3G SDI HD-SDI, HDMI, VGA, CVBS, or YPbPr (one input channel at a time)

- Input resolutions up to 1080p60

- Stores input on USB dongle

- Outputs: Single IP stream through GigE port (RJ45)

- IP output protocols: UDP, HLS, RTSP, RTMP (local and publish)

- Low latency-.5 seconds

- Multi rate, multi protocol support: Transport stream outputs can use different network protocols for transmission

- Configurable bit rate up to 10 Mbps

**Awards**

- Available with ZUMSTREAM CDN services @$20/hr for 100 viewers.

- Audio Output is AAC-LC

- Winner of the 2016 Worship Facilities Award for Best Streaming Product

**Computer Modules, Inc.**

11409 West Bernardo Court San Diego, CA 92127
Tel: 858-613-1818 Fax: 858-613-1815
www.dveo.com
Features

- Supports 1080i, 1080p, 720p, 480i
- Audio Output: AAC-LC
- 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
Now supports SRT
Companion decoder available - Spark-D™ II

Overview

- **The SPARK-E™II: Live + Record** is a Linux based, compact, cost effective, single channel, H.264, video streaming and recording appliance designed for streaming and storing video from live events. It is designed to stream content to a CDN or a live media server, which are the two principal ways such content is disseminated to the outside world. Thanks to compact storage, this device can store the incoming stream onto any USB device such as a "USB dongle".

- We provide one of the largest numbers of input options - including 3G HD-SDI, HDMI, component, and analog. Computer outputs are accommodated via our HDMI input port. The Spark-E II supports most popular streaming protocols including HLS, RTMP, and pure UDP TS and SRT.

- Onboard storage is very useful. The recorded content is stored as H.264 transport streams. These streams can be edited later on or can be transferred via file transfer to anyone, anywhere.

- This compact unit weighs just one pound, making it ideal for field production, storing, and streaming of college lectures and religious services.
Sample of GUI’s

Network Setup

Encoder Setup
Applications

- Digital Signage from computer with HDMI or VGA out
- Streaming video to CDN’s and websites like Ustream®, Akamai®, Verizon®, etc.
- Live Streaming at Religious Services, Festivals, Fairs, Lectures, Weddings, Funerals, via Wowza®, etc.
- Occasional Live streaming by Broadcasters

Inputs/Outputs

- Component (YPbPr) IN
- RS-485
- 3G SDI/HD-SDI In
- Audio In
- DVI/VGA In
- HDMI
- Power
- Ethernet Out

Application Example
# 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

## IP Output

### IP Input

**Control:**
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)

### 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

### 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
**Specifications**

### Video Encoding

**Video Compression:**

H.264/ AVC: Main 3.0, Main 3.1, High Profile Level 4.0

- 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:**

( Live and Storage )

**Input 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

**Streaming and recording**

**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 Pre-processing:**

HDMI, DVI, DVI-A/VGA, CVBS, S-Video, YPbPr:

- Brightness, Contrast, Hue Saturation
- CVBS and S-Video only: Sharpness

**Recording Formats:**

MP4, TS

**Latency:**

.5 seconds

### Physical & Power

**Size:**

5.9” h x 4” w x 2.625” d (150 x 102 x 67 mm)

**Voltage:**

DC 12V (With DV Adapter)

**Operating Temperature:**

32° to 140° F(0° to 60°C)

**Weight:**

1 lb (0.454 kg)

**Conformities:**

UL, CE, RoHS, FCC,

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**Ordering Information**

- **Spark-E II:** Live + Record
- **Spark DII- Matching Decoder, DVEO Set-top box**