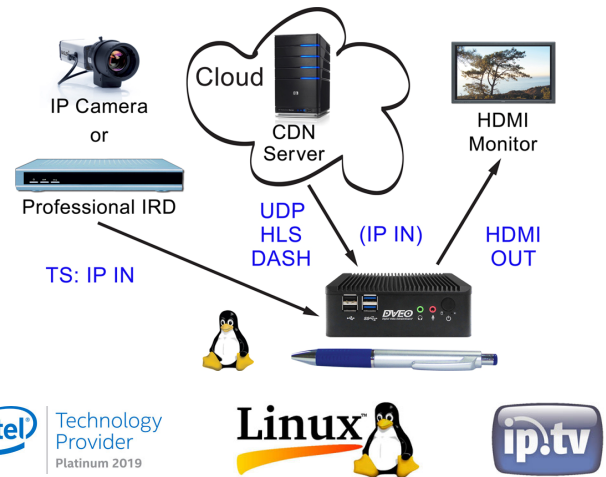


# Spark-D™ II

Tiny (5.5 inches), real time, quick starting, embedded Linux® based, remotely manageable, SD or HD, H.265/HEVC or H.264/AVC video and audio decoder for receiving live streams with most any TS protocol IP input. Supports HLS, HTTP, RTSP, HTML, or RTMP (pushed from Flash server) in and converts the H.265, H.264 AVC, or MPEG-2 compressed digital video and audio into professional digital HDMI output. Audio support for AAC, MPEG Audio, or AC-3. Decodes at .1 to 15 mbps. Ideal decoder for receiving and decoding of streaming video from remote sites, content delivery networks (CDNs), or IPTV compatible appliances or players. Tested to work over public Internet, WiFi, and other RF backbones.



## Features

- Supports both HD and SD H.265/HEVC, H.264/MPEG-4 AVC, or MPEG-2 decoding
- Input: Bursty or smooth IP
- Output: HDMI
- Security scanned for vulnerabilities
- IP Input protocols: HTTP Live (HLS), UDP, RTP, RTSP, HTTP, RTMP (pushed from Flash server)
- Supports H.264 High Profile @ Level 4.0 (HP@L4)
- Supports MPEG-2
- Supports 1080i, 1080p (30 fps), 720p, 480i, 480p, CIF, QCIF, qHD, H.264up and many others, and custom resolutions
- Supports HDTV output formats SMPTE-274M/SMPTE-296M-2001, ITU-R BT.656
- Color Space: 4:2:0 for H.264
- Audio Input: AAC, MPEG Audio, or AC-3
- Audio Output: Embedded
- Remote GUI includes some scheduling
- Can be used to store or time-delay incoming stream with optional storage add-on
- SNMP, REST, SOAP support for remote management and monitoring
- Processor Supports Octoshape™ Client on GUI

## Applications

- Companion decoder to Spark-E II: Live + Record
- Converting IP streams to HDMI wherever they may come from
- Sending IP streams to HDMI monitors for presentations, training, worship services, etc.
- IP camera decoder

## Overview

Streaming video via Flash, HLS, or RTSP has emerged as a very efficient methodology for delivering SD and HD content over the public internet. It occurred to us that there are not many decoders/receivers that decode incoming "wrapped" streams to HD and SD. The Spark-D™ II is designed to address this need and deliver a professional decoding device for the public internet.

The Spark-D II is a real time H.265, H.264, or MPEG-2 decoder that receives IP transport streams and decodes them to HDMI. It accepts a wide variety of IP protocols, wrappers, and containers but is highly tuned for HLS and RTSP.

The system is ideal for converting IP streams from anywhere into HDMI streams. Broadcasters and content providers can use our Spark-E II: Live + Record or Spark-E™ HDMI/IP to encode HDMI to H.264 IP, then decode the streams with the Spark-D II.

This embedded Linux® based unit is designed to be affordable, scalable, and extendable. Modifications to video formats are easily created. Remote management and multi level security is built in.



Computer Modules, Inc.

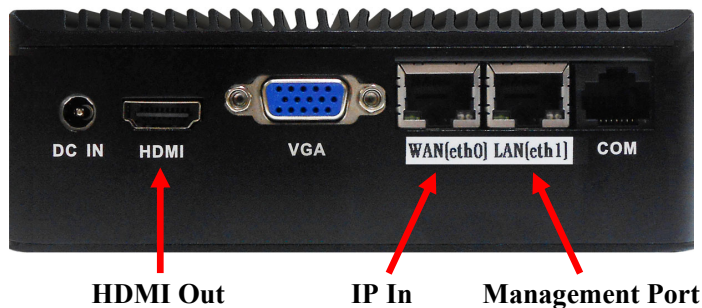
11409 West Bernardo Court

San Diego, CA 92127

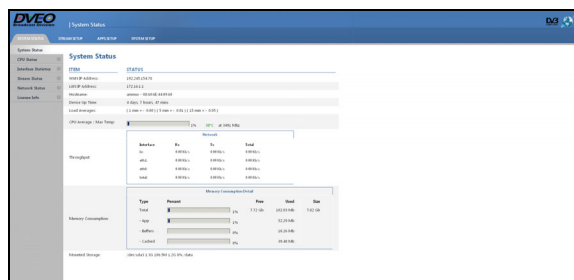
Tel: 858-613-1818 Fax: 858-613-1815

[www.dveo.com](http://www.dveo.com)

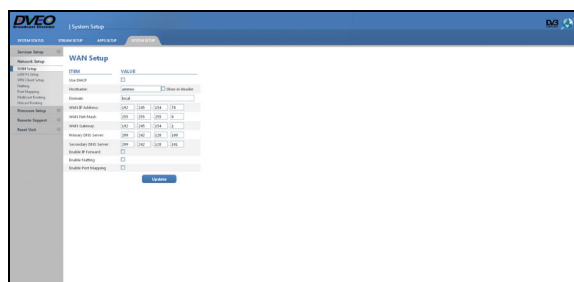
## Inputs/Outputs



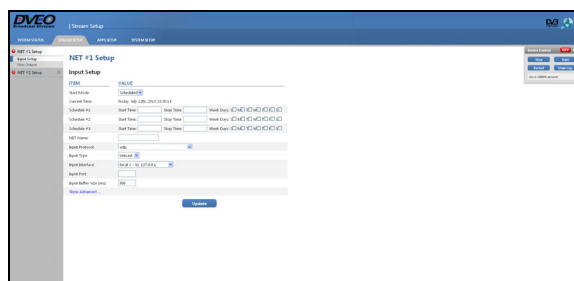
## Sample of GUIs



System Status



Network Setup



Scheduled IP Input Setup

## Ordering Information

Spark-D II: Basic unit

## Specifications

### IP Input

Input:	Single Channel Gigabit Ethernet port (RJ45)
Audio Input:	AAC, MPEG Audio, or AC-3
Input Resolutions:	Up to 1080p60
Input “wrappers”:	HTTP Live (HLS), UDP, RTP, RTSP, HTTP, RTMP (pushed from Flash server), Octoshape™
Type:	IP-multicast, IP-unicast
Bit Rates:	Up to 60 Mbps
Remote Setup – IMPORTANT:	User may need to assign static IP or provide access to router

### HDMI Output

Video:	HDMI
Audio:	Embedded audio
Latency:	Two frames

### Administration

Access:	Web interface, SSH (Secure command line interface)
SNMP:	Monitoring and alerts
Scheduling:	On, Off support for timeslots

### CPU and Operating System

CPU:	Intel® Celeron® processor N3160 @ 1.60 GHz
OS:	DVEO embedded Linux® on SSD
Memory:	4 GB RAM
Hard Drive:	32 GB MSATA SSD

### Physical & Power

Size:	5.5 x 4.88 x 1.81 inches (L x W x H) 140 x 124 x 46 mm (L x W x H)
Power Supply:	DC-12V
Operating Temperature:	15°C ~ 60°C
Humidity:	10% to 90% relative humidity, non-condensing
Weight:	1.6 lbs. (826 grams)
Conformities:	FCC, CE, RoHS 

### Security

Ports security scanned to MIL requirements prior to shipment
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