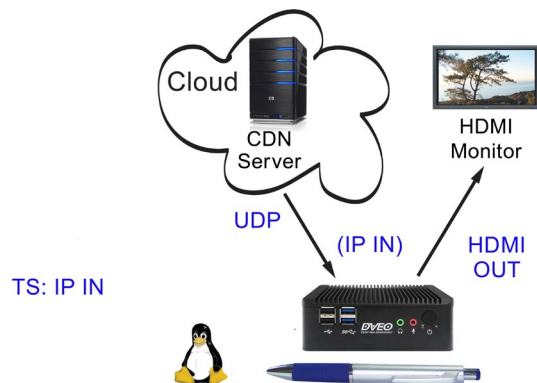


# DOZER EP: HDMI (EndPoint)

Tiny (5.5 in square), real time, quick starting, embedded Linux® based, remotely manageable, SD or HD, H.264 or H.265 video and audio decoder for receiving live DOZER streams from some DOZER enabled sources. This end point is designed as an enhanced set top box with ability to receive the "DOZERIZED" streams and decode the compressed stream into uncompressed HDMI. Supports H.264 at .1 to 15 Mbps. Ideal End Point for delivering content over great distances reliably and inexpensively. Supports RIST protocol.



## Features

- Supports both HD and SD H.265/HEVC, H.264/MPEG-4 AVC, or MPEG-2 decoding
- Input: Bursty or smooth IP (H.265, H.264, or MPEG-2)
- 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
- Supports RIST Client on GUI
- Supports DOZER™ protocol option

## Applications

- Streaming video from remote sites from RTMP, RTSP, or HTTP compatible sources such as IP cameras or YouTube®
- Converting IP streams to HDMI wherever they may come from
- Feeding Live IP Camera Views into Multiviewers from Jupiter Systems and RGB Spectrum, etc.
- DOZER end point
- Axis IP camera decoder
- RIST end point

## Overview

The world is now awash with affordable bandwidth. Video delivery over IP is rapidly overtaking Satellite and Microwave. Pretty soon many inanimate objects and appliances will have their own IP addresses. The only problem is that the Ethernet/internet protocol was not designed with video packets in mind. The issue is that video packets must arrive at their destination within a set time otherwise they "expire" like spoiled food and are discarded. The other issue with video is that the UDP protocol does not do well with traffic congestion.

ARQ based DOZER is a proven packet loss correction technology that enables reliable delivery of UDP traffic across WANs and LANs. It corrects for packet loss, fixes jitter, and encrypts your traffic with AES 128. It is interesting that low level of packet loss can be found even across dedicated TELCO lines due to TCP packet contention. DVEO's DOZER operates at layer II of the OSI stack. This makes our technology more resilient and suitable for video and VoIP.

The DOZER EP is designed for compressed video but accepts almost any bitstream with any protocol, with any kind of content. A growing list of customers are using it to transfer VoIP traffic, and others use it to send uncompressed (SMPTE 292) or lightly compressed digital video (NewTek NDI™) across public or private networks and LANs. The DOZER technology can be adapted for any kind of "bit" delivery task as long as there is a two-way connection.



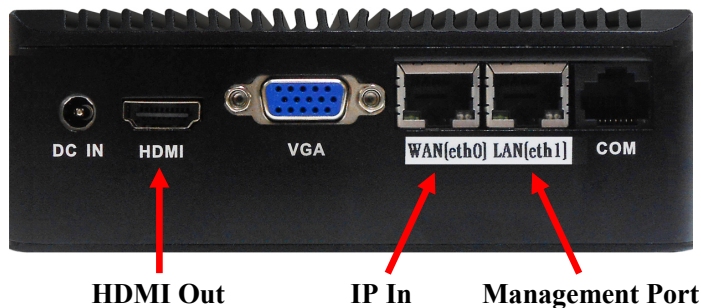
Computer Modules, Inc.

11409 West Bernardo Court  
San Diego, CA 92127

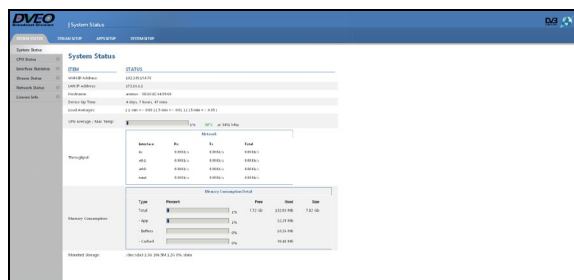
Tel: 858-613-1818 Fax: 858-613-1815

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

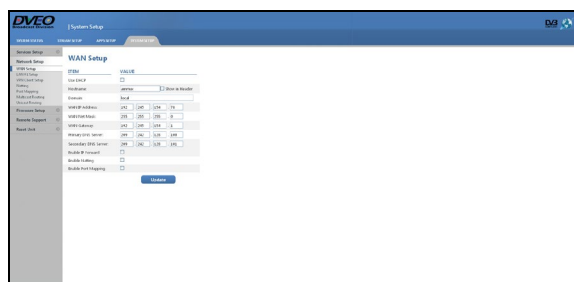
## Inputs/Outputs



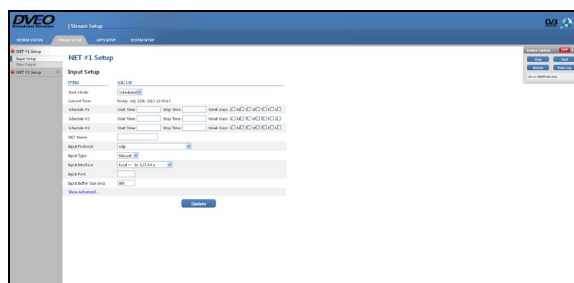
## Sample of GUIs



System Status



Network Setup



Scheduled IP Input Setup

## Ordering Information

DOZER EP: HDMI: Basic unit  
 DOZER EP: HDMI  
 RIST EP: HDMI

## 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”:	UDP with DOZER or RIST
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
--



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)