

# VidOptic FVT/FVR-2000 Series



**VIDOVATION**

Moving Video Forward

FVT/FVR-2000-Series  
multi-rate HD-SDI fiber optic  
video transport with two way  
audio, data & GPIO's



The VidOptic 2000 Series offers multi-rate HD-SDI fiber optic transport with options for multiple audio, intercom and bi-directional data over a single fiber, with high definition transport up to 1080p 3G HD-SDI, uncompressed.

VidOvation's VidOptic FVT/FVR 2000 Series gives broadcasters and A/V Pros an innovative solution for moving high definition video as well as analog or AES audio, intercom, GPIO's and tally. The data and GPIO channels can be used to control equipment in remote locations, and the tally relay can be used to control a camera tally light. The system has audio inputs for two channels of outbound digital AES audio or four analog audio channels with two more bi-directional audio channels for 4-wire intercom. Also, you can cross-convert audio signals, by inputting analog or AES audio and getting both analog AND AES out saving the cost of A/D converters. The VidOptic 2000 Series also gives users three discreet bi-directional RS-232, 422 or 485\* data channels as well as four GPIO's and one tally. Embedded audio within the HD-SDI video signal is supported as long as the resultant signal is SMPTE compliant.

The VidOptic 2000 Series provides loop outs, equalized inputs, and reclocked dual outputs, supporting 5 to 2970 Mb/s, SDI, HD-SDI, 3G HDSDI, DVB, ASI and SMPTE standards 424M, 292M, 259M and 310M.

The VidOptic 2000 Series can be used as a stand-alone product or, alternately, can be rack mounted with our convenient Rack Kits. When integrated into the handy LightBox or LightCube and combined with our other industry-leading fiber transport products, completely custom solutions can be suited to most any purpose from campus interconnects to remote outside broadcast applications.

Rely on the VidOptic 2000 Series to provide unsurpassed quality with no loss whether within a studio or across town.

## FEATURE HIGHLIGHTS:

- 1 SDI, up to 3Gbs
- Supports SMPTE ( 424M, 310M, 292M, 259M )
- Eq's and re-clocks
- 4 analog audio or 2 AES to Base
- Two 4-wires for intercom
- 3 data ( RS 232, 422, 485 )
- 4 GPIO
- 1 Tally
- 1, 2 or 3 fibers
- Multimode or Singlemode
- ST, SC or LC
- Rugged design
- Quiet - no fans
- Throw-down, rack or LightBox
- Seven year warranty

## APPLICATIONS:

- Remote Cam Control in Broadcast Locations
- Intelligent transportation systems
- Point of View (POV) cameras
- Distance learning
- HD surveillance
- High end tactical government missions
- Surgical video
- Specialty cameras
- Etc.



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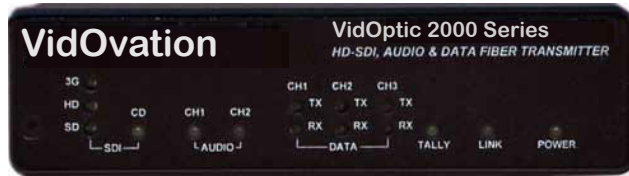
Toll Free: 1.855.VidOvation

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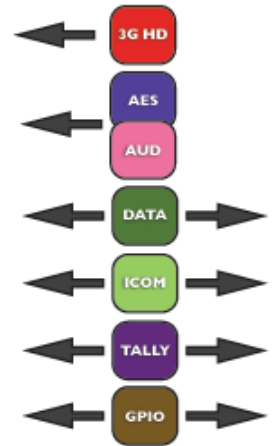
# Pick The 2000 Series Module Set That Best Fits Your Application:

## VidOptic 2143:

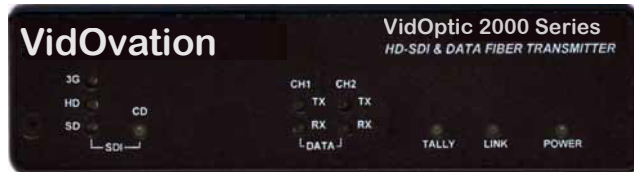


The VidOptic 2143 system provides all of the signals needed to remote any camera, and its operator, up to 40km away from its base station. The 3G HD uncompressed video is transported without any loss or degradation of the signal. Data paths allow for easy remote control of critical camera parameters and the tally circuit lets the camera operator know when he is "hot". Audio paths allow for multiple line level audios from the camera-end of the link as well as bi-directional 4-wire circuits for intercom. In addition, you can take advantage of your digital audio sources and mics by inputting AES signals and get both analog and AES out at the control room.

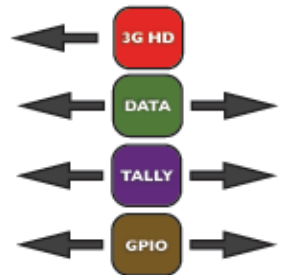
The VidOptic 2143 packs a lot of functionality into a very small package...and at a great price.



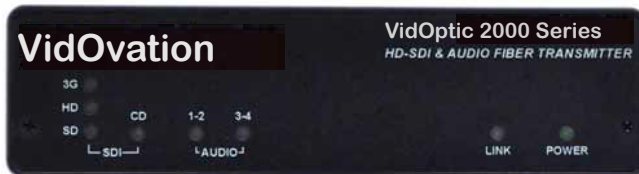
## VidOptic 2102:



The VidOptic 2102 system has everything from the 2143 minus the audio and intercom functions. For customers looking for the capability to remotely control a distant camera with or without a PTZ (Pan-Tilt-Zoom) head, this is the system for you. The system transports full resolution, uncompressed 3G HDTV from the camera and has two data paths for camera control, PTZ control and other accessories such as rain wipers. Use the GPIO's or Tally to trigger an integrated tally light at the camera or for any of a number of other convenient purposes. Why pay for audio and intercom if you don't need it? The 2102 is THE cost-effective way to operate your remote camera whether on the roof or across town.



## VidOptic 2140:



The 2140 gives you the same uncompromised video quality and AES or analog audio for fixed camera positions such as weather or scoreboard cameras. As with the 2143, you have the capability of inputting either analog or digital AES audio signals and getting both analog and digital signals out at the control room. For fixed surveillance application, the 2140 is an extremely cost efficient and small package that will fit into most weatherproof enclosures and most budgets.



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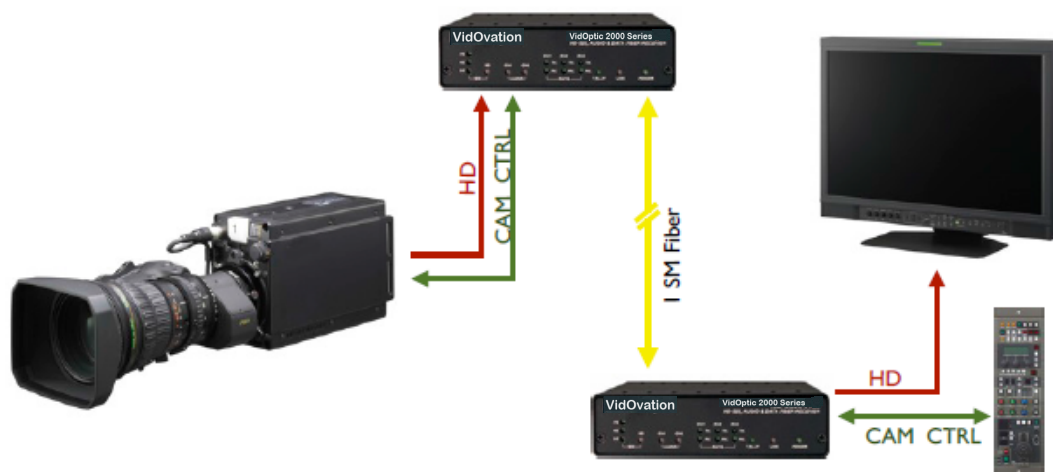
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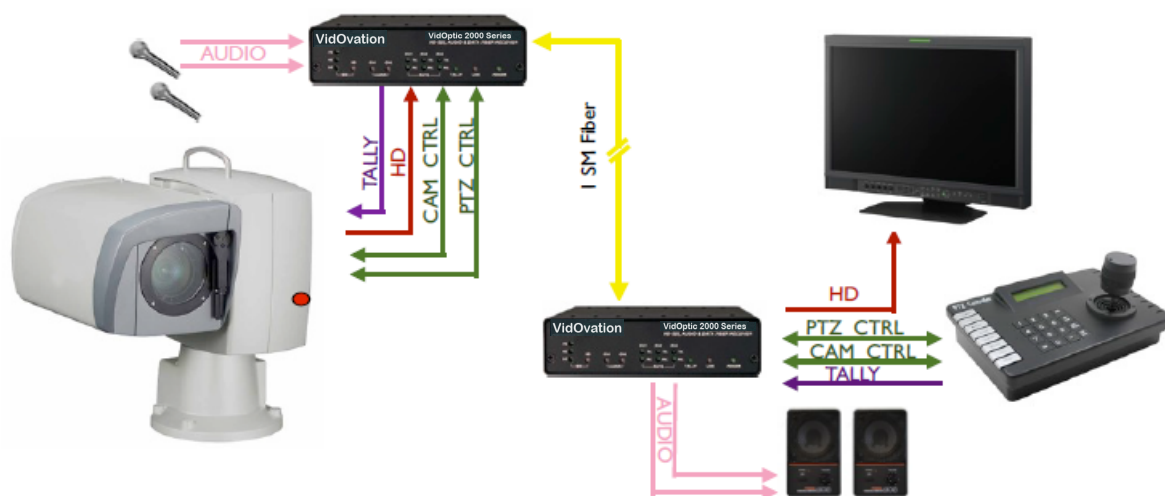
Tel: 949.777.5435

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## Applications:

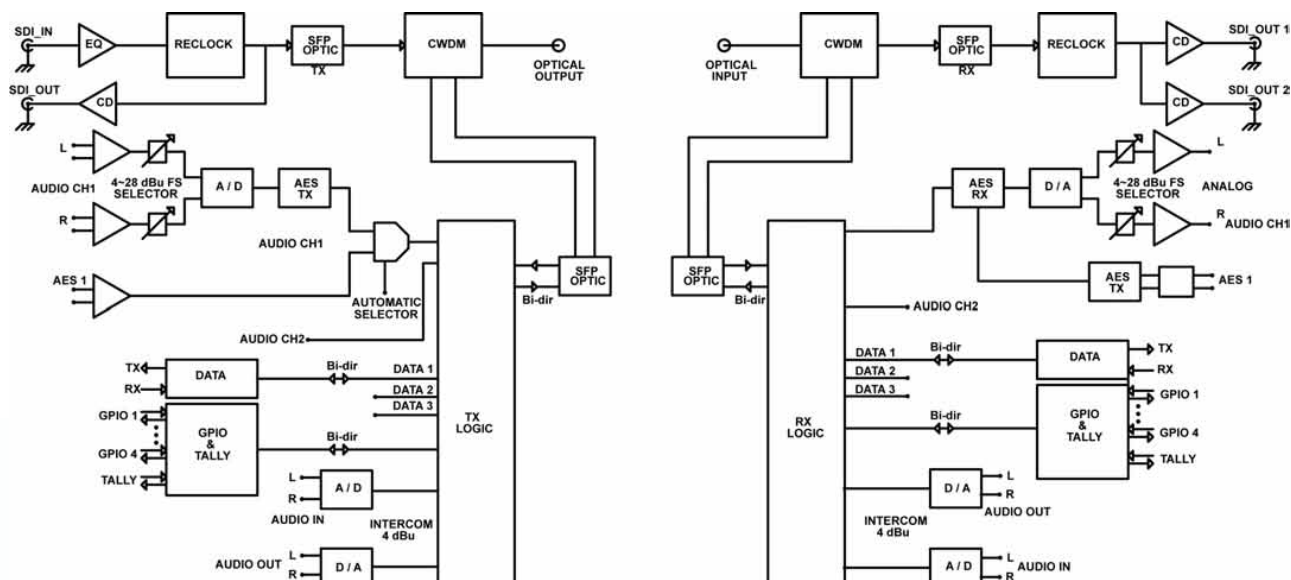


Basic CCU  
Control



POV & High Rez  
Video/Audio  
Surveillance

## System Block Diagram:



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# Specifications:

## Digital Video

# of Inputs: 1 w/ loop out, Dual outs on RX  
Interface: SMPTE 424M, 297M, 292M, M259M-C, DVB-ASI  
Input Coax EQ: @3 Gbps 80m  
@1.485 Gbps: 150m  
@143-360 Mbps: 350m  
Input level: 100mV (peak to peak)  
Impedance: 75 Ohms  
Bit-error rate: 10-12  
Jitter: < 0.03IU under 1 MHz  
Rise/fall times: < 270ps  
Return Loss: >15 dB at 5 MHz - 1.485 GHz  
>10 dB up to 3 GHz

## Data

232,422,485: DC-3Mbps  
232 In V: +/- 25V max, 2V min  
232 Out V: +/- 5V @ 3Kohm, 1.6V Sens.  
422,485 In V: -7V to 12V, 0.2V diff min  
GPI/GPO: Normally Open, Form 1 SPST

## Analog Audio

S/N: >90db  
Freq Response: < +/-0.1db  
(20Hz - 20kHz)  
Distortion: < 0.05%  
Level Adjust: 28,16,10,4 dBu  
Max I/O Level: 28 dBu  
Impedance In: (bal) 600 Ohms +  
Impedance Out: (bal) <10 Ohms

## Digital Audio

Input/Output: Balanced, AES3/AES3id  
I/O Impedance: 110 Ohm/75 Ohm (DIP Sw)  
+/-20%, 0.1MHz-6.0MHz  
Min/Max Input: 2-7 Vpp into 110 Ohms  
Rise/Fall time: 5-30ns for 10 Ohm  
Jitter : < 20ns

## Electro-Optical

Operating Wavelengths: DFB 1271-1591nm  
TX Laser output power: -2 - 0dBm, Class 1  
Receiver Sensitivity: -20 dBm  
Fiber Compatibility: single or multimode  
Optical Connector: ST, LC, SC  
Distance limit: 40km w/singlemode

## Mechanical, Environmental

Dimensions (LxWxH): 6.75" x 5.5" x 1.75"  
Weight: 1.5 lbs.  
Video connectors: BNC  
Audio/data connector: DB-44F  
Temperature Range: -25° to +55°C  
Humidity Range: 0 to 95% RH  
Noncondensing  
Power Input: 2.5mm jack  
Center pin +  
Power rating, nominal: 50w max@14 VDC  
Power Requirement: <10w @5-24VDCwww

# Ordering Information:

## VidOptic 2143

FVT-2143-2-LC: 3 Gbps Serial Digital Video Transceiver, w/ 4-Ch Audio or 2-CH AES Audio, 2-Ch 4W Intercom, 2-way 3-Ch Data & Tally, Multimode  
FVR-2143-2-LC: 3 Gbps Serial Digital Video Transceiver, w/ 4-Ch Audio or 2-CH AES Audio, 2-Ch 4W Intercom, 2-way 3-Ch Data & Tally, Multimode  
FVT-2143-ST: 3 Gbps Serial Digital Video Transceiver, w/ 4-Ch Audio or 2-CH AES Audio, 2-Ch 4W Intercom, 2-way 3-Ch Data & Tally, Singlemode  
FVR-2143-ST: 3 Gbps Serial Digital Video Transceiver, w/ 4-Ch Audio or 2-CH AES Audio, 2-Ch 4W Intercom, 2-way 3-Ch Data & Tally, Singlemode  
FVT-2143-CWDM-ST: 3 Gbps Serial Digital Video Transceiver, w/ 4-Ch Audio or 2-CH AES Audio, 2-Ch 4W Intercom, 2-way 3-Ch Data & Tally, 3 Fiber for CWDM  
FVR-2143-CWDM-ST: 3 Gbps Serial Digital Video Transceiver, w/ 4-Ch Audio or 2-CH AES Audio, 2-Ch 4W Intercom, 2-way 3-Ch Data & Tally, 3 Fiber for CWDM

## VidOptic 2102

FVT-2102-33-ST: 3.0 Gbps Serial Digital Video Transceiver, with 2-Ch Two-way Data over 2 Single-mode fibers (RMT kit for rack mounting)  
FVR-2102-33-ST: 3.0 Gbps Serial Digital Video Transceiver, with 2-Ch Two-way Data over 2 Single-mode fibers (RMT kit for rack mounting)  
FVT-2102-35-ST: 3.0 Gbps Serial Digital Video Transceiver, with 2-Ch Two-way Data over 1 Single-mode fiber (RMT kit for rack mounting)  
FVR-2102-35-ST: 3.0 Gbps Serial Digital Video Transceiver, with 2-Ch Two-way Data over 1 Single-mode fiber (RMT kit for rack mounting)

## VidOptic 2140

FVT-2140-ST: 3.0 Gbps Serial Digital Video Transmitter, with 4-Ch One-way Analog Audio over 1 Single-mode fiber (RMT kit for rack mounting)  
FVR-2140-ST: 3.0 Gbps Serial Digital Video Receiver, with 4-Ch One-way Analog Audio over 1 Single-mode fiber (RMT kit for rack mounting)

## ACCESSORIES

2000-PS: Replacement Power Supply for VidOptic 2000 units  
PS3-12VDC: Three Output DC Power Supply for up to three VidOptic 2000 modules  
RMT: Triple Rack-mount Kit (1 kit)  
BP-T: Blank panel for RMT rack-mounting kit  
HDAUDIO35: Audio and Data screw terminal break-out adapter "diving Board" (formerly DVMAUDIO35)  
XLR-HD35-TX: XLR Audio Adapter Cable for ST transmitter (formerly part # DVMXLR35)



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