

Features

- 1 SDI, up to 3Gbs
- Supports SMPTE
 - 424M -259M
 - 292M -310M
- Eq's and re-clocks
- 4 analog audio or 2 AES to Base
- Two 4-wires for icom
- 3 data (RS232,422,485)
- 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

- Remotely controlled cameras such as goal cams
- Surveillance/ Homeland security
- Distance learning
- Houses of Worship
- Surgical video
- Specialty cameras



The perfect tool for POV and other applications requiring a mix of analog and digital signals, in a very small package



The HD-3500 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.

MultiDyne's HD-3500 series gives broadcasters and A/V professionals 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 HD-3500 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 HD-3500 provides loop outs, equalized inputs, and reclocked dual outputs, supporting 5 to 2970 Mb/s, SDI, HD-SDI, 3G HD-SDI, DVB, ASI and SMPTE standards 424M, 292M, 259M and 310M.

Applications for the HD-3500 include remote camera control in broadcast environments, point-of-view (POV) cameras, action sports shots, sky cams and intelligent transportation systems as well as for high definition surveillance, casinos and Homeland Security.

The HD-3500 can be used as a stand-alone product or, alternately, can be rack mounted with our convenient Rack Kits. When integrated into the MultiDyne 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 MultiDyne HD-3500's to provide unsurpassed quality with no loss whether within a studio or across town.



The Award-Winning LightBox™

*RS-485 is point-to-point only

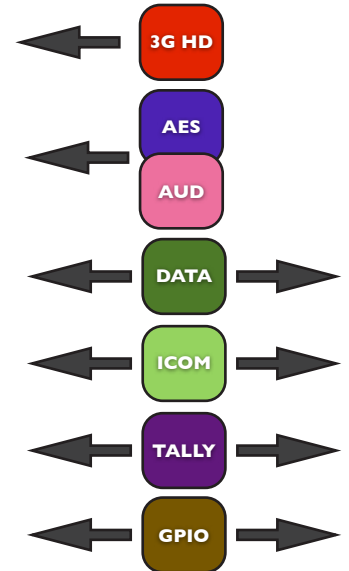
Pick The 3500 Series Module Set That Best Fits Your Application:

HD-3500



The HD-3500 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.

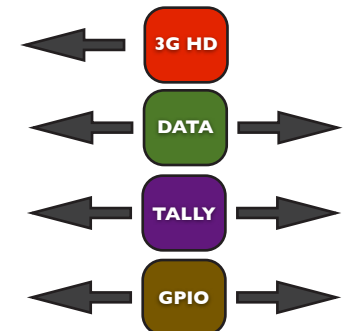
The HD-3500 packs a lot of functionality into a very small package...and at a great price.



HD-3521



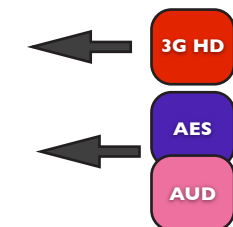
The HD-3521 system has everything from the 3500 system minus the audio and intercom functions. For customers looking for the capability to remotely control a distant camera with or without a PTZ (Pan-Tilt-Zoom) head, this is the system for you. The system transports full resolution, uncompressed 3G HDTV 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 HD-3521 is THE cost-effective way to operate your remote camera whether on the roof or across town.



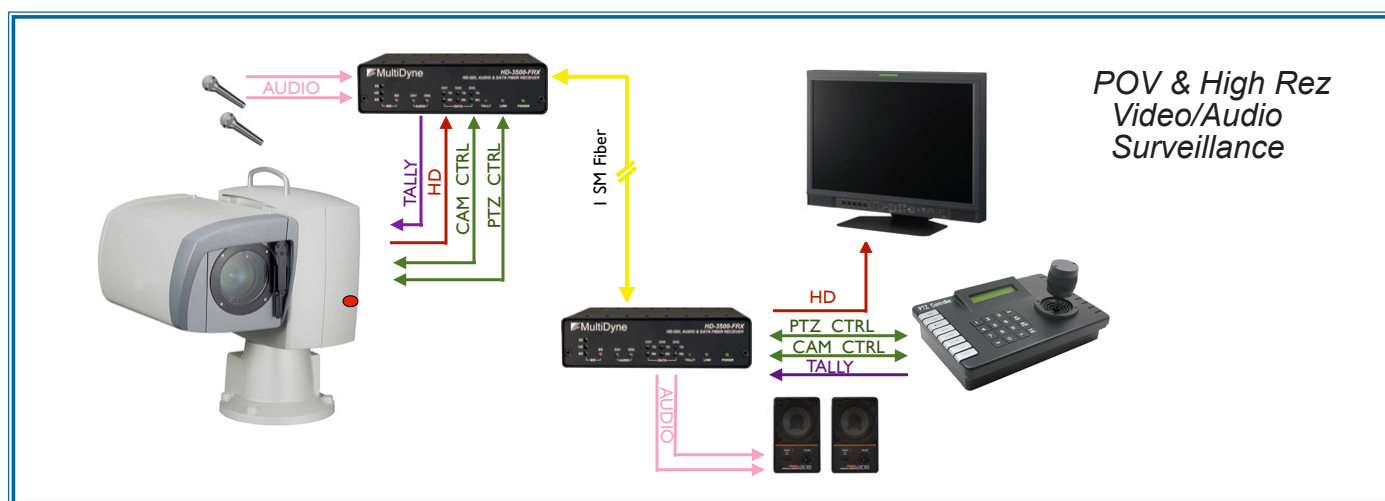
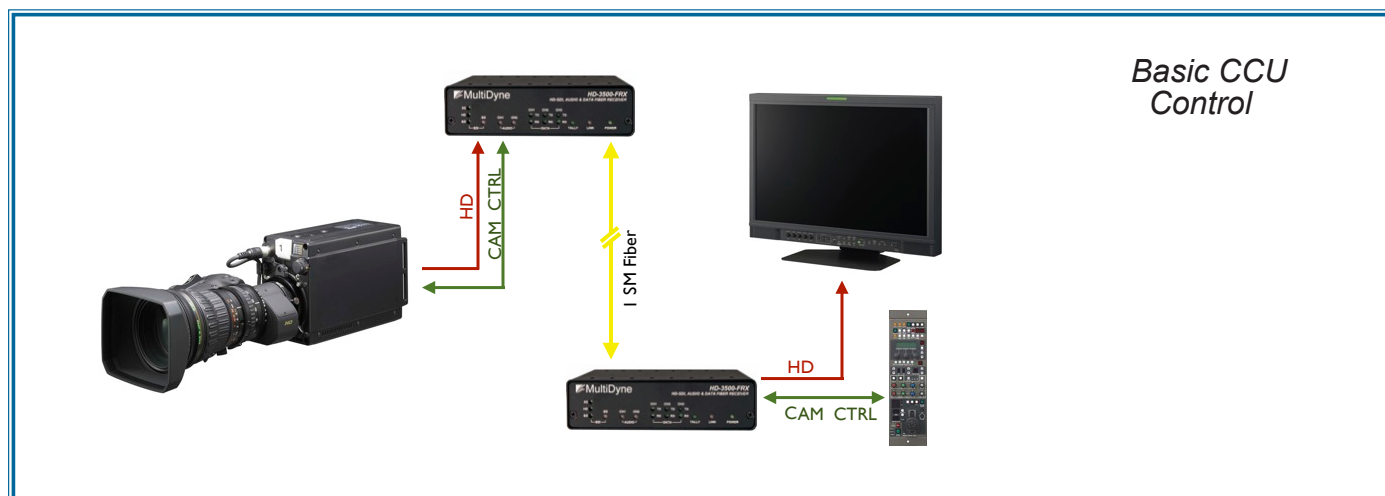
HD-3540



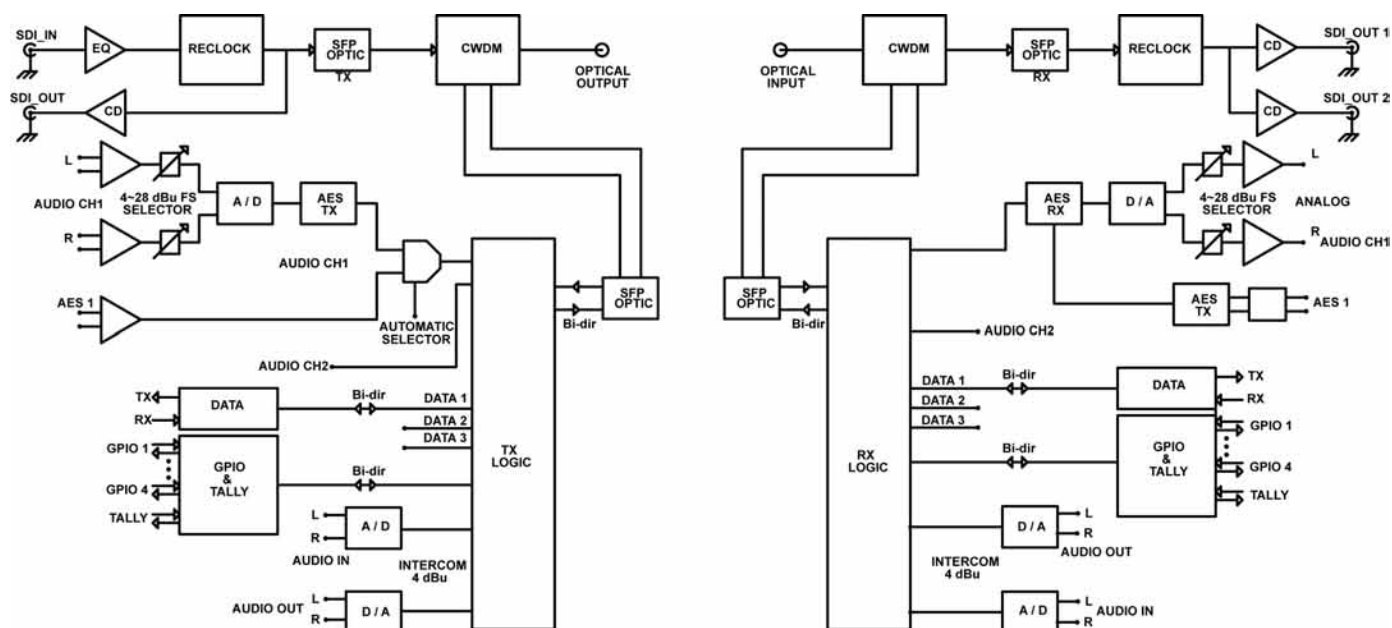
The HD-3540 gives you the same uncompromised video quality and AES or analog audio for fixed camera positions such as weather or scoreboard cameras. As with the HD-3500, you have the capability of inputting either analog or digital AES audio signals and getting both analog and digital signals out at the control room. For fixed surveillance application, the HD-3540 is an extremely cost efficient and small package that will fit into most weatherproof enclosures and most budgets.



Applications



System Block Diagram



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	< 0.031U 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
Frequency Response	< +/-0.1db (20Hz - 20kHz) < 0.05%
Distortion	28,16,10,4 dBu
Level Adjust	28 dBu
Max I/O Level	600 Ohms +
Impedance In (bal)	<10 Ohms
Impedance Out (bal)	4 dBu FS
Icom level	10 K Ohm
Icom Impedance In	<50 Ohm
Icom Impedance Out	

Digital Audio

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

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
Power Input	Noncondensing
Power rating, nominal	2.5mm jack
Power Requirement	Center pin + 50w max@14 VDC <10w @5-24VDC

Ordering Information

3500	
HD-3500-FTX-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
HD-3500-FRX-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
HD-3500-FTX-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
HD-3500-FRX-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
HD-3500-FTX-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
HD-3500-FRX-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
3520/3521	
HD-3520-TX-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)
HD-3520-RX-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)
HD-3521-TX-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)
HD-3521-RX-53-ST	3.0 Gbps Serial Digital Video Transceiver, with 2-Ch Two-way Data over 1 Single-mode fiber (RMT kit for rack mounting)
3540	
HD-3540-TX-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)
HD-3540-RX-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	
HD-3500-PS	Replacement Power Supply for HD-3500 units
PS3-12VDC	Three Output DC Power Supply for up to three HD-3500 Series 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 HD-3500-FTX-ST transmitter (formerly part # DVMXLR35)
XLR-HD35-RX	XLR Audio Adapter Cable for HD-3500-FRX-ST receiver (formerly part # DVMXLR35)



191 Forest Avenue
Locust Valley, NY 11560
Phone 516-671-7278
Fax 516-671-3362

Transmit • Route • Receive
www.multidyne.com

