

# **STONE®** Fibre Converter for HD CCTV

## **HDTVI / HDCVI / AHD Video To Fibre Converter**

### **INTRODUCTION**

Our **AHD Video over Fibre Converters** can simultaneously transmit 1-8 channels AHD over one multimode or single-mode optical fibre. Electronic and optical adjustments are never required. LED indicators are provided for instantly monitoring system status. Devices are available for either standalone or rack-mount installation, which is suitable for different working environment. Compatible with AHD-H、AHD-M、AHD-L. Lossless non-compression real time transmission.

Its optical module and core circuit adopt the imported components that have high stability, and all optical & electrical interfaces conform to the international standards, which is applied to the different working environment. This optical transceiver with video status indication can monitor the normal operation of system.



### **PRODUCT APPLICATION SCOPE**

- Public Security Surveillance
- Intelligent Transportation System
- Connection of Sub-network for Surveillance Center
- High Way & Toll Station Surveillance
- High Quality Video Conference
- Industrial Closed Circuit Television Surveillance
- Coliseum using for TV-live ,audio transmission

### **FEATURES**

- Analog HD video 1080P (1920x1080) / 960P (1280 x 960) / 720P (1280 x 720) comply with AHD / HD-TVI / HD-CVI
- Automatic compatible PAL, NTSC and SECAM video system
- 10-bit digital code and non-compression type video transmission.
- Power supply and other parameter state indication, which can monitor the operation condition of system
- Support no-damage regenerative trunk of video
- Constant input optical power, and large dynamic range, no Electrical or Optical Adjustments Required.
- Special ASIC design.
- It is plug-and-play and supports hot-swap, convenient for fixing without modulation.
- Can be installed in 19 inch rack-mounted chassis (2U/4U).

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## Technical Specification

### VIDEO PARAMETERS:

Video input / output impedance	75 Ohm (imbalance)
Standard video input / output voltage	1.0Vp-p Type
Video voltage range	0.6-2.0 Vp-p Type
Differential gain(10%-90% APL)	<1% Type
Differential phase(10%-90% APL)	<± 1 Type
Signal-to-noise ratio	> 60Db (Weighted) (10Bit) > 70Db (Weighted) (10Bit)
Channel physical interface	BNC

### AUDIO PARAMETERS

Audio input/output impedance	600 Ohm(imbalance)
Audio maximum input/output voltage	2.0 Vp-p
Audio input/output level	0 dbm (typical value)
Frequency Response	10Hz~20kHz
Total harmonic distortion	< 0.05%
Signal-to-noise ratio	> 95Db ( weighted)
Channel physical interface	Terminal Blocks

### DATA PARAMETERS

Data format	Rs232、Rs422、Rs485
Data rate	0-300 kbps
Bit error rate	10 <sup>-9</sup>
Channel physical interface	Terminal Blocks

### OPTICAL PARAMETERS

Connector	FC/ST (optional)
Wavelength	1310nm & 1470nm ~ 1610nm
Fiber type	50/125u multi-mode,62.5/125u multi-mode, 9/125u single mode
Typical optical output power	- 8 ~ -3 Dbm
Typical receiver sensitivity	-25 Dbm
Optical interface	Simplex

### SWITCHING PARAMETERS

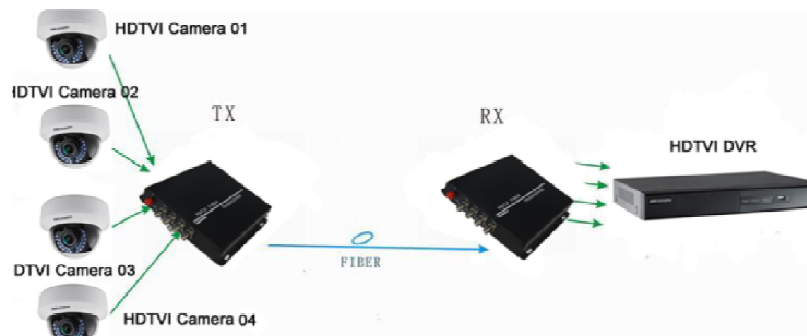
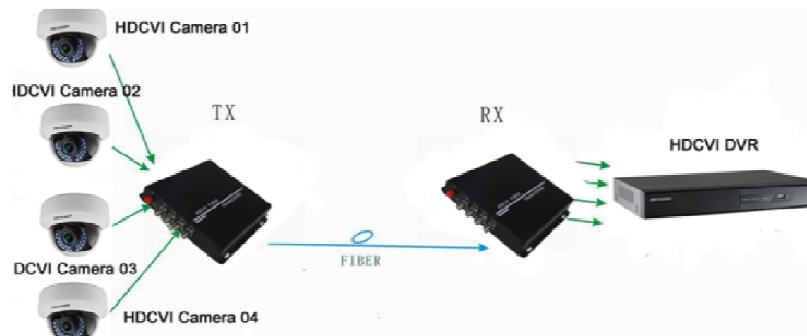
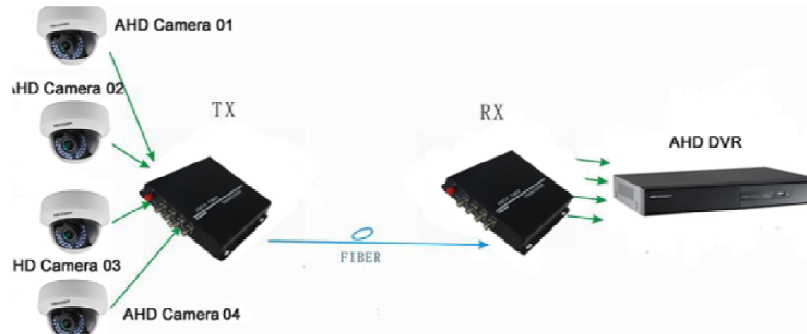
Physical interface	Terminal Blocks
Signal input	Alarm or switching value Input ,support TTL、Rs-232/422/485 or switches, buttons
Signal output	Alarm or switching value output ,support TTL Rs-232/422/485 or Contact Relay output.

### GENERAL PARAMETERS

Power supply	AC 110-220 V to DC 5V
Operating Temperature	-10℃~+
Relative humidity	0-95% ( no condensation)

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## APPLICATION DIAGRAMS



## INSTALLATION PROCEDURE

The video transmission systems series are preset for use with the data protocol RS-485. Simply connect the signal, power supply and fiber optic cables between the two units. There are indicator LEDs on the units for monitoring the real-time status of power and data. The following instructions describe the typical installation procedure and the function of the LED indicators located on each unit.

1. Connect the video source (camera) to the video input BNC connector on the transmitter unit using coaxial cable.
2. Connect the video output BNC connector on receiver unit to the video monitor using coaxial cable.
3. Connect the fiber optic cable between the transmitter and receiver.
4. Apply the power supply to both the transmitter and receiver.
5. When the power is applied, the yellow POWER LED will light, indicating the presence of operating power. The blue VIDEO LED and the blue DATA LED will give an indication as stated in the following page.
6. The system should now be operational.

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## SYSTEM TERMINAL BLOCK CONNECTIONS

The various input and output connections for our video digital optical as follows:

**Video input or output: BNC Connectors.**

**Data Input/Output Connector:**

**RS-485 2-wire**

Red Wire: Signal being transmitted or received (+) over fiber.

Blue Wire: Signal being transmitted or received (-) over fiber.

**RS-485 Connection**

**Camera site**

Connected the Red wire (485A) in the data cable from the transmitter to RS-485 (+) of the controlled unit (pan/tilt, dome), and connect the Blue wire (485B) to RS-485(-)

Of the controlled unit (pan/tilt, dome).

**Control site**

Similarly, connect the Red wire (485A) in the data cable on the receiver to RS-485(+)

Of the controlling unit (Keyboard Controller, Matrix, DVR), and connect the Blue wire (485B) to RS-485 (-) of the controlling unit (Keyboard Controller, Matrix, DVR).

**RS-232**

Green Wire: Signal being transmitted out over fiber (232R).

Yellow Wire: Signal being received in from fiber (232T).

Perplex Wire: Ground.

**RS-232 Connection**

**Camera Site**

Connect the Yellow wire (232T) in the data cable from the transmitter to RS-232 port of the controlled unit (pan/tilt, dome), and Purple wire (GND) is used for ground connection.

**Control Site**

Connect the Green wire (232R) in the data cable from the receiver to RS-232 port of the controlling unit (Keyboard Controller, Matrix, DVR), and the Purple wire (GND) Is used for ground connection.

**Indicator LEDs**

The stand-alone units have integral LEDs that are used to monitor the state of the unit. There are sixteen video LEDs, one power LED and one data LED on each unit. One, Labeled as "power (or PWR)", lights when the video input/output signals are detected. The other one, marked as "TD or RD", blink at the rate of the operating data.

**TRANSMITTER and RECEIVER:**

Power: ON: (GREEN) Indicates that correct power has been applied.

**Transmitter:**

Video: OFF: Indicates no video detected on input BNC connector  
(No Video present no input BNC)

On: (GREEN) indicates video detected on input BNC connector  
(Video present on input BNC)

Data: OFF: Indicates no data detected on the transmit data cable

Blinking: (GREEN) Indicates data transmitted at the rate of the operation data.

**Receiver:**

Video: OFF: Indicates no video present on output BNC  
(No Video present on output BNC)

On: (GREEN) indicates video detected on input BNC  
(Video present on input BNC)

Data: OFF: Indicates no data detected on the receive data cable

Blinking: (GREEN) Indicates data received at the rate of the operation data.