## 12G-SDI 4K UHD Video fiber optic Transmission System

Lightem Systems 12G-SDI 4K UHD Video fiber optic Transmission System can transmit one 11.88Gbps 12G-SDI UHD, 5940Mbps 6G-SDI UHD, 2970Mbps 3G-SD, 1485Mbps HD-SDI high definition video, or one 270Mbps SDI standard definition digital video or one DVB-ASI stream through one single mode fiber or multimode fiber. Due to the advanced digital fiber optic transmission and UHD-SDI 12Gbps technology, it is simple to set up, easy to operate, suitable application in TV station, digital TV, IPTV, mobile TV, mobile phone TV and other new media fields. The transmitter equipped with auto-cable equalization circuit, and cable driver circuit available at receiver. It also provides one 12D/6G/3G/HD/SD-SDI input, and one loop-through for local monitoring. The receiver output 2-channel parallel 12G/6G/3G/HD/SD-SDI video. Transmitter is equipped with auto-cable equalization circuit, and cable driver circuit available at receiver. Both at the transmitter and receiver, signal jitter elimination circuit available, to ensure high quality signal transmission over long distance fiber cable.

## FEATURES

- When signal input, with automatic cable equalization function, and when signal output, with driver function
- With re-clocking function at transmitter and receiver
- Perfect LED indicators design, very convenient to monitor transmitter and receiver work well or not
- PCB boards made with multilayer design, to ensure stable and reliable signal transmission and environment friendly
- All components, including connectors, are ordered from public-known manufacturers in the world, high stability and reliability ensurance
- Enclosure box material is made of aluminum, elegant appearance, and light weight
- Dual switching power supply design, wide voltage range, reliable long-term running
- A variety of installation options: 18-slot rack(3RU), 8-slot rack(2RU), particularly suitable for large volume optical transmission platform construction, and also available for 4-slot rack(1RU), 2-slot(1RU) rack and single-slot mini rack, fixed 19-inch 1RU box, mini small box

## SPECIFICATIONS

| Video Input | |
|---|---|
| Signal Standard | ST2082-1, ST2081-1, SMPTE424M, SMPTE292M, SMPTE259M, SMPTE297M, SMPTE305M, |
| | SMPTE310M, DVB-ASI |
| Channel | 1 plus 1 loop-through |
| Data Rate | 19.4Mbps to 11.88Gbps |
| Signal Level | >380mVp-p |
| Auto-Cable Equalization | >20m@11.88Gbps, (Belden 1694A cable) |
| | >50m@5940Mbps, (Belden 1694A cable) |
| | >100m@2970Mbps, (Belden 1694A cable) |
| | >200m@1.485Gbps, (Belden 1694A cable) |
| | >350m@270Mbps, (Belden 1694A cable) |
| Input Return Loss | >10dB@11.88Gbps |
| Impedance | 75Ω |
| Connector | BNC |
| Video Output | |
| Channel | 2 |
| Signal Level | 800mVp-p±10% |
| 12G-SDI Rise/Fall time | <40ps(11.88Gbps) |
| 6G-SDI Rise/Fall time | <66ps@5940Mbps |
| 3G-SDI Rise/Fall time | <135ps@2970Mbps |

# AUDIO VIDEO SYSTEM

## SPECIFICATIONS

| | |
|---|---|
| *HD-SDI Rise/Fall time* | <270ps@1485Mbps |
| *SDI Rise/Fall time* | <0.6ns@270Mbps |
| *12G-SDI Jitter* | <0.5UI |
| *6G-SDI Jitter* | <0.4UI |
| *3G-SDI Jitter* | <0.3UI |
| *HD-SDI Jitter* | <0.2UI(134ps)@100KHz |
| | <1.0UI(673ps)@10Hz |
| *SDI Jitter* | <0.2UI(740ps)@10Hz |
| | <0.2UI(740ps)@1KHz |
| *Impedance* | 75Ω |
| *Connector* | BNC |
| *Physical* | |
| *Dimensions (H X W X D): 19-inch 1RU* | 44×433×340(mm) |
| *Internal Power Supply* | 44×132.3×164(mm) |
| *External Power Supply* | 25×82.3×121.7(mm) |
| *Power supply* | 130-260VAC, 50/60Hz, or 2A/5V |
| *Power consumption* | <10W |
| *Operation temperature* | 0-50°C |
| *Relative humidity* | 0-95%, non-condensing |
| *LED status indicator* | Power, optical link, video activity |
| *Fiber optic link* | |
| *Fiber type* | Single mode |
| *Number of fiber* | 1 |
| *Wavelength* | 1310nm/1550nm |
| *Distance* | 0-20km, or 0-40km optional |
| *Connector* | FC/PC, or SC/PC |

## ORDERING INFORMATION

| P/N | Description |
|---|---|
| L4K-SD12-FC | 12G-SDI 4K UHD Video fiber optic Transmission System |