



### 3390 3G/HD/SD-SDI Series

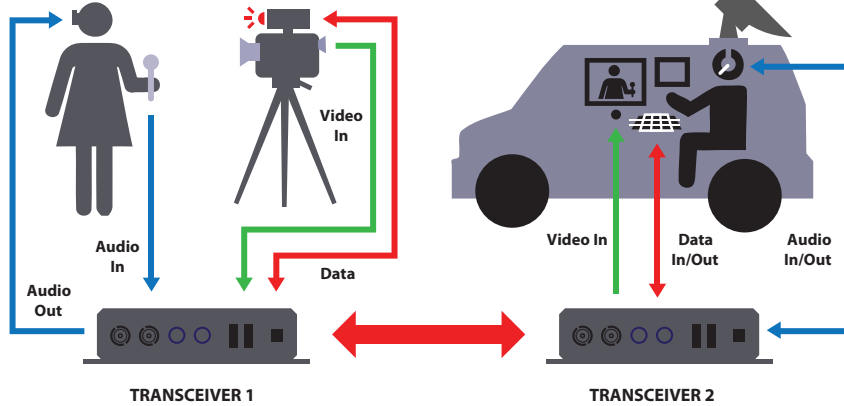
Broadcast quality 3G/HD/SD-SDI with two-way audio, data, Ethernet, and contact closure over one or two fibers in a compact box!

#### Ideal Applications:

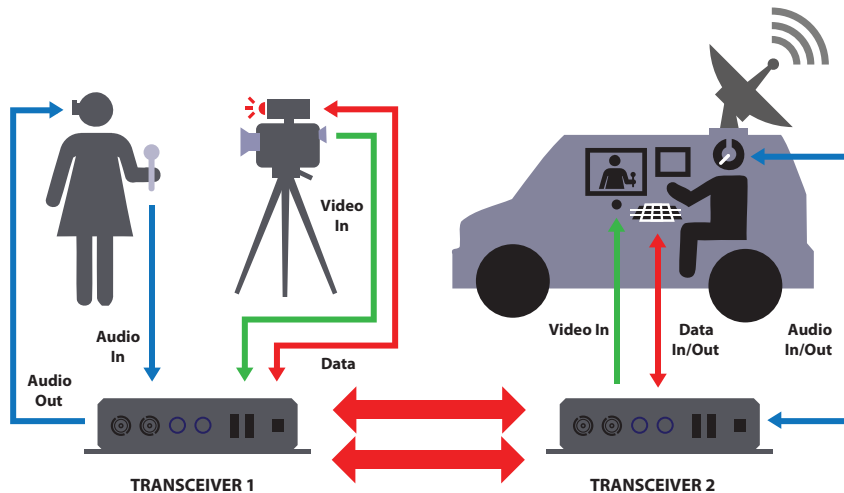
Broadcast or corporate studios, OB Vans, Point-of-View Cameras, Rental & Staging, auditoriums, stadiums and theaters, airport or transportation hubs, distance learning, surgical or medical imaging and more!



Signal	Channels	Direction
3G/HD/SD-SDI	1	→
Audio	2	↔
RS-Type Data	1	↔
10/100 Ethernet	1	↔
Contact Closure	1	↔



One-Way SDI with Bi-Directional Audio, Data, Ethernet, & Contact Closure on One Fiber



One Way SDI with Bi-Directional Audio, Data, Ethernet, & Contact Closure on Two Fibers

#### Features

3G/HD/SD-SDI signal transmission with two-way audio, data, 10/100Base-T Ethernet and contact closure.

One-fiber and two-fiber versions for single mode and multimode fiber types.

All channels are independent and available simultaneously.

SDI signal is equalized and re-clocked prior to fiber optic transmission.

SDI output is re-clocked after optical reception.

ASI signals also supported.

Compliant with all applicable SMPTE standards.

Wide operating temperature range: -10C to +50C.

Available in Box and Card versions.

ST or LC connectors available.

#### Sales



**CSI** Communications Specialties, Inc.

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## Fiberlink® 3390 Series General Specifications

### General Specifications:

Number of Fibers Required:	
3390/3391:	1
3392/3393:	2
Indicators:	Power, 3G/HD/SD data rate, Audio activity, RS-Data Activity Ethernet LEDs on RJ-45 Connector Alarm (card version only)
Box Version Dimensions:	6.5 W x 1.15 H x 8 L (inches) 165 W x 29 H x 203 L (mm)
Weight:	approx. 1 lb.; 0.45 kg
Slots in 6000A Card Cage:	2
Power:	9-24 volts, AC or DC 3390/91: 7.5 watts, 25.6 BTU/Hr 3392/93: 7.5 watts, 25.6 BTU/Hr
Operating Temperature:	-10° C to +50° C
MTBF:	27,000 Hours

### Serial Video BNC Input

Number of Inputs	1
Data Rate Range	19.4 Mbps to 2.97 Gbps
Supported Standards	SMPTE 259M, 292, 424M-2006, 305M, 310M, 344M, DVB-ASI
Re-clocked Data Rates	270 Mbps (SMPTE 259M, DVB-ASI-270), 1.485 Gbps (SMPTE 292), 2.97 Gbps (SMPTE 424M-2006)
Equalization	Automatic up to 100m of Belden 1694A at 3.0 Gbps, 200m at 1.485 Gbps and 350m at 270 Mbps
Return Loss	>10dB up to 2.97 Gbps

### Serial Video BNC Output

Number of Outputs	1
Signal Level	800mV ± 10%
DC Offset	0V ± 0.5V
Rise/Fall Time	< 135 ps at 2.97 Gbps per SMPTE 424M-2006; < 270 ps at 1.485 Gbps per SMPTE 292; 0.4 ns to 1.5 ns at 270 Mbps per SMPTE 259M
Overshoot	< 10% of amplitude
Timing Jitter	< 0.2 UI at 270 Mbps; < 1.0 UI at 1.485 Gbps; < 2.0 UI at 2.97 Gbps with color bar signal
Alignment Jitter	< 0.2 UI at 270 Mbps; < 0.2 UI at 1.485 Gbps; < 0.3 UI at 2.97 Gbps with color bar signal
Re-clocking	At 270 Mbps, 1.485 Gbps & 2.97 Gbps



**3390 3G/HD/SD-SDI with audio, Data, 10/100 Ethernet, contact closure.**

Fiberlink® 3390 Transceiver



Front Panel LEDs quickly reveal the 3390's Video & Data input status

Dip Switches allow for quick configuration of your data preferences

The 3391 Receiver Data LEDs quickly reveal which channels have data present

Available as a box or a card



Fiberlink® 3391 Transceiver

**The Fiberlink® 3390 Series is available in a card version that is compatible with the Fiberlink® 6000A Rackmountable Card Cage.**



**3390 3G/HD/SD-SDI with audio, Data,  
10/100 Ethernet, contact closure.**

## Accessories



### Fiberlink® 6656 Visible Light Source

The Fiberlink 6656 is a light-weight, hand-held tool used to quickly troubleshoot faults in the continuity of both single-mode and multimode fibers. High-intensity visible laser allows for visible fault location of breaks and microbends in both single-mode and multimode fibers



### Fiberlink® 6650 Optical Power Meter

The Fiberlink 6650 Optical Power Meter is a high accuracy, high resolution, microprocessor controlled optical power meter. 65 dB dynamic range; calibrated to measure 850, 1300, 1310 and 1550nm. Works with multimode and single mode fiber. Graphical LCD display with intuitive user interface with simple 2-key operation.



### Fiberlink® 6652/6654 Light Sources

The Fiberlink® Light Source offers a laser output at selectable wavelengths, allowing for convenient, on-site testing of fiber networks during construction and maintenance procedures.



### Fiberlink® 6658

The Fiberlink® Optical Length Meter Measures the length of both single mode and multimode fiber with accuracy of  $\pm 2.5$  meters. Generates a pulsed signal for use with fiber identifiers. Easy-to-read bright red 7-segment LED display. Comes equipped with industry preferred ST connectors.

## Audio Specifications

Number of Audio Channels	2, balanced or unbalanced, bi-directional
Bits per sample/ Sampling Rate	24 bits, 78 kHz
Audio Connector	Removable terminal block
Switches	<ul style="list-style-type: none"> <li>Select input termination</li> <li>Balanced or unbalanced input/output, selectable on a per-channel basis</li> </ul>
Frequency Response	+0/-0.5 dB, 20 Hz - 20 kHz
Maximum Audio Level	+10 dBu
Signal-to-Noise Ratio (A-weighted)	95 dB referenced full scale (balanced)
THD	0.002%, 20Hz - 20 kHz, full scale
Channel Phase Differential	$\pm 0.1^\circ$
Crosstalk	-100 dB (1 kHz)
Audio Noise Level	-85 dBm
System Gain	Unity Gain, $\pm 3\%$ , input: balanced 600 ohms, 50 ohms source impedance ; output: balanced into 600 ohms.
Input Impedance	600 Ohms terminated, >24K ohms unterminated
Output Impedance	50 Ohms nominal
Audio to Video Diff. Delay (skew)	<300 usec

## Ethernet Specifications:

Port:	10/100 Base-T, RJ-45 connector, Configured as MDI
Speed:	10 Mbps & 100 Mbps Ethernet, Switch Selectable

## Data Specifications:

Data Channels	1 Channel, Bi-Directional
Data Bandwidth	DC to 115 Kb/sec, max.
Control Format	Switch selectable RS-232, RS-422 & RS-485 (4 wire or 2 wire);
Protocols	NRZ, NRZI, RZ, Manchester, Bi-phase
Signal Connectors:	Removable terminal block

## Contact Closure Specifications

Contact Closure Input	Dry contact or TTL level referenced to GND
Contact Closure Output	Isolated reed relay contacts; 115 Volts AC; 50/60 Hz @ 0.2 A or 24 Volts DC @ 1 A
Contact Closure Connectors	Removeable terminal block

## Fiber Optic Output

Connector	LC or ST
Wavelengths Used 2-Fibers:	1310nm, 1490nm, 1550nm
Wavelengths Used 1-Fiber:	1510nm, 1530nm, 1550nm, 1570nm
Emmitter Type	Laser
Output Power ( <i>nominal</i> )	-3.0 dBm
SDI Re-clocking	At 270 Mbps, 1.485 Gbps & 2.97 Gbps

## Fiber Optic Input

Connector	LC or ST
Wavelength	1100 - 1620 nm
Minimum Input Sensitivity	-17 dBm at 2.97 Gbps -19 dBm at 1.485 Gbps -19 dBm at 270 Mbps
Maximum Input Power	0 dBm

## Operating Loss Budget & Maximum Usable Distance\*

Fiber Type	Loss(dB)	Data Rate	Distance
Single Mode	0-14	2.97 Gbps	30 km
	0-16	1.485 Gbps	40 km
	0-16	270 Mbps	40 km
Multimode (62.5u)	0-14	2.97 Gbps	0.8 km
	0-16	1.485 Gbps	1 km
	0-16	270 Mbps	2.5 km
Multimode (50u)	0-14	2.97 Gbps	1 km
	0-16	1.485 Gbps	1.3 km
	0-16	270 Mbps	3 km

\*Distance specifications are approximate, based upon connecting a 3390 Transceiver to a 3391 Transceiver, and are not guaranteed. CSI cannot estimate or guarantee operating loss budgets when the 3390 Series is used with other, non-Fiberlink devices. Operating loss budget must not be exceeded.

## Ordering Information

Part Number	Description	Fiber Cores
3390-xyz	Transmitter	1
3391-xyz	Receiver	1
3392-xyz	Transmitter	2
3393-xyz	Receiver	2
PDPS-1-pp	Power Supply	

### Part Number Suffix Codes:

<b>x:</b> B	Box Version	<b>y:</b> 3	Multimode	<b>z:</b> L	LC Connector
C	Card Version	7	Single Mode	S	ST Connector

### Power Supply Suffix Codes (pp) for AC Line Cord:

NA - North America	AU - Australia	EU - Europe
JP - Japan	UK - United Kingdom	



3390 3G/HD/SD-SDI with audio, Data,  
10/100 Ethernet, contact closure.



Learn more about the  
industry's largest selection  
of fiber optic transmission  
products at  
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warranty on parts and labor.  
See website for terms and conditions.

## Sales



**CSI Communications  
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