

# Retro Linx Series - SIBT M3T-25 and SIBR M3T-25

VSB/AM Transmitter/Receiver - 5 Channels



The SIBT-M3T-25 fiber optic transmitter along with the SIBR-M3T-25 receiver provides a high-quality system for transporting up to five TV channels over a multimode optical fiber. With an RF bandwidth from 5 MHz to 250 MHz, these units can transmit sub-band, low-band, FM, mid-band or high-band channels. Optimum performance is achieved when the channel (frequency) plan is within a single octave of bandwidth. The system can transmit signals from a VCR, camcorder or cable television feed over a distance of 3 km on one multimode fiber. Tri-color LED's are used to indicate optimum RF input level on the transmitters and optical input status on the receivers. Green indicates an acceptable level, red is too high and amber is too low. These products are recommended for use with multimode fibers only and require a minimum fiber bandwidth of 250 MHz.

## ○ Features & Benefits

- Low Cost
- 5-250 MHz RF bandwidth
- Up to Five Channels Over a Multimode Fiber
- Distance to 3 km

## ○ Specifications

### LINK @ 25 °C, Multi-mode Fiber

Bandwidth: 5-250 MHz  
Operating Wavelength: 1310 nm  
CATV Channels: 5  
CNR (-7 dBm Input, 5 Ch. Load): 47 dB  
CSO (5 Ch. Load): -71 dB  
CTB (5 Ch. Load): -55 dB  
Input/Output Impedance: 75 Ohms  
Operating Temperature Range: +10 to +40 °C  
Weight: 6 oz, 170 g (per unit)  
Physical Dimensions  
SIBT (WxHxL): 3.75 x 2.95 x 1.12 in  
146 x 74 x 28 mm

### Transmitters

RF Input Level (5 Channel): +6.0 dBmV  
Optical Output: -7 dBm  
Power Dissipation: 1.8 W

### Receiver

Optical Input Range: -16 to -6 dBm  
Power Dissipation: 1.8 W

### Connectors

Optical Output: ST™  
RF Input: "F"  
Power Supply  
SIBT/SIBR: ACCS-PS-90  
(BT Stock No. 7417)

## ○ Ordering Information

Model	Stock No.	Description
SIBT-M3T-25	7422 S	Fiber Optic Transmitter, 5 Channel 5-250 MHz, Multimode, 1310 nm, ST Connector, -7 dBm Optical
SIBR-M3T-25	7432 S	Fiber Optic Receiver, 5 Channel 5-250 MHz, Multimode, 1310 nm, ST Connector

# VSB/AM Transmitter/Receiver - 10 Channels

Retro Linx Series- SIBT S3A-210 and SIBR S3A-210



## ○ Features & Benefits

- Low Cost
- Up To 10 Channels on One Single-mode Fiber
- 5-250 MHz RF bandwidth
- 1310nm Operation To 10 KM

## ○ Specifications

The SIBT-S3A-210 fiber optic transmitter along with the SIBR-S4A-210 receiver provides a high-quality system for transporting up to ten TV channels over a single mode optical fiber. With an RF bandwidth from 5 MHz to 250 MHz, these units can transmit sub-band, low-band, FM, mid-band or high-band channels. Optimum performance is achieved when the channel (frequency) plan is within a single octave of bandwidth. The system can transmit signals from a VCR, camcorder or cable television feed over a distance of 10 km on one single mode fiber. Tri-color LED's are used to indicate optimum RF input level on the transmitters and optical input status on the receivers. Green indicates an acceptable level, red is too high and amber is too low. These products are recommended for use with single mode fibers only and require a minimum fiber bandwidth of 500 MHz.

### LINK @ 25 °C, Single-mode Fiber

Bandwidth: 5-250 MHz  
Operating Wavelength: 1310 nm  
CATV Channels: 10  
CNR (+1 dBm Input, 10 Ch. Load): 52 dB  
CSO (10 Ch. Load): -68 dB  
CTB (10 Ch. Load): -70 dB  
Input/Output Impedance: 75 Ohms  
Operating Temperature Range: +10 to +40 °C  
Weight: 6 oz, 170 g (per unit)  
Physical Dimensions  
(WxHxL): 5.75 x 2.95 x 1.12 in  
146 x 74 x 28 mm

### Transmitters

RF Input Level (10 Channel): +7.0 dBmV  
Optical Output: +3 DBM  
Power Dissipation: 3.6 W

### Receiver

Optical Input Range: -9 to +4 dBm  
Power Dissipation: 2.0 W

### Connectors

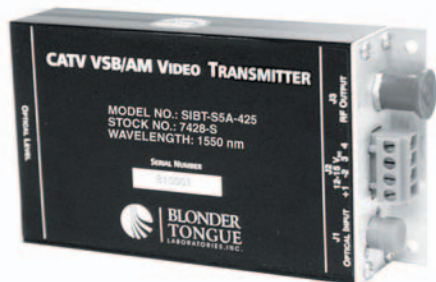
Optical Output: FC/APC  
RF Input: "F"  
Power Supply  
SIBT/SIBR: ACCS-PS-170  
(BT Stock No. 7419)

## ○ Ordering Information

Model	Stock No.	Description
SIBT-S3A-210	7423 S	Fiber Optic Transmitter, 10 Channel 5-250 MHz, Single-mode, 1310 nm, FC/APC Connector, 3 dBm Output
SIBR-S4A-210	7433 S	Fiber Optic Receiver, 10 Channel 5-250 MHz, Single-mode, 1310 nm, FC/APC Connector

# VSB/AM Transmitter/Receiver - 25 Channels

Retro Linx Series - SIBT S5A-425 and SIBR S4A-425



## ○ Features & Benefits

- Up to Twenty Five Channels on One Single Mode Fiber
- Supports Transmission of Sub-band, Low-band, FM, Mid-band and High-band Channels
- Utilizes Inputs from Standard CATV VSB/AM Modulators, Processors, etc.
- 1550 nm Operation to 50 km
- Tri-color LED For Optimum Input Indication

The SIBT-S5A-425 fiber optic transmitter along with the SIBR-S4A-425 receiver provide a high-quality system for transporting up to twenty five TV channels over a single mode optical fiber. With an RF bandwidth from 5 MHz to 350 MHz, these units can transmit sub-band, low-band, FM, mid-band, high-band or super-band channels. Optimum performance is achieved when the channel (frequency) plan is within a single octave of bandwidth. A possible channel plan for the twenty five channel link is TV channels G through AA (155 to 305 MHz). The system can transmit TV channels over a distance of 50 km at 1550nm on one single mode fiber. Tri-color LED's are used to indicate optimum RF input level on the transmitters and optical input status on the receivers. Green indicates an acceptable level, red is too high and amber is too low. These products are recommended for use with single mode fibers only and require a minimum fiber bandwidth of 500 MHz.

## ○ Specifications

### LINK @ 25 °C, Single-mode Fiber

Bandwidth: 5-350 MHz  
Operating Wavelength: 1550 nm  
CATV Channels: 25  
CNR (+1 dBm Input, 25 Ch. Load): 52 dB  
CSO (25 Ch. Load): -68 dB  
CTB (25 Ch. Load): -70 dB  
Input/Output Impedance: 75 Ohms  
Operating Temperature Range: +10 to +40 °C  
Weight: 6 oz, 170 g (per unit)  
Physical Dimensions  
SIBR (WxHxL): 5.75 x 2.95 x 1.12 in  
146 x 74 x 28 mm

### Transmitters

RF Input Level (25 Channel): +7.5 dBmV  
Optical Output: +4 dBm  
Power Dissipation: 3.6 W

### Receiver

Optical Input Range: -9 to +4.5 dBm  
Power Dissipation: 2.0 W

### Connectors

Optical Output: FC/APC  
RF Input: "F"  
Power Supply  
SIBT/SIBR: ACCS-PS-170  
(BT Stock No. 7419)

## ○ Ordering Information

Model	Stock No.	Description
SIBT-S5A-425	7428 S	Fiber Optic Transmitter, 25 Channel 5-350 MHz, Single-mode, 1550 nm, FC/APC Connector, 4 dBm Output
SIBR-S4A-425	7438 S	Fiber Optic Receiver, 25 Channel 5-350 MHz, Single-mode, 1550 nm, FC/APC Connector

# FM Video/Audio Transmitters/Receivers

## 850 nm/1310 1550 nm

Retro Linx Series - SIAT-31 Series and SIAR-31 Series



Fiber

The SIAT-M3T/M8T/S3T/S5T transmitters, used with the SIAR-M8R/U4T-3 receivers, provide a high-quality system for transferring baseband video and stereo audio signals with complete EMI immunity via fiber optics. The transmitters accept one video and two unbalanced (600  $\Omega$  or 10 k $\Omega$ ) audio inputs and combine them for transmission over a single optical fiber. The receivers accept the composite optical signal and convert it to a video and two unbalanced (600  $\Omega$  or 10 k $\Omega$ ) audio outputs. This FM video/stereo audio fiber optic link offers near studio-quality performance in low-to-moderate optical loss applications.

Single mode and multimode fiber models are available. Because of the FM technique employed, no user adjustments are required over the full optical loss range. While optimum performance is achieved with an RS-250 C video input and 1-Volt RMS audio inputs, the output level tracks the input level over the full optical loss range. Used with a good quality optical fiber (0.5 dB/km @ 1310nm & 1000 MHz/km), the multimode version will function over more than 15 km of fiber, and the single mode version will function over more than 70 km.

### ○ Features & Benefits

- FM Video/Unbalanced Stereo Audio Transmission Over Optical Fiber
- Meets and or exceeds RS-250C Medium Haul Specifications
- Single-mode or Multimode Versions Available
- Audio Bandwidth 50 Hz-20 KHz
- 0-15 dB Optical Loss Range with Multimode Fiber Using 1310nm Optics
- 0-23 dB Optical Loss Range with Single-Mode Fiber Using 1310nm or 1550nm

### ○ Specifications

#### Typical ALL MODELS (Multimode & Single Mode)

- Power Supply Voltage: +12 to +15 VDC
- Power Supply Current: 500 mA
- Required Fiber Bandwidth: 100 MHz
- Video Bandwidth: 5 MHz
- Video Low Frequency Response: 2 Hz
- FM Carrier Frequency: 60 MHz
- Video Input/Output Impedance: 75 Ohms
- Differential Gain Error: 1.7 %
- Differential Phase Error: 1.3 °
- Input Signal Range: 1.0 Vsync-white
- Video Channel Gain: 1.0 V/V
- Audio Bandwidth (+1/-3 dB): 50 to 20,000 Hz
- Audio Input Impedance: 600 Ohms/10K  $\Omega$  Switchable
- Audio Distortion: 1.5 %
- Audio Channel Amplitude Matching: -1 to +1 dB
- Audio Channel Crosstalk: -55 dB
- Video I/O Levels: 1.0 V P-P
- Audio I/O Levels: 1.0 V rms
- Output I/O Levels: Input Level  $\pm$ 10 %
- Minimum MTBF (Tx): 0.85 Million Hrs, 89 Yrs
- Minimum MTBF (Rx): 0.35 Million Hrs, 40 Yrs

#### Environmental And Physical Characteristics

- Operating Temperature Range: -20 to +70 °C
- Storage Temperature Range: -20 to +70 °C
- Humidity: 0 - 95 %
- Weight: 10 oz
- Physical Dimensions:  
8.45 X 2.95 X 1.12 in,  
(215 X 75 X 28 mm)

#### Connectors

- Optical Output: ST™
- Video Input: BNC Female
- Audio Input: RCA Female
- Power Supply  
SIAT/SIAR: ACCS-PS-200  
(BT Stock No. 7418)  
MIAT/MIAR:  
MIPS-12C (BT Stock No. 7722C)  
and MIRC-12V (BT Stock No. 7715)

#### MM 850nm

- Optical Loss Range: 0 to 12 dB
- Optical Output Power: -12 to 12.0 dBm
- S/N (Rcvr Input = -19.5 dBm): 64 dB
- S/N (Rcvr Input = -23.5 dBm): 58 dB
- S/N (Rcvr Input = -25.0 dBm): 53 dB

#### MM 1310nm

- Optical Loss Range: 0 to 15 dB
- Optical Output Power: -15.0 dBm
- S/N (Rcvr Input = -27 dBm): 64 dB
- S/N (Rcvr Input = -30 dBm): 58 dB
- S/N (Rcvr Input = -31 dBm): 53 dB

#### SM 1310nm

- Operating Wavelength: 1310 nm
- Optical Loss Range: 0 to 23 dB
- Optical Output Power: -6.0 dBm
- S/N (Rcvr Input = -27 dBm): 62 dB
- S/N (Rcvr Input = -30 dBm): 58 dB
- S/N (Rcvr Input = -31 dBm): 51 dB

### ○ Ordering Information

Model	Stock No.	Description
SIAT-S3T-31	7463 S	Fiber Optic Transmitter, Video/Audio/Audio Single-mode, 1310 nm, ST Connector, 50 +km
SIAR-U8T-31	7471 S	Fiber Optic Receiver, Video/Audio/Audio Multimode, 850 nm, ST Connector
SIAT-M3T-31	7462 S	Fiber Optic Transmitter, Video/Audio/Audio Multimode, 1310 nm, ST Connector, 15 +km
SIAT-M8T-31	7461 S	Fiber Optic Transmitter, Video/Audio/Audio Multimode, 850 nm, ST Connector, 1.5 km
SIAR-U4T-31	7472 S	Fiber Optic Receiver, Video/Audio/Audio Single-mode or Multimode, 1310/1550 nm, ST Connector