

ANTEC Laser Link™ II Optical Transmitters

The reliability standard in broadband fiber transmission.



- Family of nine transmitters provides design flexibility and superior system performance options
- 15 dBmV RF input levels
- Flexible primary and redundant powering options
- Capable of transmitting any combination of analog video and compressed digital signals in a 50-750 MHz spectrum
- Five low power transmitters for cost effective narrowcasted service provision
- Backwards compatible with installed base of Laser Link products

ANTEC

Network Technologies

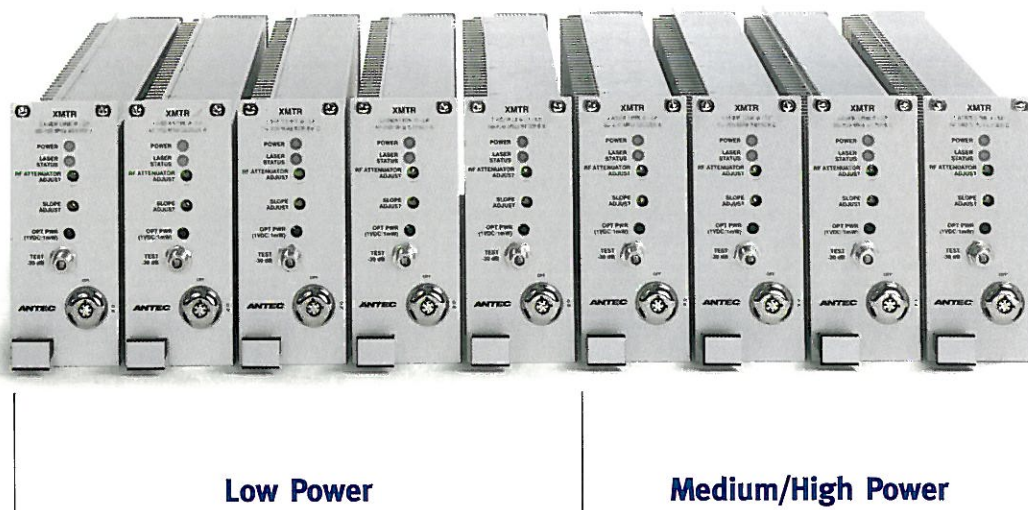
ANTEC Laser Link™ II Optical Transmitters

ANTEC's new Laser Link transmitter offering is tiered to provide consistent carrier-to-noise and distortion performance over varied loss budgets. This family of nine transmitters allows the end-user cost-effective options for all evolving HFC architectures.

Five low cost, low power transmitters and four medium and high power options are now available with 15 dBmV RF input levels. This new product

feature decreases reliance on RF pre-amplification thereby decreasing transmitter cost while enhancing platform density and reliability.

The new Laser Link transmitters are supported by ANTEC's existing Laser Link II shelf, offering operators backwards compatibility options unavailable elsewhere. Flexible primary and redundant powering options are currently available.



Specifications:

	LLT LP-A7	LLT LP-B7	LLT LP-C7	LLT LP-D7	LLT LP-E7	LLT MP-F7	LLT MP-G7	LLT MP-H7	LLT HP-I7
Part Number	251138	251139	251140	251141	251142	251345	251143	251144	251145
Optical									
Optical Power (max)	4-5 dBm	7-8 dBm	3-4 dBm	5-6 dBm	7-8 dBm	7-9 dBm	9.5-11 dBm	10.5-12 dBm	11-13 dBm
Total Optical Loss (dB)	3 dB	6 dB	2 dB	4 dB	6 dB	8 dB	9 dB	10 dB	12 dB
Fiber Length	5 km	15 km	2 km	5 km	10 km	20 km	23 km	25 km	30 km
Carrier-to-Noise	50 dB	52 dB	54 dB	54 dB	54 dB	51 dB	52 dB	52.5 dB	51.5 dB
Composite Second Order	-63 dBc	-62 dBc	-63 dBc	-63 dBc	-63 dBc	-62 dBc	-62 dBc	-62 dBc	-62 dBc
Composite Triple Beat	-67 dBc	-65 dBc	-67 dBc	-67 dBc	-67 dBc	-67 dBc	-67 dBc	-67 dBc	-67 dBc
Optical connector	SC/UPC								
Wavelength	1310 nm								
RF Input/Output									
Impedance	75 ohms								
Return Loss (45-550/550-750 MHz)	17/15 dB	17/15 dB	17/15 dB	17/15 dB	17/15 dB	16 dB	16 dB	16 dB	16 dB
Input Level	15 dBmV/ch.								
Frequency response	50-750 MHz								
Ripple (peak to valley) 50-750 MHz	±.75 dB								
Test Point Attenuation	30 ±1.0 dB								
Power									
Supply Voltage	24 VDC								
LLII Shelf Input Power	90-130/180-260 VAC or -48 VDC								
Physical									
Operating Temperature	0-50° C ¹								
Relative Humidity (min-max)	15-95% non-condensing								
Mounting	LLII Shelf								
Dimensions (HxWxL)	5.25x2.17x13.5"								

Note1: Forced air convection cooling may be required.

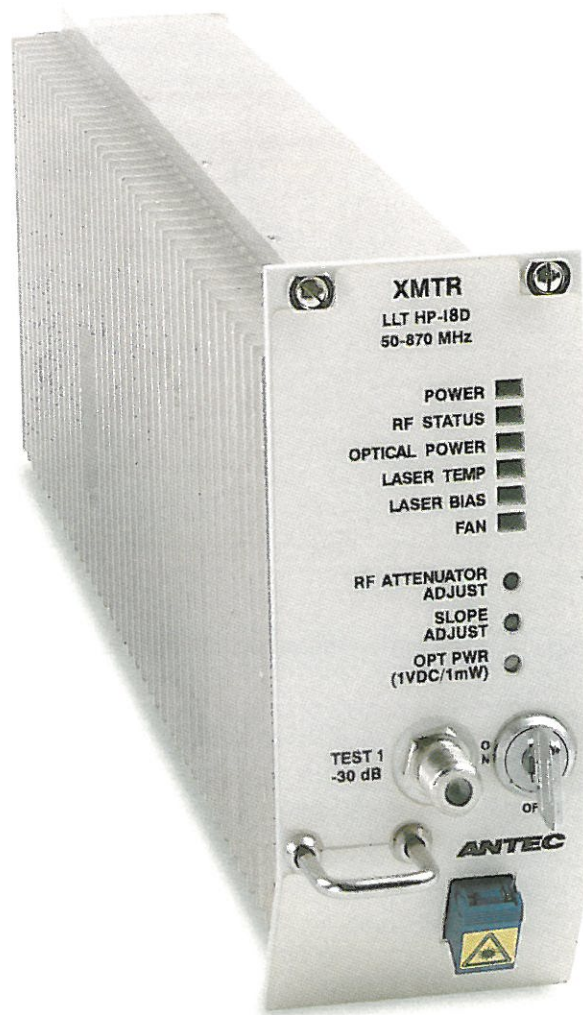
Note2: In an effort to continually improve product performance, specifications subject to change without notice.

ANTEC Laser Link™ II Optical Transmitters

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ANTEC Laser Link® Optical Transmitters

The reliability standard in broadband fiber transmission.



- Series of transmitters provides design flexibility and superior system performance options
- Full bandwidth broadcast and narrowcast RF input ports simplify headend combining networks
- Unsurpassed narrowcast to broadcast isolation alleviates external filter requirements
- Flexible primary and redundant powering options
- Capable of transmitting any combination of analog video and compressed digital signals in a 45-870 MHz spectrum
- Five low power transmitter options for cost effective narrowcasted service provision
- Backwards compatible with installed base of Laser Link products
- Non-proprietary network management interface

Dual Input 750 MHz Specifications:

	LLT LP-A7D	LLT LP-B7D	LLT LP-C7D	LLT LP-D7D	LLT LP-E7D	LLT MP-F7D	LLT MP-G7D	LLT MP-H7D	LLT HP-I7D	LLT HP-J7D
Part Number	252423	252424	252425	252426	252427	252428	252429	252430	252431	252432
Optical										
Optical Power (max)	4-5 dBm	7-8 dBm	3-4 dBm	5-6 dBm	7-8 dBm	7-9 dBm	9.5-11 dBm	10.5-12 dBm	11-13 dBm	12-14 dBm
Total Optical Loss (dB)	3 dB	6 dB	2 dB	4 dB	6 dB	8 dB	9 dB	10 dB	12 dB	13 dB
Fiber Length	5 km	15 km	2 km	5 km	10 km	20 km	23 km	25 km	30 km	32.5 km
Carrier-to-Noise*	50 dB	52 dB	54 dB	54 dB	54 dB	51 dB	52 dB	52.5 dB	51.5 dB	51.5 dB
Composite Second Order*	-63 dBc	-62 dBc	-63 dBc	-63 dBc	-63 dBc	-62 dBc	-62 dBc	-62 dBc	-62 dBc	-62 dBc
Composite Triple Beat*	-67 dBc	-65 dBc	-67 dBc	-67 dBc	-67 dBc	-67 dBc	-67 dBc	-67 dBc	-67 dBc	-67 dBc
Optical connector	SC/UPC (SC/APC option available)**									
Wavelength	1310 nm									
RF Input/Output										
Impedance	75 ohms									
Return Loss (45-550/550-750 MHz)	16/14 dB	16/14 dB	16/14 dB	16/14 dB	16/14 dB	16/14 dB	16/14 dB	16/14 dB	16/14 dB	16/14 dB
Input Level (Broadcast)	15 dBmV/ch.									
Input Level (Narrowcast)	42 dBmV/ch. Referenced to analog video levels									
Frequency response	50-750 MHz									
Isolation: Narrowcast to Broadcast	50 dB min., 55 dB typical referenced to analog video levels									
Ripple (peak to valley) 50-750 MHz	±.75 dB									
Test Point Attenuation	30 ±1.0 dB									
Power										
Supply Voltage	24 VDC									
Power Consumption	1.4/0.75 Amps Max/Typ									
Physical										
Operating Temperature	0-50 C									
Relative Humidity (min-max)	15-95% non-condensing									
Mounting	LL Mainframe									
Dimensions (H x W x L)	5.25 x 2.17 x 13.5"									

*Performance characterized for 79 NTSC CW channels.

**Contact customer service for SC/APC options.

Specifications subject to change without notice.

Dual Input 870 MHz Specifications:

	LLT LP-A8	LLT LP-B8	LLT LP-C8	LLT LP-D8	LLT LP-E8	LLT MP-F8	LLT MP-G8	LLT MP-H8	LLT HP-I8
Part Number	252433	252434	252435	252436	252437	252438	252439	252440	252441
Optical									
Optical Power (max)	4-5 dBm	7-8 dBm	3-4 dBm	5-6 dBm	7-8 dBm	7-9 dBm	9.5-11 dBm	10.5-12 dBm	11-13 dBm
Total Optical Loss (dB)	3 dB	6 dB	2 dB	4 dB	6 dB	8 dB	9 dB	10 dB	12 dB
Fiber Length	5 km	15 km	2 km	5 km	10 km	20 km	23 km	25 km	30 km
Carrier-to-Noise*	48.5 dB	50.5 dB	52.5 dB	52.5 dB	52.5 dB	49.5 dB	50.5 dB	51 dB	50 dB
Composite Second Order*	-61 dBc	-60 dBc	-61 dBc	-61 dBc	-61 dBc	-60 dBc	-60 dBc	-60 dBc	-60 dBc
Composite Triple Beat*	-66 dBc	-64 dBc	-66 dBc	-66 dBc	-66 dBc	-66 dBc	-66 dBc	-66 dBc	-66 dBc
Optical connector	SC/UPC (SC/APC option available)**								
Wavelength	1310 nm								
RF Input/Output									
Impedance	75 ohms								
Return Loss (45-550/550-870 MHz)	16/14 dB	16/14 dB	16/14 dB	16/14 dB	16/14 dB	16/14 dB	16/14 dB	16/14 dB	16/14 dB
Input Level (Broadcast)	13 dBmV/ch.								
Input Level (Narrowcast)	42 dBmV/ch. Referenced to analog video levels								
Frequency response	45-870 MHz								
Isolation: Narrowcast to Broadcast	50 dB min., 55 dB typical Referenced to analog video levels								
Ripple (peak to valley) 45-870 MHz	±.75 dB								
Test Point Attenuation	30 ±1.0 dB								
Power									
Supply Voltage	24 VDC								
Power Consumption	1.4/0.75 Amps Max/Typ								
Physical									
Operating Temperature	0-50 C								
Relative Humidity (min-max)	15-95% non-condensing								
Mounting	LL Mainframe								
Dimensions (H x W x L)	5.25 x 2.17 x 13.5"								

*Performance characterized for 110 NTSC CW channels.

**Contact customer service for SC/APC options.

Specifications subject to change without notice.

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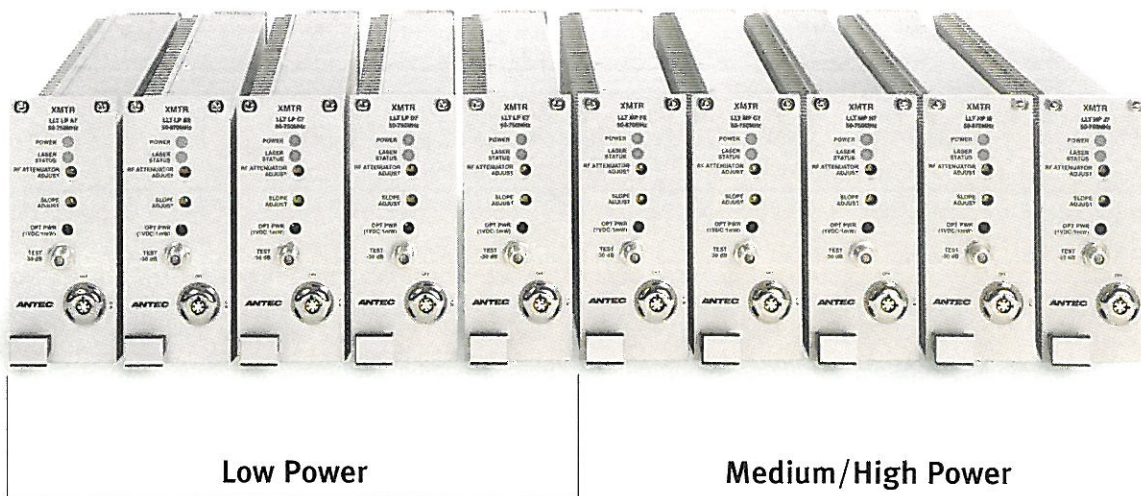
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Five low cost, low power transmitters and five medium and high power options are now available with dual RF inputs for broadcast/narrowcast transmission. Both broadcast and narrowcast inputs will support analog video signals across the full frequency range. Any applications requiring a combination of analog

and digital signal inputs are also readily accomplished.

Unsurpassed narrowcast to broadcast isolation alleviates requirements for external filters, thereby simplifying HE combining networks.

Laser Link transmitters are supported by ANTEC's existing Laser Link II Mainframe, offering operators backwards compatibility options unavailable elsewhere. Flexible primary and redundant powering options are currently available.



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