

Laser Link® Ancillary Modules

Description

The Laser Link® optical network is an advanced transmission system designed to optimize network architectures and increase reliability, scalability, and cost effectiveness. Ancillary modules such as the Dual Amplifier and RF Switch support the main optical transmission modules of the Laser Link network. The modules are designed for easy insertion, setup, and administration.

Ancillary Modules

The Laser Link Ancillary Modules include the following:

- 870 MHz Dual Amplifier, LLDA
- RF Switch, LLRS



LLDA Dual Amplifier



LLRS RF Switch



Laser Link® 870 MHz Dual Amplifier (LLDA)

Description

The Laser Link® Dual Amplifier provides an RF amplification function in a dual output Laser Link module. It may be utilized to feed Laser Link Transmitters directly or in RF combining networks for additional gain requirements.

Benefits

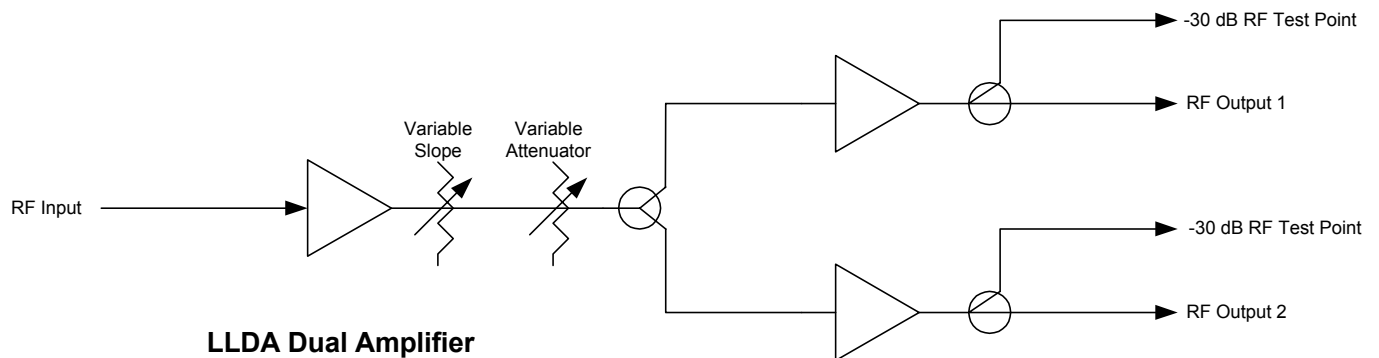
- Efficient use of space
- Easy installation
- Easy set up
- Flexible headend solution
- Remote monitoring

Features

- One amplifier is capable of driving up to 64 1310 nm transmitters
- Easily accessible test points
- Front panel gain and slope controls
- Front panel power LED
- Two power doubler driven outputs
- 50-870 MHz passband
- Redundant powering options available
- Network Management (status monitoring) ready



Block Diagram



Laser Link Ancillary Modules



Laser Link 870 MHz Dual Amplifier (LLDA)

Specifications

Description	Units		
Passband	MHz	50-870	
Frequency Response	dB	±0.75	
Full Gain (Min.)	dB	22	
Noise Figure (50 MHz)	dB	7.5	
Noise Figure (550 MHz)	dB	8	
Noise Figure (870 MHz)	dB	10	
Return Loss (50-550 MHz)	dB	16	
Return Loss (550-870 MHz)	dB	14	
Gain Control Range	dB	8	
Slope Control Range	dB	0-6	
Test Point Attenuation	dB	-30 ±1	
		79 Ch. NTSC	110 Ch. NTSC
Reference Output Level	dBmV/Channel	35	33
Composite Triple Beat ¹	dBc	-80	-75
Composite Second Order ¹	dBc	-70	-66
Cross Modulation ¹	dBc	-75	-70
Power			
Supply Voltage	V dc	2.4	
Supply Current	mA	600	
Power Consumption	W	14.4	
Physical			
Operating Temperature	°F (°C)	32-122 (0-50)	
Relative Humidity (Min.-Max.)	%	15-95% (Non condensing)	
Mounting		Laser Link Mainframe	
Dimensions (H x W x D)	in. (cm)	5.25 x 2.17 x 13.5 (13.3 x 5.5 x 34.3)	
Weight	lbs. (kg)	3.25 (1.47)	

Note:

1. Performance with specified channel loading at reference output levels

Ordering Information

Description	Part Number
Amplifier, Laser Link Mainframe Mounted, 50-870 MHz Dual Output, Full-width Module	252953

Laser Link[®] RF Switch (LLRS)

Description

The Laser Link[®] RF Switch protects RF transmission paths by switching to a redundant input in the event of a primary path failure. Switch position is determined by an input TTL voltage or by the front panel membrane push button.

The switch is designed to operate in conjunction with other Laser Link devices that provide the state determining logic voltages. Each switch device is housed in a half-width module, allowing for up to 14 switches to be housed the Laser Link Mainframe, or four switches in the Laser Link Mini-mainframe.

Benefits

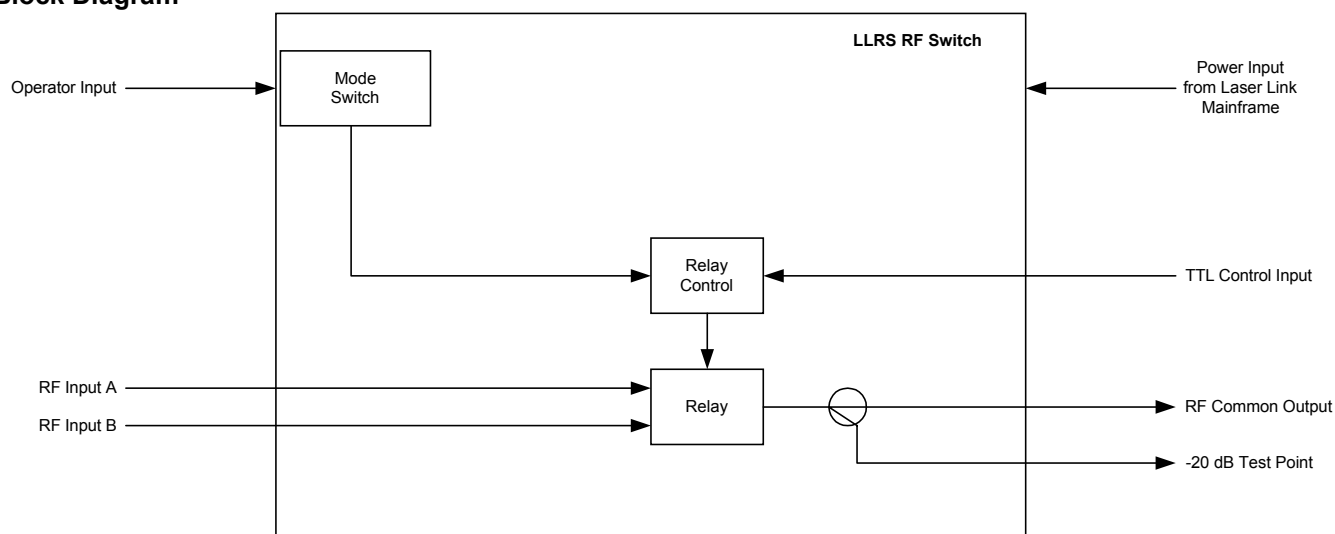
- Improves system reliability
- Up to 14 half-width modules may be housed in a 5 RU space
- Front panel LEDs indicate switch position
- Accepts switch state determining logic from other Laser Link modules

Features

- Compact housing, half-width module
- Front panel membrane switch, determines switch position
- Front panel status indicators
- Output signal test point
- Redundant power option available
- Network Management (status monitoring) ready



Block Diagram



Laser Link Ancillary Modules



Laser Link RF Switch (LLRS)

Specifications

RF	Units	LLRS RF Switch
Passband	MHz	5-1000
<u>Insertion Loss</u>	dB	
5-200 MHz		1.1
5-550 MHz		1.4
5-750 MHz		1.8
5-870 MHz		2.0
5-1000 MHz		2.5
Frequency Response	dB	±0.5
<u>Tilt</u>	dB	
5-200 MHz		0.4
5-550 MHz		0.9
5-750 MHz		1.3
5-870 MHz		1.5
5-1000 MHz		2.0
Impedance	ohms	75
<u>Primary Port Return Loss</u> (minimum)	dB	
5-860 MHz		18
860-1000 MHz		14
<u>Secondary Port Return Loss</u> (minimum)	dB	
5-860 MHz		16
860-1000 MHz		14
<u>Port-to-Port Isolation</u> ¹	dB	
5-600 MHz		51
600-750 MHz		45
750-870 MHz		42
870-1000 MHz		39
Switching Time	msec	10
Test Point	dB	-20 ±1
Power		
Supply Voltage	V dc	24
Supply Current	mA	80
Power Consumption	(W)	1.9
Physical		
Operating Temperature	°F (°C)	32-122 (0-50)
Relative Humidity (Min.-Max.) (Non condensing)	%	5-95%
Mounting		Laser Link Mainframe
Dimensions (H x W x D)	in. (cm)	5.25 x 1.05 x 13.5 (13.3 x 2.7 x 34.3)

Note:

1. Isolation between any two unconnected ports with third port terminated

Laser Link Ancillary Modules



Laser Link RF Switch (LLRS)

Ordering Information

Description	Part Number
RF Switch, Half-width Module	253531

Laser Link products include some of the industry's most complete range of high performance optical components:

1310 nm Transmitters
1550 nm Transmitters
1550 nm Optical Amplifiers
Receivers
Ancillary Modules
MainFrame

For more information please refer to:

Laser Link Data Sheet Part Number 7001673
Laser Link Data Sheet Part Number 7001674
Laser Link Data Sheet Part Number 7001675
Laser Link Data Sheet Part Number 7001676
Laser Link Data Sheet Part Number 7001677
Laser Link Data Sheet Part Number 7001678



Scientific Atlanta, the Scientific-Atlanta logo, and Laser Link are registered trademarks of Scientific-Atlanta, Inc.
Specifications and product availability are subject to change without notice.
© 2003 Scientific-Atlanta, Inc. All rights reserved.

Scientific-Atlanta, Inc.
1-800-722-2009 or 770-903-6900
www.scientificatlanta.com

Part Number 7001677 Rev A
April 2003