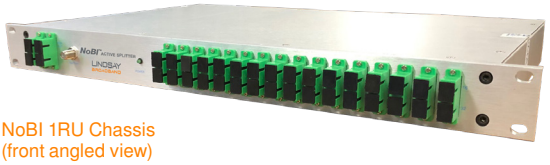
NoBI™

OBI-Free Active Splitter

RACK MOUNT SERIES

Optical Beat Interference (OBI) occurs when simultaneous optical upstream transmissions from multiple CPEs (RFoG mini nodes) interfere with each other - a condition that becomes more likely as subscriber densities increase. OBI is a huge issue that RFoG FTTH networks face.



NoBI 1RU Chassis
(front angled view)

Lindsay Broadband eliminates OBI with its outdoor temperature-rated NoBI active optical splitter. This device provides total OBI elimination, even in networks with multiple upstream lasers, by combining them on a single upstream wavelength.

The NoBI active splitter eliminates OBI without compromising network performance and allows operators to migrate to higher capacity DOCSIS® 3.0 and 3.1 technologies. The active splitter easily allows operators to achieve twice the reach of traditional passive splitters in an RFoG network. The 19", 1RU NoBI active splitter can be installed in either a headend/hub or a distribution cabinet. The device is also available in an outdoor wall/pole/strand enclosure which can be used in MDU applications. The device is rated to withstand temperatures from -40°C to +60°C (-40°F to +140°F).

The NoBI active splitter includes an optional EDFA for a downstream 1550 nm optical signal that compensates for splitting losses. It also has an integrated 1550/1610 nm WDM. The upstream active combiner is a DOCSIS 3.1 capable, 204 MHz upstream bandwidth, wideband (1240 nm to 1620 nm; except 1540-1560 nm) multi diode receiver. The multiple upstream signals are received by this multi diode receiver, conditioned, and sent to the headend using a 1610 nm high performance CW 6 dBm DFB laser.

Lindsay offers end-to-end solutions for eliminating OBI and extending the reach of your current RFoG network by using their OBI-free NoBI active splitter along with their RFoG CPEs.

FEATURES

- Completely eliminates OBI
- Maximizes network capacity & performance
- Extend the reach of traditional RFoG FTTH networks
- Available in 4, 8, 16 or 32 ports
- Integrated 1550/1610 nm WDM
- DOCSIS 3.1 capable, 204 MHz upstream bandwidth
- Optional built-in EDFA for longer reach
- Outdoor temperature-rated: -40°C to +60°C (-40°F to +140°F)
- 19", 1RU or IP65 outdoor enclosure for wall/pole/strand mounting
- 100-240 VAC, 40-65 VAC HFC or 48 VDC powering available
- Upstream test point for easy setup & troubleshooting
- Pair with Lindsay's LBON series CPE mini nodes
- Low power consumption
- Ultra-low noise DFB laser with isolator
- Adjustable upstream optical input dynamic range for optimum CNR performance

NoBI 1RU Chassis (front view)

NoBI 1RU Chassis (rear view)

ORDERING INFORMATION

	Optical Split		Upstream Wavelength		Upstream Optical Output Power		Downstream Optical Amplifier		Optical Connector		Powering		Power Connector Location
NoBI	xx	-	61	-	x	-	xx	-	xx	-	xxx	-	xx
	04 = 4 ports		61 = 1610 nm		3 = 3 dBm		00 = No EDFA		SA = SC/APC		ACP = 100-240 VAC		FP = Front panel-powered
	08 = 8 ports				6 = 6 dBm		OA = 17 dBm EDFA		LA = LC/APC		HFC = 40-65 VAC		RP = Rear panel-powered
	16 = 16 ports				L = Low power (-12 dBm)						DCP = -48 VDC		
	32 = 32 ports												

EXAMPLE:

Part # NoBI-32-61-6-OA-SA-ACP-RP
NoBI active splitter with 32 ports, single fiber, 1610 nm upstream wavelength, 6 dBm upstream power, 17 dBm EDFA downstream optical amplfier, SC/APC connector, 100-240 VAC, rear panel powering

SPECIFICATIONS

Parameter		Specification
Downstream		
Optical Wavelength		1550 ± 10 nm
Optical Return Loss		≤ 45 dB
Downstream - Without EDFA		
Recommended Optical Input Power		≤ 22 dBm
Insertion Loss	4 ports	≤ 8 dB
	8 ports	≤ 11 dB
	16 ports	≤ 14 dB
	32 ports	≤ 17 dB
Downstream - With EDFA		
Optical Input Power Range		3 dBm ± 3 dB
Optical Output Power (per port)	4 ports	9 dBm ± 1 dB
	8 ports	6 dBm ± 1 dB
	16 ports	3 dBm ± 1 dB
	32 ports	0 dBm ± 1 dB
Upstream Active Combiner		
Optical Wavelength (1)		1240-1620 nm
Optical Input Power		0 dBm ± 3 dB
Optical Receiver Diode Type		PIN
Optical Transmitter Diode Type		DFB Class 1 Laser
Optical Output Wavelength		1610 ± 10 nm
Optical Output Power (4)		+3 dBm
Frequency Range		12-204 MHz
Flatness		± 1 dB Max
Optical Return Loss		≤ 45 dB
Test Point for OMI Control (2)		20 dBmV ± 2 dB
Adjustable Upstream Levels (3)		10 dB (ie. -2 dBm → 0 dB; 0 dBm → 4 dB; +3 dBm → 10 dB)
Power, Environmental & Physical		
Total Power Consumption - without EDFA		≤ 9 W
Total Power Consumption - with EDFA		≤ 12 W
Rated Operating Voltage	VAC - 50/60 Hz	100-240 VAC
	VAC - 50/60 Hz - HFC	40-65 VAC
	VDC	-48 VDC
Operating Temperature		-40°C to +60°C (-40°F to +140°F)
Dimensions (H x W x D) 19" Rack Mount Unit		1.75"H x 19.0"W x 12.8"D (4.4H x 48.3W x 32.5D cm)
Weight		5.5 lb (2.5 kg)

NOTES:

(1) Except 1540-1560 nm
(2) 8% OMI per channel. 8 channels in total
(3) 2 dB steps with step attenuator
(4) Optional 6 dBm & low power (-12 dBm)

LINDSAY BROADBAND

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