WaveReady™
Optical Link Monitoring System: BrightJack 200

Key Features

- **Enables protocol- and format-independent monitoring of link loss**
- **Enables real-time monitoring of in-service fiber pairs**
- **Requires no power for passive customer-end interface**
- **Supports link budgets up to 20 dB**
- **Provides direct TL-1 interface**
- **Provides monitoring for up to six fiber links from a high-density 1U CO chassis**

Applications

- Enables optical link monitoring of up to six discrete optical fiber pairs
- Enables optical demarcation interface between carrier and client networks

Compliance

- Telcordia NEBS Level 3
- UL 60950 Third Edition
- FCC Class A

The JDSU WaveReady™ BrightJack 200 is a compact, modular performance monitoring solution for optical fiber links. The BrightJack lets system operators isolate faults within the fiber plant to improve response time. BrightJack also lets system operators monitor the health of the optical fiber over time and address slow degradation in fiber performance before it can result in unplanned service outages.

The BrightJack 200 operates independent of optical power and does not disrupt service in the event of power failure. Unlike Layer 2 performance monitoring solutions, which may not differentiate between equipment failure and fiber failure, the BrightJack monitors the health of the fiber plant from the central office (CO) without dependence on electronics located at the far end of the link.

With interfaces for remote TL-1 alarms over transmission control protocol/Internet protocol (TCP/IP), visual alarms, and local telemetry alarms, the BrightJack is readily integrated into a wide variety of network management interfaces and ready to deploy out of the box.
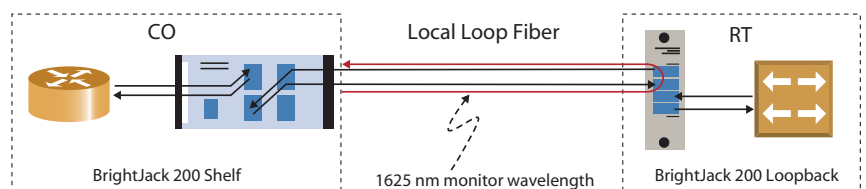

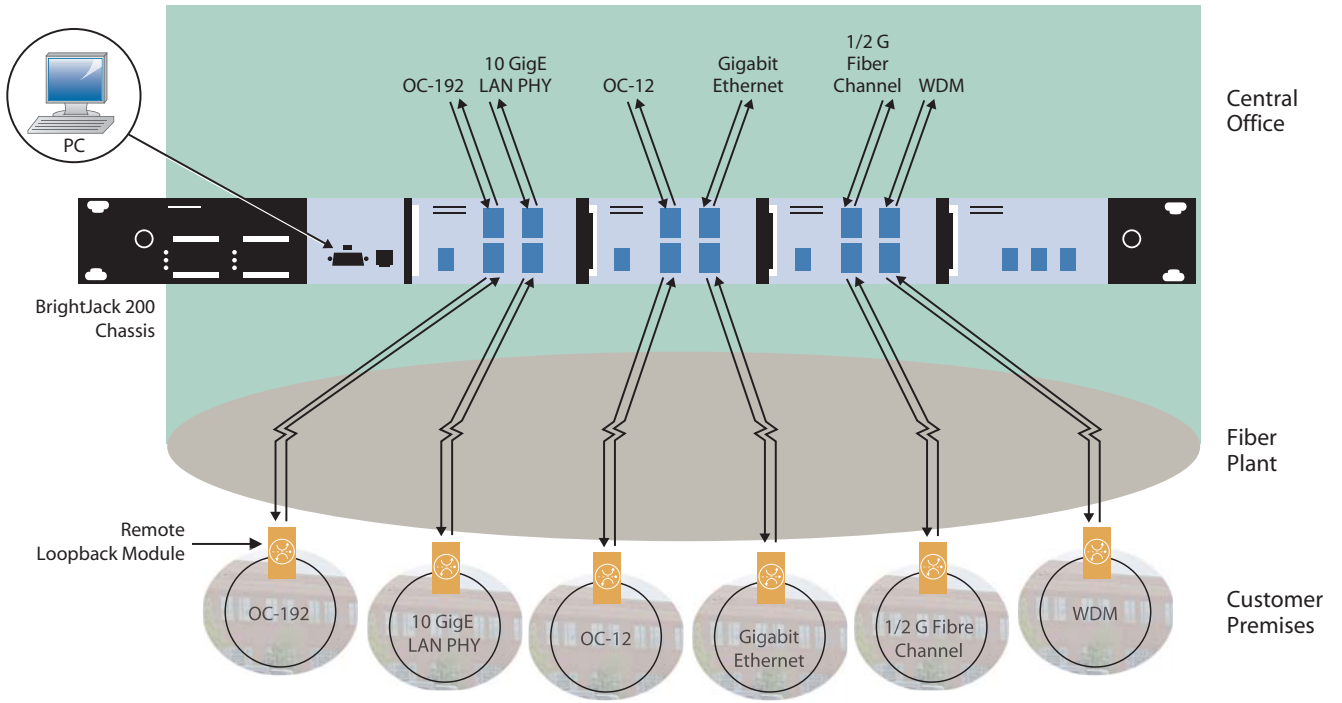Figure 1 Local loop fiber

2

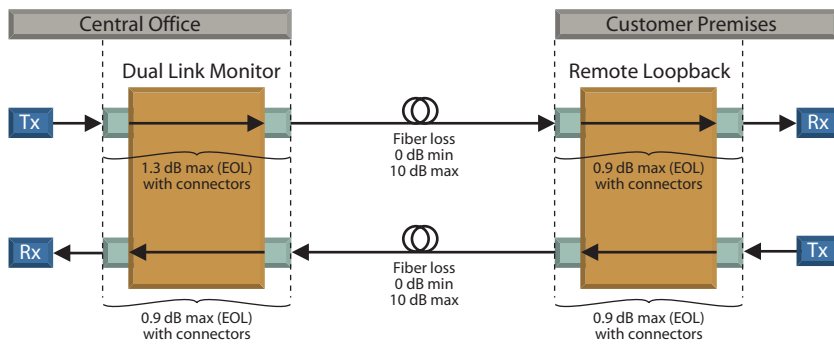## Sample Configurations

Figure 2 BrightJack 200 application

Figure 3 BrightJack 200 insertion loss

3

Performance Specifications[1]

Parameter	Min	Typical	Max
Optical Characteristics			
Supported data rates		Any	
Operating wavelength range			
1310 nm wavelength	1260 nm	1310 nm	1360 nm
1550 nm wavelength	1480 nm	1550 nm	1580 nm
Monitor channel wavelength range	1620 nm	1625 nm	1630 nm
Client input power range	−10 dBm	—	0 dBm
Monitor input power	−8 dBm	−5 dBm	−1.4 dBm
Link loss range	0 dB	—	20 dB
Insertion loss[2]			
End-to-end path from CO Client In to CP Client Out	—	—	2.2 dB
End-to-end path from CP Client In to CO Client Out	—	—	1.8 dB
Return loss	40 dB	—	—
Optical input power	—	—	300 mW
PDL	—	—	0.2 dB
PMD	—	—	0.2 ps
Electrical Characteristics (Chassis)			
DC supply voltage (CO chassis) [3, 4]	−40 V DC	−48 V DC	−57.5 V DC
DC current (CO chassis)	—	225 mA	300 mA
Power dissipation (CO chassis)	—	10.8 W	15 W
Power dissipation (Remote loopback)	—	0 W	—
Physical Characteristics (Chassis)			
External dimensions including brackets (H x W x L)		4.5 x 58.4 x 30.5 cm (1.75 x 23.0 x 13.2 in)	
Weight (approximate)		3.2 kg (7.0 lb)	
Physical Characteristics (Remote loopback)			
External dimensions including brackets (H x W x L)		13.0 x 2.74 x 15.2 cm (5.1 x 1.08 x 6.0 in)	
Weight (approximate)		0.45 kg (1.0 lb)	
Environmental Characteristics			
Normal operating temperature	0℃	—	40℃
Extended operating temperature	−5℃	—	55℃
Storage temperature	−40℃	—	85℃
Relative humidity (non-condensing)	5%	—	85%
Interface Specifications			
Optical connectors		LC/PC on CO equipment, SC/PC on terminal loopback module	
DB-9/RS-232 craft user port		Three-wire serial TTL, 9600 Baud, no parity, no flow control, 8 data bits, 1 stop bit	
		TL1 command line via serial (RS-232) or network (10/100Base-T) ports	

[1] This product should be deployed in accordance with your company's deployment directives
[2] Refer to Figure 2 BrightJack insertion loss
[3] The DC power supply must be −48 V SELV output and certified by a nationally recognized test laboratory (NRTL). UL tested at −48 V
[4] The Remote Loopback module (BJK-200LB02B) is a passive optical device with no applicable electrical connections or heat dissipation

Ordering Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America, +1 800-5378-JDSU worldwide or via e-mail at sales@jdsu.com.

Sample: BJK-200BC200

Product Code	Description	CLEI
BJK-200BC200	BrightJack 4-slot Chassis, ANSI	WOMA210HRA
BJK-200CM100	BrightJack Controller Module 100	WOCUAB1AA
BJK-200LM63B	BrightJack Laser Source Module, 3 Port	WOCUAB2JAA
BJK-200DM42B	BrightJack Dual Link Monitor Module, Low IL	WOCUAB0JAA
BJK-200DC48R	BrightJack 48 V DC Power Supply Plug-in	WOPUAAFEAA
BJK-200AL100	BrightJack Alarm Interface Module	WOCUAB4JAA
BJK-200LB02B	BrightJack Remote Loopback Module, Low IL	WOCUAB3JAA