Overview

The Wave2Wave w-Ignite™ Fiber-in-a-Box is a fully enclosed 6RU fiber-distance simulation system engineered for telecom labs, data center validation, and optical performance testing. By relying on real single-mode fiber rather than artificial emulation, it accurately recreates field conditions to support dependable transmission-over-distance benchmarking and system qualification.

The chassis accommodates 6- or 8-spool configurations with up to 200 km of Corning SMF-28e+ fiber, customizable in precise 1 km increments. Each spool supports fiber lengths up to 25 km, enabling granular distance tuning for a wide range of test scenarios. With support for LC, SC, ST, and FC front-panel connections, the system integrates smoothly into existing optical infrastructures while delivering consistent, repeatable measurement results.

Up to 200 KM



FIBER-IN-A-BOX

Features & Benefits

- 6RU enclosed chassis with secure, reversible 19" mounting
- Supports up to 200 km of SMF-28e+ fiber in 6- or 8-spool layouts
- Configurable LC, SC, ST, or FC front-panel connections
- Custom fiber lengths available in 1 km increments
- Low-loss, industry-standard SMF termination and polish options
- Multiple spool configurations supporting up to 25 km per spool
- Ideal for real-world distance simulation and repeatable testing

Applications

- Telecom equipment testing and benchmarking
- Engineering qualification and performance validation
- Optical transport and long-reach system simulation
- SAN/Fibre Channel long-distance testing
- WAN and optical-network benchmark testing

Optical Specifications

- SMF-28e or Similar Type of Single Mode Bare Fibers
- Termination with LC, SC, ST, FC with UPC or APC Polish

Mechanical Specifications

- Dimensions: 17.2” x 20.3” x 10.5” or 17.2” x 29.6” x 10.5” (6RU)
- Rack Mountable: 19”

Optical Characteristics

Characteristics	Conditions	Specific Values	Units
Attenuation	1310 nm	<0.35	[dB/km]
	1550 nm	<0.20	[dB/km]
	1625 nm	<0.24	[dB/km]
Attenuations vs. Wavelength Max. ∞ difference	1285-1330 nm	<0.03	[dB/km]
	1525-1575 nm	<0.02	[dB/km]
Dispersion coefficient	1550 nm	<18	[ps/(nm-km)]
	1625 nm	<22	[ps/(nm-km)]
Zero dispersion wavelength		1312 ±12	[nm]
Zero dispersion slope		<0.091	[ps/(nm-km)]
PDM Maximum Individual Fibre		<0.2	[ps/√km]
PDM Link Design Value (M=20, Q=0/01%)		<0.1	[ps/√km]
PDM Typical Value		0.04	[ps/√km]
Cable cutoff wavelength λ∞		<1260	[nm]
Mode field diameter (MDF)	1310 nm	9.2 ±0.4	[nm]
	1550 nm	10.4 ±0.5	[nm]

Product Selection

Part Number: 68PAB-30EF-XXKM

AB	E (Spools)	F	XX
31 (LC) 33 (SC) 34 (FC) 40 (ST)	2 4 6 8	1 (UPC) 2 (APC)	Length (Kilometers)

Standards Compliance

- Telcorida GR-326-CORE
- TIA/EIA-568B-B.3 Fiber Optic Cabling Components Standard
- IEEE802.3z Standards for Fiber Optic Cabling
- RoHS Approved for European Market Requirements

RoHS

8 x 25Km Duplex SMF Fiber Spools Configuration

