

IntegraOptics Pluggables Operability and Compatibility Testing

Testing was completed in Integra's Lab

Devices Under Test

Integra Part Number	OEM Compatible Part Number	Platform Tested	Product Description
331-5310-IO	331-5310	EXFO FTB-88100NGE	SFP+, 1310nm, LR SMF 10km, 10G DDM, Dell 331-5310 Compatible

Responsible Engineers

Name	Email	Organization
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Results Overview

Integra Part Number	OEM	Recognition	Error/Alarm	Link	Compatibility Certified
331-5310-IO	331-5310	PASS	PASS	PASS	PASS

Standard Compatibility Test Plan

The IntegraOptics' standard test plan consists of installing transceivers into the required lab elements with their interfaces configured appropriately. Each device then undergoes the following procedure to determine OEM compatibility as well as to verify correct operating performance. All IntegraOptics' transceivers must receive a "pass" rating on each of the below criteria for 100% compatible certification and subsequent GA release.

1. Initial plug in observations

- a. *Verify laser turn on – Laser turn on is typically used as a quick indicator of a transceivers compatibility.*
 - i. *Upon insertion, the transmitter light levels shall be recorded*
- b. *Observe system for error free operation – Errors consist of anomalies that severely impact a transceivers operation. Issues that may flag errors include:*
 - i. *I2C Communication Failures*
 - ii. *Electrical and/or Pin Timing Issues*
 - iii. *Code Issues resulting in host rejection and/or disabled interfaces*
 - iv. *Critical deviations from optical or electrical operating specifications*
- c. *Verify Host Recognition – Host recognition consists of determining if a part is recognized correctly. Successful recognition indicates a transceiver is communicating correctly with the host device. Parameters directly observed include:*
 - i. *Revision, Serial Number, and OEM Part ID*
 - ii. *Vendor Name and Vendor Part Number*

2. CLI Performance Observation

- a. *Observe Alarms and Warnings – General alarms consist of warnings indicating a transceiver is operating out of spec or indicates operation may not be error free, this test is typically performed using an appropriately attenuated fiber loop or active connection to another device. Issues that may flag alarms include:*
 - i. *Operation at an undesirable bit error rate or errored seconds*
 - ii. *DDM related alarms, operation above or below alarm thresholds for:*
 - *Transmit Power and Laser Bias*
 - *Receive Power*
 - *Temperature*
 - *Voltage*

Compatibility Test #1: 3 3 1 - 5 3 1 0 - IO

Results:

1. Initial Plugin Observations
 - a. Verify Laser Turn On
 - i. Result: **Pass**
 - b. Observe System Error Free Operation
 - i. Errors: None
 - ii. Link: **Pass**
 - iii. Result: **Pass**
 - c. Verify Host Recognition
 - i. Revision, Serial Number, and OEM Part ID. Result: **Pass**
 - ii. Vendor Name and Vendor Part Number. Result: **Pass**
2. CLI Performance Observations
 - a. Observe Alarms and Warnings
 - i. Alarms: None
 - ii. Result: **Pass**
 - b. Observe Alarm Thresholds
 - i. Result: **Pass**

