CORNING OPICAL COMMUNICATIONS GENERIC SPECIFICATION FOR BASE 8 PORT TAP MODULE

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PGS152
Revision 2

Corning Optical Communications reserves the right to update this specification without prior notification.

Master Format   27 11 16   Communications Cabinets, Racks, Frames and Enclosures

1   Port Tap Module: General

The port tap module is a module with a fibre optic splitter inside that divides the optical signal into two outputs, one for live link traffic and one for monitoring. The live traffic continues through the system link while the monitor traffic is sent to a monitoring device which filters the data and sends it to various software tools for analysis, where it is then viewed in application-layer software.

2   Module Specifications and Options

2.1 Module Function and Construction

2.1.1   The port tap modules shall be dimensionally compatible with Corning Optical Communications EDGE8™ rack-mountable connector housings.

2.1.2   The small form module shall meet the following dimensions 5.42 in x 2.40 in x 0.465 in (137.7 x 60.85 mm x 11.81 mm) (L x W x H).

2.1.3   The port tap modules shall permit front and rear installation into the housing. When uninstalling a module from the back; a rear-accessible retention trigger must be present in order to facilitate this operation.

2.1.4   The port tap module shall have a label providing part number, serial number, human and machine readable barcode affixed to it for identification.

2.1.5   The port tap module shall contain splitters for dividing the optical power signal, one output of the splitter provides signal to the live network and the other to the monitoring port.

2.1.6   The port tap module shall be available in three configurations:

2.1.6.1 Configuration A – The port tap module shall provide connectivity for LC connectors entering at the front, having two live LC ports providing connectivity to the live network and one LC tap port providing connectivity to the monitoring devices. The LC ports shall be constructed with LC shuttered – adapter.

2.1.6.2 Configuration B - The port tap module shall support two MTP® connectors entering the back of the module and four LC adapters in the front. One MTP port provides connectivity to the live network link, and the other MTP provides connectivity to monitoring devices. The front of the module shall provide LC shuttered-adapter connectivity to the live network.

2.1.6.3 Configuration C – The port tap module shall support one live MTP connector entering the back of the module and another live MTP connector entering at the font of the module providing connectivity to the live network link. The module shall also have an MTP port located at the front or the back of the module providing connectivity to monitoring devices.

2.2 **Module Connectivity**

2.2.1   Cable assemblies within modules shall be terminated with MTP® pinned and non-pinned connectors or LC connectors.

2.2.2   Multimode port tap modules shall be constructed using thin-film splitter technology. The single-mode splitters shall use bi-conical taper splitter technology to ensure optimal performance of the module. The splitter shall be qualified to the environmental and mechanical test as defined in Telcordia GR1209/1221-CORE)

2.2.3   The adapter sleeves shall be color coded as indicated in Table 1.

2.2.4   The tap modules utilizing LC connectivity shall have a self-retracting LC shutter adapter mechanism that allows a single hand operation. The shuttered adapter shall be VFL compatible. The LC adapter sleeves shall be color coded as indicated in Table 1.

2.3 Module Fiber Types, Optical Specifications, and Component Loss Specifications

2.3.1 Completed module assembly shall meet the specifications of TIA 568 C.3 for New Product IL, Low temperature, Temperature Life and Humidity Aging. The completed module assembly shall also meet Vibration specification per GR-326.

2.3.2 Splitter devices in the port tap module shall meet specification of TELCORDIA GR-1209/1221-CORE.

2.3.3 Available fiber types and their optical performance specifications shall be as indicated in Table 1.

Table 1: Modules - Available Fiber Types, Optical Specifications, Component Loss Specifications, and Adapter Colors.

Property	OM4 Ultra-Bendable 50 µm Multimode (850/1300 nm)	OS2 Bend-Improved Single-Mode (1310/1550 nm)
Fiber Attenuation, max (dB/km)	2.8/1.0	0.4/0.3
Minimum Over Filled Launch (OFL) Bandwidth (MHz*km)[1]	3500/500	-/-
Minimum Effective Modal Bandwidth (EMB) (MHz*km)[2]	4700/-	-/-
MTP® mated pair max loss (dB)[3]	0.25	0.35
LC mated pair max loss (dB)[3]	0.10	0.25
Splitter 50/50 max loss (dB)	3.50	3.50
Splitter 70/30 (Live/Tap) max loss (dB)	2.40/5.80	2.10/5.80
Splitter 80/20 (Live/Tap) max loss (dB)	1.30/7.30	1.30/7.80
Splitter 90/10 (Live/Tap) max loss (dB)	N/A	0.70/11.80
Adapter Color: LC Live Port MTP® Live Port MTP®/LC Tap Port	Aqua Aqua Red	Blue Black Red

Note (1): As predicted by RML BW, per TIA/EIA 455-204 and IEC 60793-1-41, *for intermediate performance laser based systems* (up to 1 Gb/s).

Note (2): As predicted by minEMBc, per TIA/EIA 455-220 and IEC 60793-1-49 for *high performance laser-based systems* (up to 10 Gb/s).

Note (3): Insertion loss specifications when mated to other system components of a like performance specification

2.4 Module packaging

    2.4.1   The modules shall be packaged in blister packs. The blister pack overall dimensions shall be 10 in x 5.26 in x 1.15 in (L x W x H).

    2.4.2   The blister packs shall have the ability to be stored in a box or hung when using a hook merchandising storage devise.

    2.4.3   The blister pack shall be constructed with 100% recyclable Polyethylene Terephthalate ♲ material.

3   Universal Polarity Management System

3.1 The port tap module shall have a wiring scheme such as that when placed in a link with universal-wired components, duplex polarity is maintained.

Gen Spec PGS152 Revision History

Revision #	Date	Reason for Change
0	07/23/16	Initial Creation
1	10/24/17	Reformatted and added Master Format number
2	04/06/18	Updated splitter loss table and form factor size.