



# ORION TELECOM NETWORKS INC.

## Optical Splitter

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### Product Brochure & Data Sheet

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## Description

### Optical Splitter - What does it do?

Orion offers 1x2 Optical Splitters in 90:10 and 80:20 ratios. The Optical Splitters “split” the input optical signal received by it on input optical ports and provide the outputs simultaneously, in a pre-specified ratio 90:10 or 80:20.

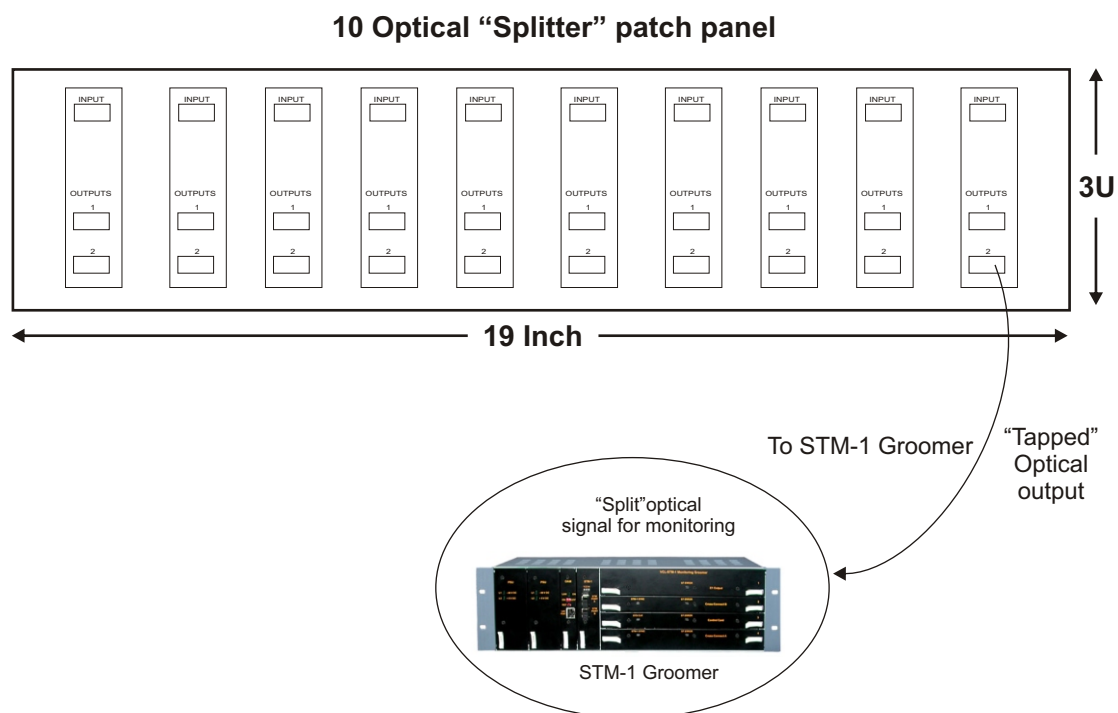
### Application - Where is it used?

The Optical Splitters may be used in applications that require the STM-1 (SDH) optical signal input to be simultaneously connected to an active link, while at the same time connecting it to “shadow” equipment such as an STM-1 Groomer or an analyser, to non-intrusively monitor the “live” STM-1 traffic links. The Optical Splitters also allow the users to non-intrusively test and collect data from “live” STM-1 circuits.



Optical Splitter

### Connecting / patching an STM-1 optical link through an Optical Splitter:

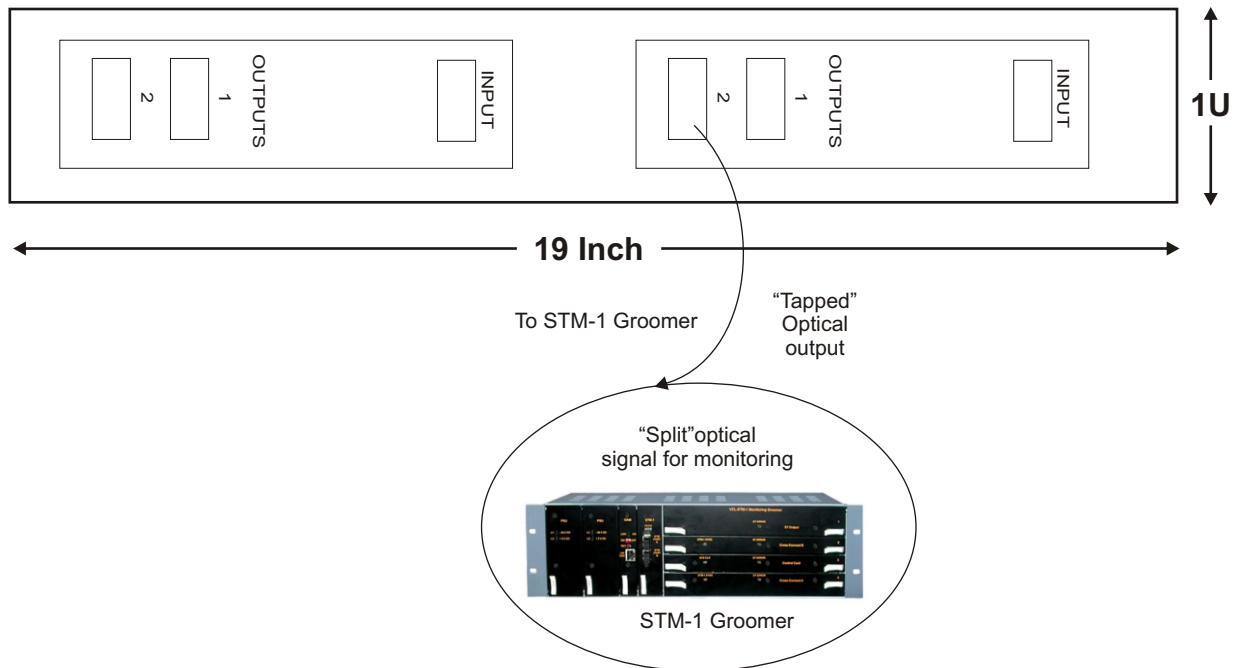


The Monitoring “Optical Port” (the optical port with a lower “split” ratio) connects to the STM-1 Groomer to “monitor” the “live” STM-1 link, non-intrusively.

The minimum power signal on the “tapped” optical output port must be at least -38dBm to ensure the satisfactory working of the STM-1 Groomer.

## Connecting / patching an STM-1 optical link through an Optical Splitter

### 2 Optical "Splitter" patch panel



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## Technical Specifications

### Optical Performance

Optical Performance	Specifications
Operation Wavelength	1310nm and 1550nm
Split Ratio - Type I	90:10
Split Ratio - Type II	80:20
Insertion Loss (I1-O1 / I1-O2) - 90:10 Split Ratio	11.7 / 2.1 dB (max)
Insertion Loss (I1-O1 / I1-O2) - 80:20 Split Ratio	8.4 / 1-5 dB (max)
Fiber Type	SMF-28e
Polarization Dependent Loss	0.20 dB (max)
Wavelength Bandwidth	± 40 nm
Return Loss	> 50 dB (min)
Directivity	55 dB (min)
Operating Temperature	- 10 ~ 70 °C
Storage Temperature	- 40 ~ 85 °C

### Environmental Stress Screening

Environmental Stress Screening	Specifications
Baking (Temperature / Duration)	+85C / 48Hr
Temperature Cycling (Temperature Range / Cycles)	- 40C to +85C/48Hr
19-Inch Shelf Extra - Must be ordered separately	19-Inch Shelf

## Technical Specifications

### Mechanical and Configuration

Mechanical and Configuration	Specification
Upto 10 Optical Splitters in a 19-Inch Shelf	Installed in a DIN standard 19-inch shelf

### Others Parameters

Others Parameters	Specifications
Pigtail Type	SMF-28e
Pigtail Length	None
Pigtail Mark Method	None
Connector Type	SC/UPC

### Mechanical Specifications for 1U (2 Optical Splitter)

Height	42 mm.
Width	125 mm.
Length	482 mm.
Weight	0.760 kg.

### Mechanical Specifications for 3U (10 Optical Splitter)

Height	132 mm.
Width	125 mm.
Length	482 mm.
Weight	4.600 kg.

## Ordering Information

S.No.	Part #	Product Description	Qty
1.	OTN-OPT-SPLIT-80:20	Optical Splitter Module Provides 80:20 Split Ratio SC/UPC Optical Connector.	1
2.	OTN-OPT-SPLIT-90:10	Optical Splitter Module Provides 90:10 Split Ratio SC/UPC Optical Connector.	1
3.	OTN-OPT-SPLIT-SHELF	19-Inch Rack Mountable Shelf accommodates up to 10 optical splitters in one 19-Inch shelf.	1
4.	LC-SC-PATCHCORD-10MTS	Optical Patch Cord, LC to SC connector. 10 meters length. 1310nm, Simplex.	1

Technical specifications are subject to changes without notice.  
Revision 04 - May 15, 2010

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