

TeraOptic 4221e

TeraOptic™ 4221e

Free-Space Optics Solution

Description

The TeraOptic 4221e is the latest in a line of high-bandwidth, carrier-grade systems. It is unique among our solutions in that it operates via free-space optics and thus does not use radio frequency. The system is a cost-effective solution for high-bandwidth connectivity at ranges less than one kilometer, and is ideal for deployments such as mobile wireless backhaul, single customer access, multi-tenant building access, enterprise E1/T1, Fast Ethernet extension and LAN-to-LAN or campus connectivity.

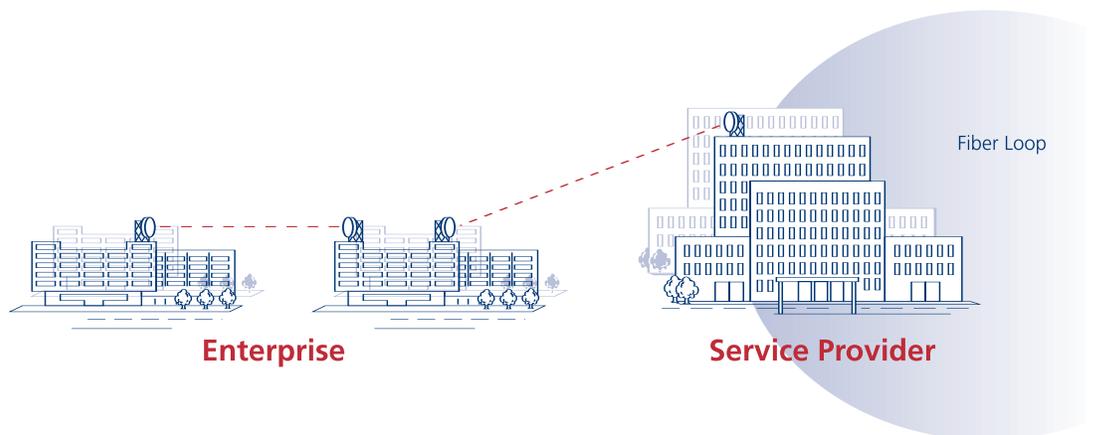
Key Features

- Designed for outdoor installations providing bandwidths of 125 Mbps independent of transport protocol
- Ideal for dense metro deployments in the range of 20 meters to 1 kilometer
- Operates at a wavelength of 850 nm and is completely eye-safe, with a Class 1 IEC/CDRH rating, which means no warning labels or access restrictions are required

- License-free operation worldwide eliminates the need for spectrum licensing or frequency planning
- Provides reliable performance using high-performance lasers with a mean time between failures (MTBF) of one million (1,000,000) hours
- Lightweight, advanced industrial design includes an integrated optalscope for ease of alignment and high/low power settings for optimized performance
- Design includes advanced laser delivery technology which maximizes availability while maintaining eye safety
- Includes built-in management functionality using Simple Network Management Protocol (SNMP) version 1
- Power supplies and power cords included

APPLICATIONS

- Point-to-point Wireless Bridge
- Enterprise LAN and PBX extension
- WAN connection redundancy
- ISP remote POP
- ISP direct customer connections using point-to-point
- Extension of an existing fiber network



TeraOptic 4221e Specifications

FREE-SPACE OPTICAL PERFORMANCE	
Nominal Wavelength	850 nm
FWHM Divergence	6 mrad
Average/Peak Output Power	20 mW / 40 mW
Aperture Diameter	80 mm (3.14 in.)
Full Field of Regard	6 mrad
Laser Type	VCSEL
Detector	Silicon APD
OPERATING RANGE	
Minimum to Maximum	20 m (65.6 ft) to 1 km (0.62 mi)
Clear air margins	40dB @ 20meters 16dB @ 500meters 10dB @ 1000meters
INTERFACES	
Data (to/from Network interface Unit)	125-Mbps, Duplex MMF, 1325 nm, SC connector
Management	IEEE 802.3 100Base-FX, Duplex MMF, 1325 nm, SC connector
Installation	IEEE 802.3 10/100Base-T, RJ-45
Power	Three-Way, 10- to 16-AWG Terminal Block
MANAGEMENT	
Installation Tools	Laptop-based software provided
REGULATORY COMPLIANCE	
Electrical	UL60950 cUL - CSA C22.2 No. 60950 CE - IEC60950
Laser Safety	CDRH - Class 1 (21 CFR 1040 per Laser Notice No. 50) IEC - Class 1 (60825-1, Amendment 2 (2001-01))
Electromagnetic	FCC - Class A, Title 47, Vol. 1, Part 15 CE - EN55022 CE - EN55024
POWER	
Input Voltage	-40 to -57 VDC
Maximum Power Consumption	72 Watts
Maximum Input Current	1.5 Amps at -48 VDC
OPTIONAL OUTDOOR POWER MODULE	
Input Voltage	100 to 230 VAC, 50/60 Hz
Maximum Power Consumption	60 Watts
Maximum Input Current	0.6 to 0.26 Amps
Power Module Dimensions (H x W x D)	41.2 x 27.7 x 16.5 cm (16.2 x 10.9 x 6.5 in.)
Power Module Weight	5.8 kg (12.8 lbs)
ENVIRONMENTAL AND MECHANICAL	
Operating Temperature	12 in. (30 cm)
Storage Temperature	34.5 dBi
Relative Humidity	>45 dB
Dimensions (H x W x D)	48.3 x 36.8 x 36.8 cm (19 x 14.5 x 14.5 in.)
Weight	9.3 kg (20.5 lbs)
Mounting	Standard Outdoor Mount (4 to 4.5 pole)