MRV

OPTICAL ACCESS SOLUTIONS

Datasheet

TereScope® 10 GE

TereScope10GE

Features

- 10-Gigabit Ethernet Connectivity
- Distances of up to 350 m
- Fast deployment
- License-free operation
- Visual and receiver power measurement alignment
- Weatherproofing: IP56
- Secure transmission
- Eye Safety Class 1M
- Modular

Applications

- Multi-site Enterprise Connectivity
- Provider Edge Networks
- Temporary or permanent installation
- Disaster recovery

Overview

The line-of-sight TereScope 10GE, the industry's first wireless 10 Gigabit Ethernet Free Space Optics system, provides enterprises and service providers with a cost-effective and high-bandwidth wireless solution for extending backbone networks between multiple buildings without a need for rights-of-way or a fiber-optic cable plant.

Reliability

TereScope 10GE is extremely reliable with an MTBF (Mean Time Between Failures) of ten years.

Safety

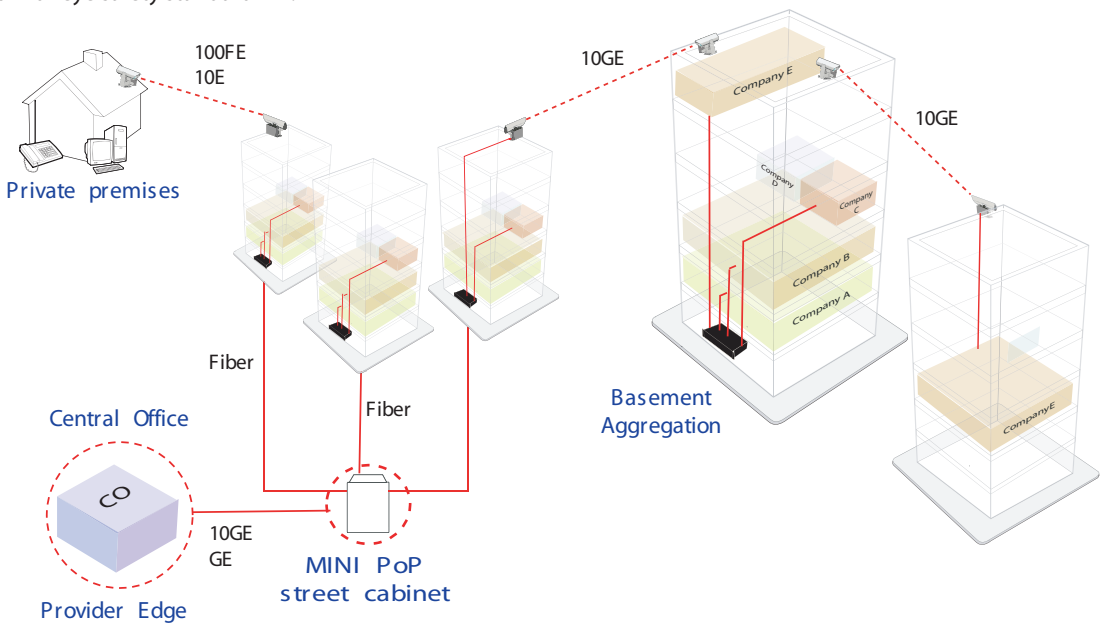
MRV offers this equipment based on low power lasers. TereScope 10GE is eye and skin safe at the aperture and complies with eye safety standard 1M.

Enterprise application

In the near future, it is foreseen that most of the enterprises' networks' backbone will consist of 10GE switches.
For connecting the various buildings on a multi-site campus where digging for deploying a new fiber infrastructure is not practical or feasible, th0ere will be a need for 10GE campus building-to-building wireless connections.

Carrier application

The industry is moving to Optical Metro Ethernet for transport to the customer from legacy DSL/T1/T3, and10 GE drops to the customer over fiber are becoming more common where no fiber is available, practical, or cost-effective, the TS10GE FSO link offers a wireless 10GE solution.



TereScope® 10GE - Technical Specifications

Part number			TS10GE/XYL/SHS
Model			TS-10GE
Standard P.N.			TS10GE/S3L/SHS
Applications/ Data Protocol			10 Gigabit Ethernet, STM64, OC-192, 10 Gigabit Fiber Channel
Performance	Rate		9.95 – 11.3 Gbps
	Range @ 17 dB/km		350m
	@ 30 dB/km		300m
	Minimum Range		10 m
	Bit error rate		Less than 1E-12 (unfaded)
	MTBF		10 years
Transmitter	Light source		1 EML DFB Laser + EDFA
	Wavelength		1528-1565 nm
	Total Output power		80 mW
	Beam divergence		2 mrad
Receiver	Detector		APD
	Field of view		2 mrad
Interface	Type		XFP
	Connectors		LC (other connectors available)
	Wavelength		1310 nm (other wavelengths available)
	Cable		Up to 10km length over 9/125 SM fibre
Power Supplly			Factory set: 100-240 VAC @ 50/60 Hz or 24-60 VDC (45 W)
Environmental Information	Operating temperature		-30˚ C to +50˚ C
	Storage temperature		-40˚ C to +70˚ C
	Humidity		95% non-condensing
	Housing		Weatherproofing: IP56
	Eye safety Class		1M
Mechanical Design	Dimensions (mm)		TereScope: 412x263x355mm, Service Box: 276X187x300mm, Mounted: 412x491x355mm
	Weight	Unit	17.5 kg
		Modularity	Modular Power supply, Modular Interface, Modular EDFA module, Modular SNMP
Diagnostics	Indicators		Airlink: Flag, Fiber Optic: Flag, Sync. Receive Signal Strength (Digital Display), Tx Laser, EDFA, SNMP TX and RX Optical Block Heating, Elec. Block Heating
	Selectors		Transmit power attenuator. Laser OFF, EDFA OFF, Control mode
	Dry contact		Two pairs of Pins of the management RJ45 connector can be used for dry contact purposes, for Airlink flag and F/O flag alarms
	Management		JT-SNMP-SW/E included (SNMP Unit with web based software, extended version license)

@17 dB/km = Cloudburst (100 mm/hr) - Medium snow - Light fog
@30 dB/km = Rain (up to 180 mm/hr) - Blizzard - Moderate fog

Order Information

Product	Description
TS10GE/S3L/SHS	TereScope10GE, 9.95-11.3Gbps Free Space Optics link. 300m@30db/km and 350m@17db/km. XFP Single mode 1310nm interface. Internal heating. Each TereScope unit consists of an Optical head, Service Box and cabling between them. The Service Box includes Removable Modules: Power supply Module (** Power supply options: S or 3 - See below for power supply options explanation), Management Module (JT-SNMP-SW/E - SNMP Unit with web based software, extended version License), Interface Module and EDFA Module. Basic accessories kit supplied with the link: Aiming Head, JMP-G, Service box Stand and JITK-G (installer basic tools).