

## TereScope™ 1000 Series



### Overview

Wireless Gigabit Ethernet Solutions for high-speed networks.

When deploying a Gigabit Ethernet network, you want to be able to take full advantage of your investment. The TereScope 1000 series ensures that your remote sites will have the full benefit of your high-speed network.

The TereScope 1000 Series is an ideal solution for connecting the Gigabit Ethernet network in your campus environment. With a maximum range of 1.5 km, a data rate of 1.25 Gbps, and a modular and compact design, the 1000 Series is a reliable, safe and secure alternative to traditional last-mile access.

The TereScope 1000 Series systems are equipped with an advanced video alignment system ensuring simple and precise installation. An integrated SNMP agent is also available and allows for easy monitoring and network management.

The TereScope family of Free-Space Optics products makes cost-effective, high-speed wireless connectivity available for a number of last-mile applications. Operating at data rates of 1.5 Mbps to 1.25 Gbps, TereScope solutions provide scalable wireless alternatives to leased lines. TereScope systems are deployed in one day, without right-of-way or government permits for installation, providing you with communication links in hours instead of weeks or months.

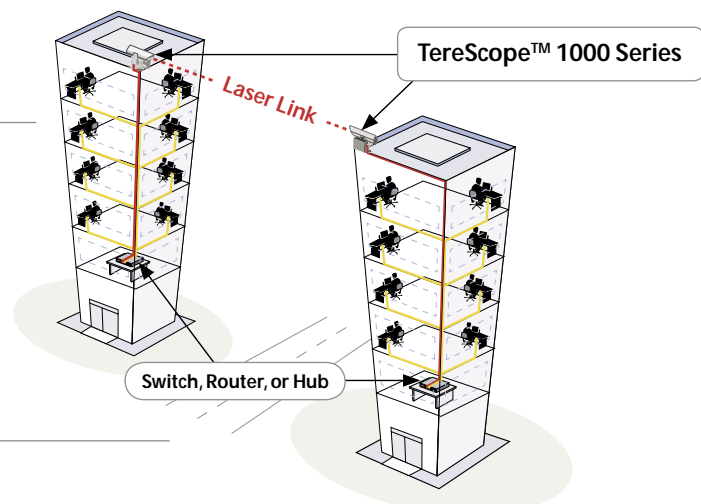
### Features

- Data rate 1.25 Gbps for Gigabit Ethernet
- Quick return on investment
- Versatile, deployed quickly and easy to expand
- Transmits at distances up to 1.5 km
- Built-in heaters prevent condensation and ice buildup on lens
- Operating voltage - 100-120 VAC, 200-240 VAC (50-60 Hz) or -48 VDC
- Full duplex
- License-free operation
- Video alignment
- Remote management
- Secure transmission
- Modular design
- Portable
- One-year standard warranty; extended warranties available

### Applications

- Gigabit Ethernet LANs
- High speed, last-mile connectivity
- Mesh network environments
- MAN environments
- Temporary or permanent installations
- Live video transmission
- Disaster recovery
- Backup to fiber

Full duplex 1.25 Gbps wireless links for easy extension of Gigabit Ethernet networks.



## Technical Specifications: TereScope™ 1000 Series

MODEL/ PROD CODE		TS1000G TS1000/H/CM8/V*, TS1000/H/CS3/V*	TS3000G TS1000/J/CM8/V*, TS1000/J/CS3/V*
Applications/ Data Product		Gigabit Ethernet-full duplex	
Performance	Rate	1250 Mbps	
	Range(1)		
	@ 3 dB/km	535 m	1930 m
	@ 5 dB/km	515 m	1600 m
	@10 dB/km	480 m	1170 m
	@17 dB/km	430 m	880 m
@30 dB/km	360 m	620 m	
Bit error rate		Less than 10 E-9 (unfaded)	
MTBF		Greater than 8 years	
Transmitter	Light source	VCSELs	
	Wavelength	850 nm	
	Output power	9 mW	24 mW
	Beam divergence	2.5 mrad	
Receiver	Detector	APD	
	Field of view	2.2 mrad	2.8 mrad
	Sensitivity	500 nW	500 nW
Interface	Type	Multimode	Singlemode
	Connector		SC
	Wavelength (nm)	850	1300
	Fiber link length		
	9/125 μm fiber	N/A	5 km
	50/125 μm fiber	500 m	N/A
	62.5/125 μm fiber	220 m	N/A
	Input optical power (dBm)	-17	-28
	Output optical power (dBm)	-9.5 to -4	-15 to -8
Power Supply	Voltage range	100-120 VAC or 200-240 VAC (Factory Set)	100-120 VAC, 200-240 VAC, or -48 VDC (Factory Set)
	Power consumption	190 W	100 W
Environmental Information	Operating temperature	-30° C to +50° C (-22° F to 122° F) MRV Communications	
	Storage temperature	-30° C to +70° C (-22° F to 158° F) > F to 122<02DA> F)	
	Humidity	Less than 90% non-condensing	
	Housing	Weatherproof	
Mechanical Design	Dimensions (mm)	610 x 380 x 394	794 x 424 x 576
	Weight (kg)	20	30
Diagnostics	Indicators	Alignment via NTSC CCD camera, receive and transmit data lights, RJ45, fiber and RS232 based interfaces	
Management		Command line interface, SNMP (manageable via MRV's MegaVision™ or 3 <sup>rd</sup> party browser)	

(1) @ 3 dB/km = Light rain (5-10 mm/hr) - Light haze  
 @ 5 dB/km = Light to medium rain (15-20 mm/hr) - Haze  
 @10 dB/km = Medium to heavy rain (45 mm/hr) - Light snow - Thin fog  
 @17 dB/km = Cloudburst (100 mm/hr) - Medium snow - Light fog  
 @30 dB/km = Rain (up to 180 mm/hr) - Blizzard - Moderate fog

CM8 = SC, Multimode, 850 nm  
 CS3 = SC, Singlemode, 1310 nm

Ordering Info	Product	Description
	TS1000/H/CM8/V*	TereScope 1000G, Optical Wireless 500 m Gigabit Link 1250 Mbit/s, camera alignment (DSC, MM 850 nm), SNMP Management, Power supply V1 or V2*
	TS1000/H/CS3/V*	TereScope 1000G, Optical Wireless 500 m Gigabit Link 1250 Mbit/s, camera alignment (DSC, SM 1310 nm), SNMP Management, Power supply V1 or V2*
	TS1000/J/CM8/V*	TereScope 3000G, Optical Wireless 1500 m Gigabit Ethernet Link 1250 Mbit/s, camera alignment (DSC, MM 850 nm), SNMP Management, Power supply V1, V2 or V4*
	TS1000/J/CS3/V*	TereScope 3000G, Optical Wireless 1500 m Gigabit Ethernet Link 1250 Mbit/s, camera alignment (DSC, SM 1310 nm), SNMP Management, Power supply V1, V2 or V4*

\*V1 = 110 VAC · V2 = 220 VAC · V3 = 24 VDC · V4 = -48 VDC (Internal) · V5 = -48 VDC (External)

MRV has more than 50 offices throughout the world. Addresses, phone numbers, and fax numbers are listed at [www.mrv.com](http://www.mrv.com). Please e-mail us at [sales@mrv.com](mailto:sales@mrv.com) or call us for assistance.

**MRV (West Coast USA)**  
 20415 Nordhoff St.  
 Chatsworth, CA 91311  
 800-338-5316  
 818-773-0900

**MRV (East Coast USA)**  
 295 Foster St.  
 Littleton, MA 01460  
 800-338-5316  
 978-952-4700

**MRV (International)**  
 Business Park Moerfelden  
 Waldeckerstrasse 13  
 64546 Moerfelden-Walldorf  
 Germany  
 Tel. (49) 6105/2070  
 Fax. (49) 6105/207-100

All statements, technical information and recommendations related to the products herein are based upon information believed to be reliable or accurate. However, the accuracy or completeness thereof is not guaranteed, and no responsibility is assumed for any inaccuracies. Please contact MRV Communications for more information. MRV Communications and the MRV Communications logo are trademarks of MRV Communications, Inc. Other trademarks are the property of their respective holders.