



GPS Fiber Transport

Transparent RF-Over-Fiber Connection

Between GPS Antenna & Receiver

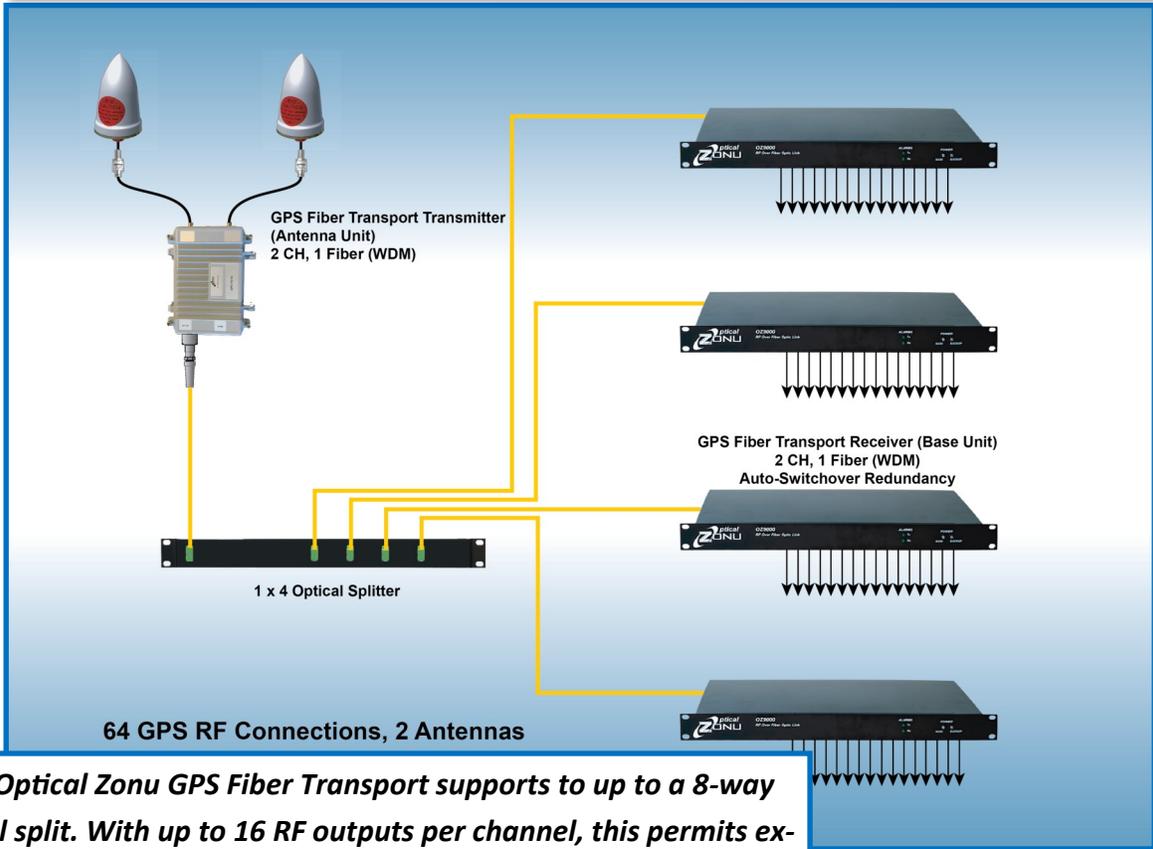
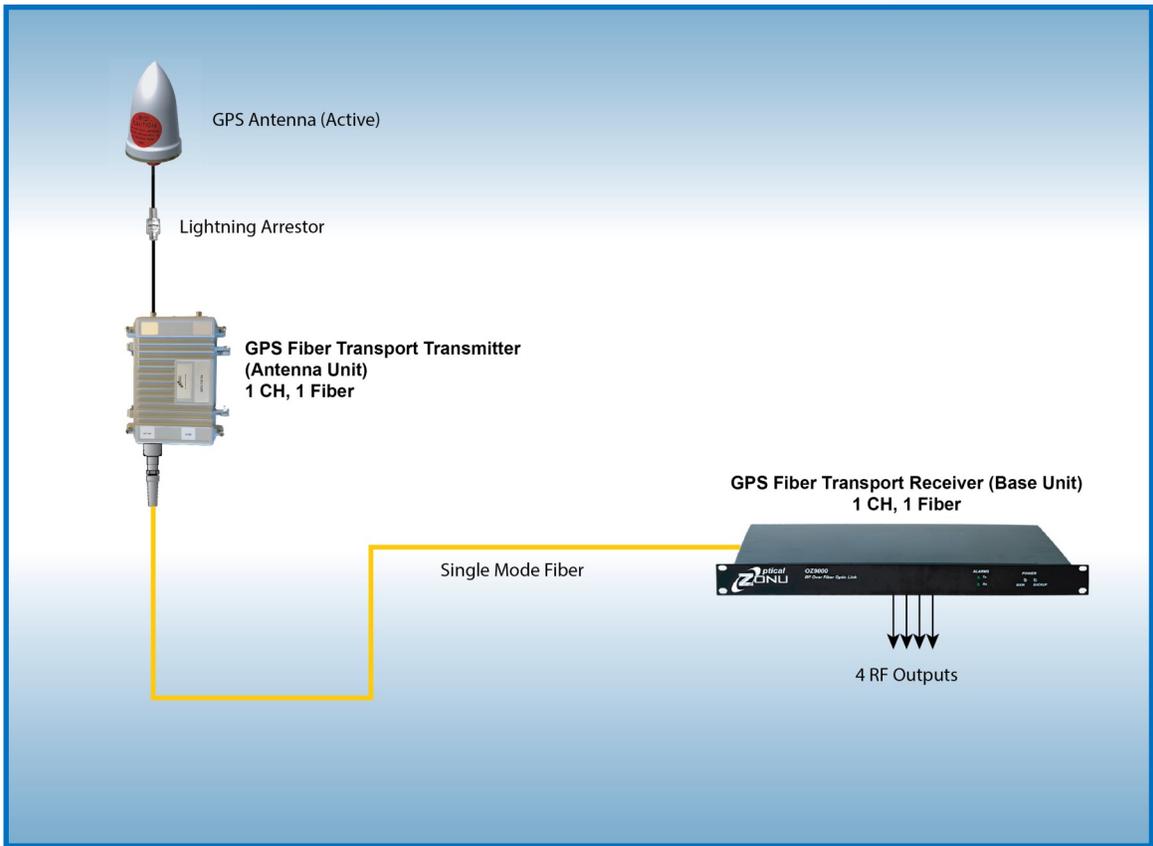
Features & Benefits

- Supports L1 – L5 Frequencies, GLONASS, GALILEO
- Compact, Rugged IP-67 Fiber Optic Antenna Unit
- 1 or 2 GPS Channels – 4, 8 or 16 RF Outputs
- Auto-Switchover Redundancy Option
- Point-to-Point or Distributed GPS for C-RAN Hubs & Base Station Hotels
- Simple, Clear Alarming Integrates Easily Into Any NMS
- Wireless Infrastructure Synchronization
- Data Network Timing
- Public Utilities

The GPS Fiber Transport Link by Optical Zonu provides a simple, cost-effective and reliable RF connection between the GPS antenna and receivers in those instances where coaxial cable is impractical. Each link is wide-band and supports any of the global GPS frequencies – current or future. The high dynamic range of the system ensures a transparent pass through with no distortion. A low noise pre-amplifier ensures a margin on signal-to-noise ratio while keeping the signal in the most linear operating range of the fiber optic link.

The fiber optic transmitter housing is a compact, IP-67 enclosure and supports one or two GPS antennas. Built-in Bias-Ts provide the needed DC power for each of the active GPS antennas. While the Optical Zonu GPS Fiber Transport Link can be used for point-to-point applications, the link may also be optically split up to 8 ways to provide cost-effective GPS distribution to multiple locations over lightweight fiber cable. In addition, the receiver is available with either one or four RF outputs per channel. The 2 channel version is available as independent connections or as a redundant link with auto switchover.





The Optical Zonu GPS Fiber Transport supports up to an 8-way optical split. With up to 16 RF outputs per channel, this permits extremely flexible and cost-effective GPS distribution

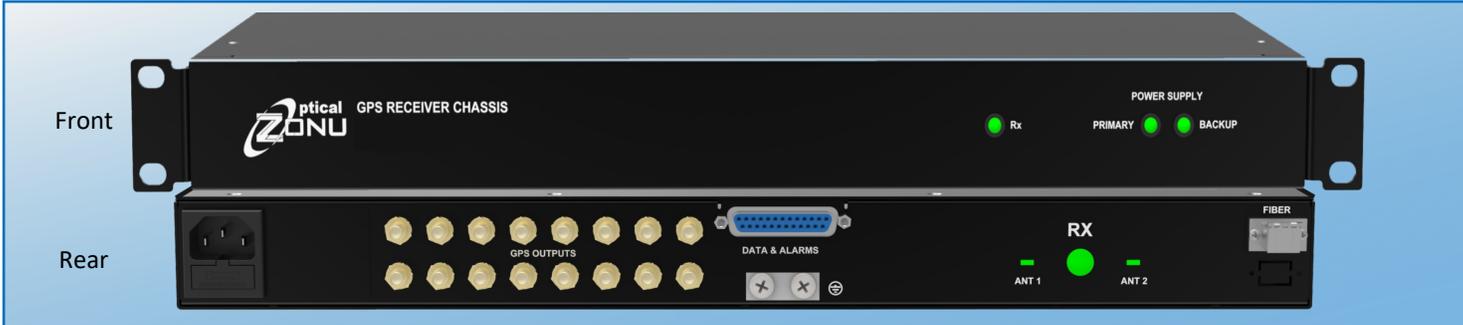
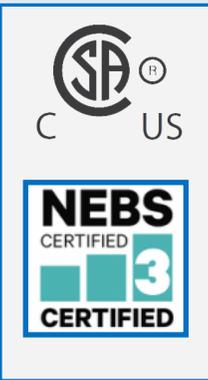
Specifications

RF Parameters				
Frequency Range	1.1 – 1.8 GHz			
Noise Figure (Typical)	18 dB			
Input IP3	+8 dBm			
Link Gain (Typical)	32 dB: 4 RF Output/Channel, 28 dB: 8 RF Outputs/Channel, 24 dB: 16 RF Outputs			
Group Delay	< 1 ns Components + 4.9 ns/m fiber length			
Optical Parameters				
Fiber	Single Mode (Multimode can also be supported – contact factory)			
Electrical Parameters				
Antenna Power	N connector Center Pin	+5 VDC, 50 mA		
Power	T Box	-36 to -48 VDC; +12 VDC (<i>Option: available with separate AC adaptor</i>) (One supply each channel)		
	Receiver	-36 to -70 VDC; <i>Option: 100 – 240 VAC, 50 – 60 Hz, Redundant</i>		
Current	T Box	-36 VDC	80 mA (1 GPS antenna) 160 mA (2 GPS antennas)	
	Receiver		240 mA (1 Channel) 333 mA (2 Channels)	
	T Box	+12 VDC	240 mA (1 Channel) 480 mA (2 Channels)	
	Receiver	115 VAC	75 mA (1 Channel) 105 mA (2 Channels)	
	Environmental			
	Operating Temperature	T Box	-20 to +50 °C: Tx	
Receiver		0 to +40 °C: Rx		
Mechanical Parameters				
Dimensions	T Box	9.25" W x 6" H x 3" D		
	Receiver	19" W x 1.75" H x 15" D		
Connectors	RF	N (F): T Box SMA(F): Receiver		
	Optical	Senko IP-SC/APC (T Box, 1 fiber)		
		Senko IP-LC/APC dual, (T Box, 2 fiber) SC/APC (Receiver)		
	DC	2.1 mm Sealed Power Lock (T Box); 2 Position 5.08mm Pluggable (Receiver)		
	AC	Receiver Only: IEC60939 Socket		
Alarms & Monitoring				
T Box – Fiber Optic Transmitter	LEDs	1 Channel	GREEN: OK; YELLOW: Antenna Fail; RED: Tx Fail; OFF: Power Supply Fail	
		2 Channels	LED cycles through 3 states: 1 st : OFF 2 nd : Channel 1 status (see 1 Channel color codes above) 3 rd : Channel 2 status (see 1 Channel color codes above)	

TBox Fiber Transmitter Detail



Receiver Alarms & Monitoring	LEDs	Front	POWER – Main and Standby; GREEN – OK, OFF – Fail STATUS – Summary CH 1 + CH 2; GREEN – OK, OFF – ANT or Optical Fail
		Rear	POWER – Main and Standby; GREEN – OK, OFF – Fail ANT 1, ANT 2 – GREEN – Antenna OK, RED – Antenna Fail
	Electrical	DB-25 Connector	Alarms – Contact Closure, NC to Pin 12 Common Ant 1/Ant 2 – Pin 1/Pin 3; Rcvd Opt Pwr – Pin 2/Pin 4 Monitor – Rcvd Opt Power CH 1/CH 2 (1 V/mW) – Pin 14/Pin 15 Power Supplies (+12 VDC, 500 mA Fused) – Pin 24/Pin 25 RF – DC load on center pin to suppress GPS Rcvr alarm, Removed if ANT Failure



Ordering

Description		Model Number	
GPS Fiber Transmitter	-48 VDC	A13-TLnGPS-D31-Ny-SLzB-48	n = 1, 2: Number of Channels y = S (single fiber), L (2 fiber) z = W (WDM), Blank (no WDM)
	+12 VDC	A13-TLnGPS-D31-Ny-SLzB	
AC Power Adaptor (+12 VDC only)		ZA1-1-12-15-I	
GPS Fiber Receiver	Non-Redundant	A23-Z950n-GPS-AS-SpxN-Z	n = 1, 2: Number of Channels N = 4, 8, 16 (RF Outputs/Channel) p = W (WDM), Blank (no WDM) Z = Blank (AC Power), 48 (-48VDC)
	Redundant	A23-Z7R02-GPS-AS-SpxN-Z	

Optical Zonu Corporation 7510 Hazeltine Ave, Los Angeles, CA 91405-1419 T: 818.780.9701 www.opticalzonu.com

Optical Zonu Corp.
HQ and Technical Center
T: 818 780 9701
F: 818 780 9739
info@opticalzonu.com

Optical Zonu Corp.
Americas Region Sales
T: 818 780 9701 x123
M: 818.219.5504
info@opticalzonu.com

Optical Zonu Corp.
East Coast Office
M: 267 416 2395
pantola@opticalzonu.com

