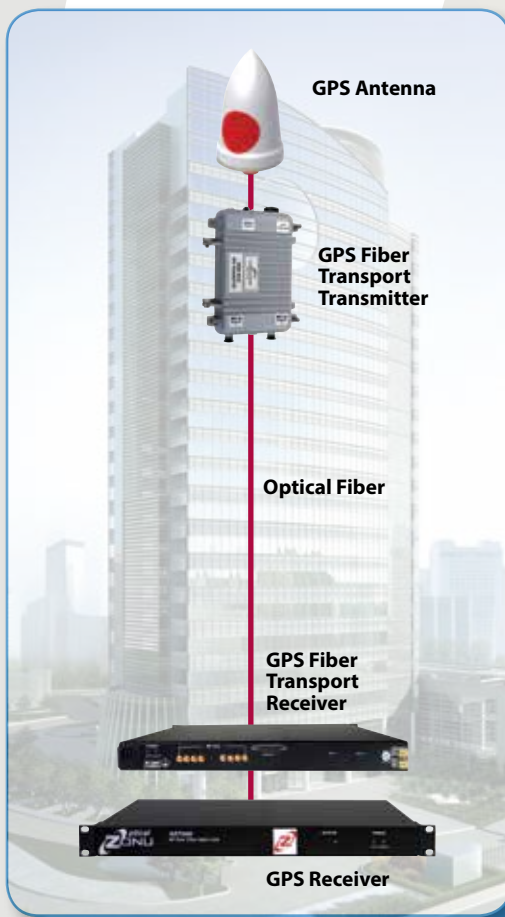




TURNKEY GPS FIBER TRANSPORT SOLUTIONS

UTILIZING OPTICAL ZONU LINK HARDWARE
AND PCTEL SITE ANCILLARY PRODUCTS



PCTEL's GPS Fiber Transport Solutions

- Include Everything Needed for Deployments
- Are Carrier Approved, with High Quality Materials and Electronics
- Provide Reliable Connections Between GPS Antennas and Receivers
- Enable Deployments Where Coaxial Cable Is Impractical
- Simplify Cost-Effective Site Installations
- Include Optical Zonu GPS Fiber Transmitters and Receivers
- Include PCTEL GPS High Rejection Antennas
- Include PCTEL Fiber and RF Ancillary Components
- Support Single and Dual Channel Applications
- Are Customizable, with Redundant Options Available



*Secure, Transparent RF Connection Between Your
GPS Antennas and Receivers*



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Fiber Transport Solution Configuration Options

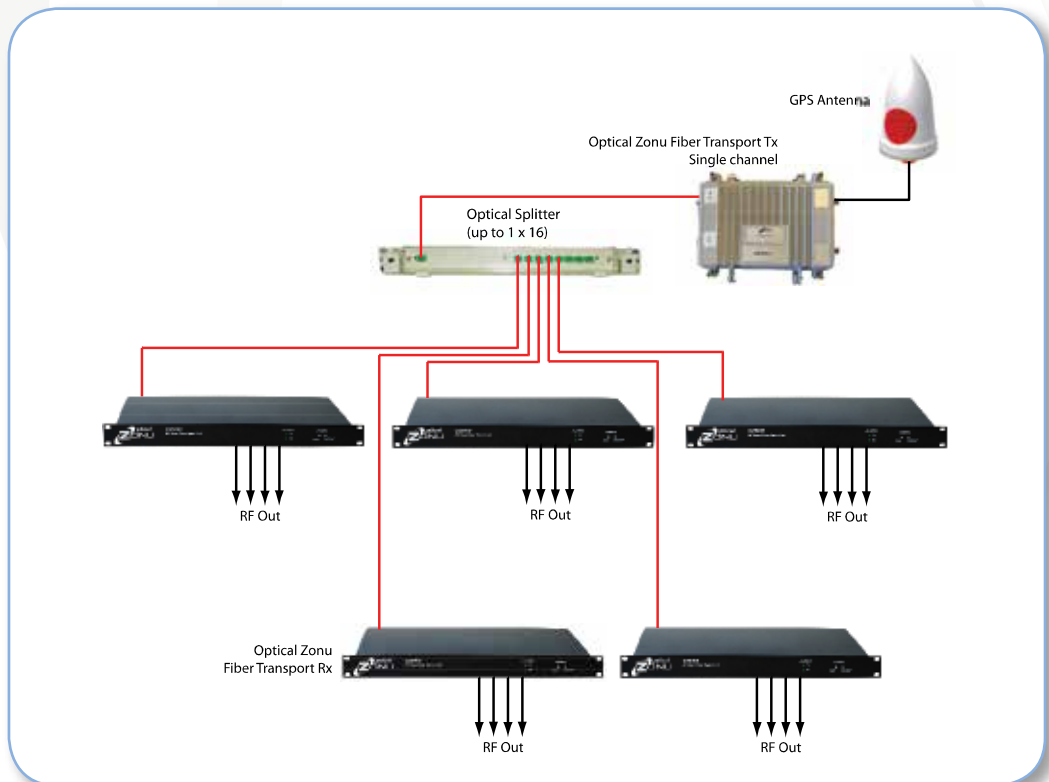
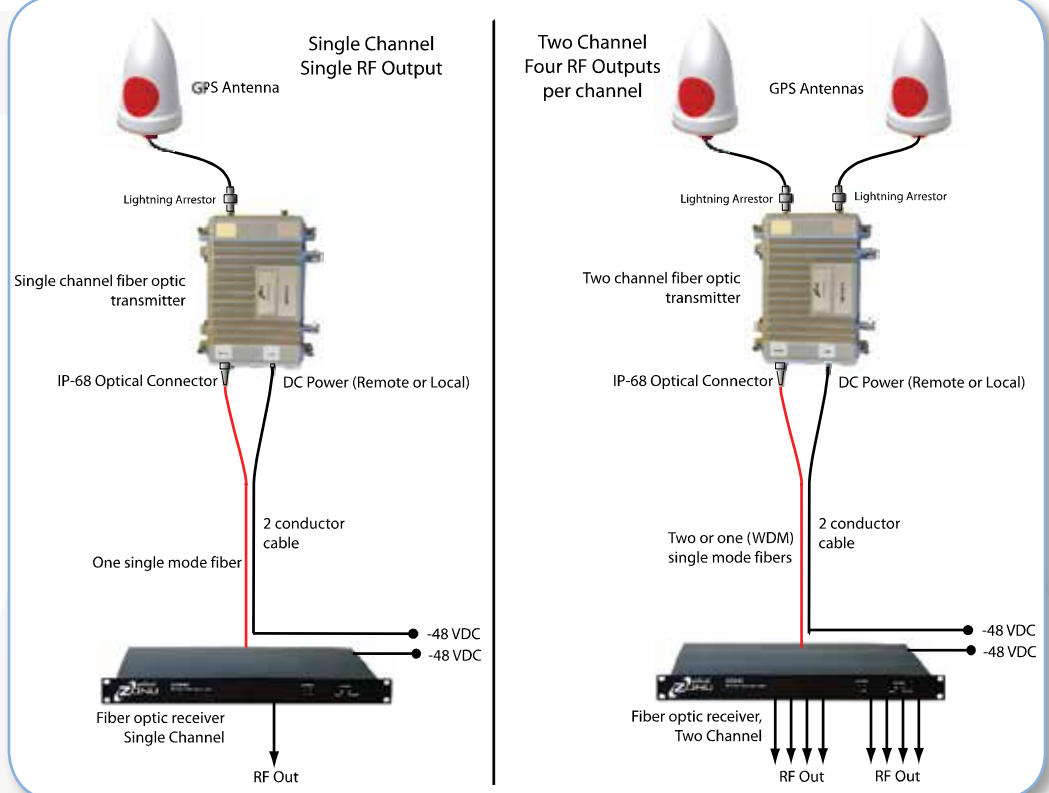
The Optical Zonu GPS Fiber Transport supports up to a 16-way optical split. With 4 RF outputs per channel, this permits extremely flexible and cost-effective GPS distribution.

Major Features and Benefits

- Supports GPS Bands L1-L5 and Global GNSS Bands
- Compact, Rugged IP-67 Fiber Optic Tx
- 1 or 2 GPS Channels – 1 or 4 RF Outputs per Channel
- Built-In Bias-T to Power Antenna
- Point-to-Point or Optical Split for Distributed GPS
- Auto Switchover Redundancy Option

Recommended Applications

- Wireless Infrastructure Synchronization
- Data Network Timing
- Public Safety E911
- Public Utilities
- Aviation
- Public Broadcasting



Technical Specifications

RF Parameters			
Frequency Range	1.1 – 1.6 GHz		
Noise Figure (Typical)	18 dB		
Input IP3	+8 dBm		
Link Gain (Typical)	20 dB: single RF Output/Channel, 13 dB: 4 RF Outputs/Channel		
Group Delay	< 1 ns + 5.0 ns/m fiber length		
Optical Parameters			
Fiber	Singlemode (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; Option: 100 – 240 VAC, 50 – 60 Hz, Redundant	
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)

Optical Zonu Transmitter / Receiver Detail

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

Fiber Receiver Chassis - Rear Panel (Top), Front Panel (Bottom)



Kit Materials and Ordering Information

PCTEL PROVIDES COMPLETE KITTED SITE SOLUTIONS INCLUDING THESE OPTIONS PACKAGED TO YOUR SPECIFICATIONS:

- Optical Zonu GPS Fiber Transport Link Hardware (transmitter and receiver(s) - your model choice)
- PCTEL High Rejection GPS Timing Antenna(s) (26db or 40db, N and 4.3-10 connector available)
- RF Surge Arrestor(s)
- Antenna Mounting Platform
- Low Loss Coaxial Cable Assemblies (built to length and environmental specifications)
- Fiber Optic Cable Assemblies (built to length and environmental specifications)
- Fiber Optic Splitter (when distribution to multiple receivers is required)
- Terminators for Unused Receiver Ports

Call Your PCTEL Account Manager or Customer Services Representative for Assistance with GPS Fiber Transport Solutions

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