



## Features & Benefits

- Supports L1 – L5 Frequencies, GLONASS, GALILEO
- Compact, Rugged Fiber Optic Antenna Unit for Indoor or Outdoor Installation
- Small, Easy-to-Install Fiber Optic Base Unit at Each Small Cell
- Point-to-Point or Distributed GPS for eFemtos, PicoCells, DRAN
- Patented Optical Alarm Reporting
- Simple, Clear Alarming Integrates Easily Into Any NMS
- Wireless Infrastructure Synchronization
- Data Network Timing

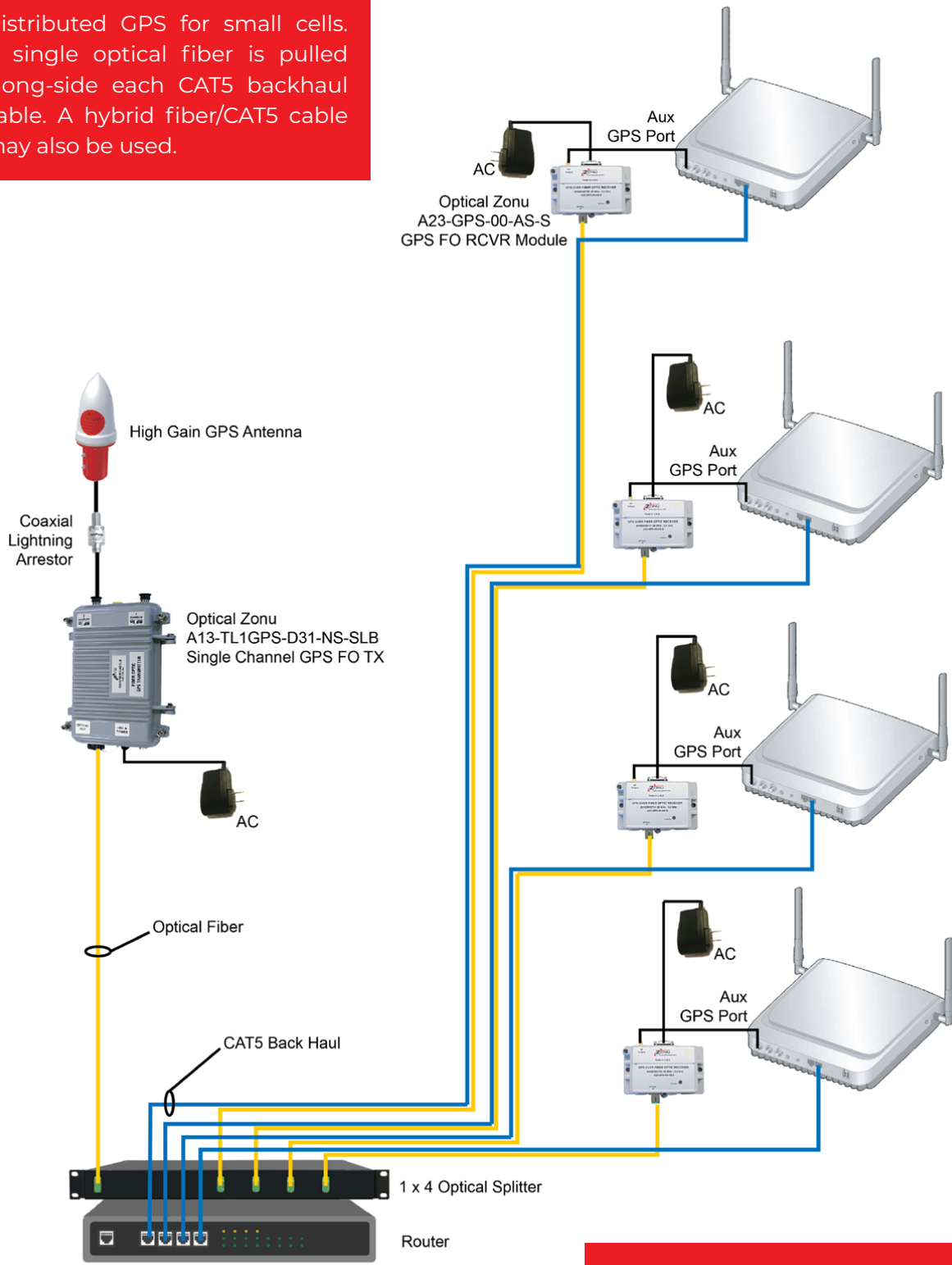
# GPS Over Fiber for Small Cells

## Description

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 and is the standard with all US mobile wireless service providers. Each link is wideband 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.

Optical Zonu's GPS-Over-Fiber for Small Cells provides an easy-to-install and cost-effective method of bringing the GPS signal directly to one or multiple small cells. The solution supports eFemtos, PicoCells and DRAN architectures. The RF-Over-Fiber connection from the Fiber Optic Antenna Unit can be optically split up to 8 ways. This optical splitter is collocated with the small cell back haul router and each single fiber from the splitter is combined with a CAT5 back haul cable to the small cell locations. Here, the small Base Unit recovers the GPS signal which is connected to the Small Cell auxiliary GPS port.

Distributed GPS for small cells. A single optical fiber is pulled along-side each CAT5 backhaul cable. A hybrid fiber/CAT5 cable may also be used.



The system supports up to a 1 x 8 optical split.

## Specifications

### RF Parameter

Frequency Range	1.1 - 1.8 GHz
Noise Figure (Typical)	18 dB
Input IP3	+8 dBm
Link Gain (Typical)	20 dB: 4 RF Output, no Optical Splitter; -2 dB with 1 x 8 Optical Splitter
Group Delay	< 1 ns Components + 4.9 ns/m fiber length

### Optical Parameters

Fiber	Single Mode (Multimode can also be supported – contact factory)
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### Electrical Parameters

Antenna Power	RF Connector Center Pin	+5 VDC, 50 mA
Power	T Box	+12 VDC; 240 mA
	Receiver	+12 VDC; 120 mA

### Environmental

Operating Temperature	T Box	-20 to +50 °C: Tx
	Receiver	0 to +40 °C: Rx

### Mechanical Parameters

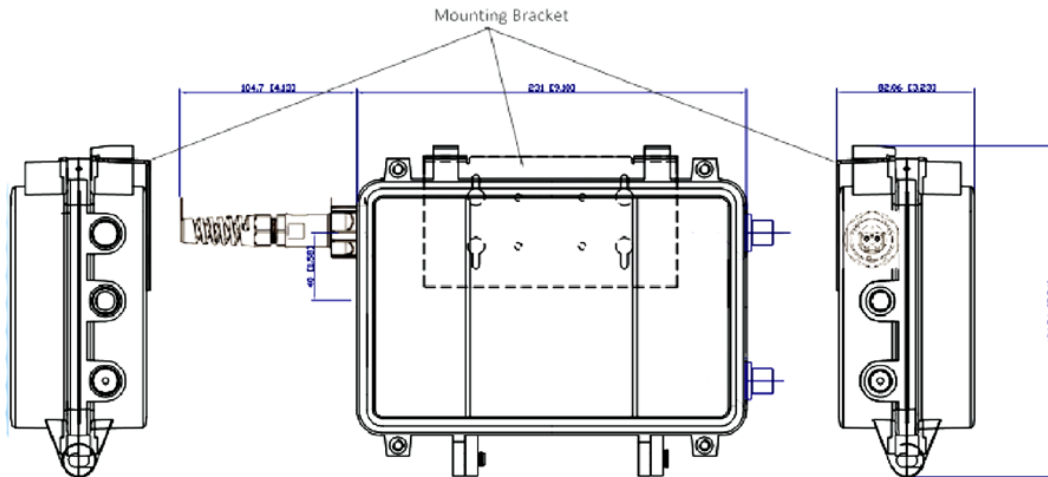
Dimensions	T Box	9.25" W x 6" H x 3" D
	Receiver	3" (76.2mm) x 5" (127mm) x 1.22" (31mm)
Connectors	RF	N (F): T Box SMA(F): Receiver
	Optical	Senko IP-SC/APC (T Box, 1 fiber) SC/APC (Receiver)
	Antenna Unit	2.1 mm Sealed Power Lock (T Box)
	Base Unit	9 Pin D-Sub

### Alarms & Monitoring

LEDs	Antenna Unit	GREEN: OK; YELLOW: Antenna Fail; RED: Tx Fail; OFF: Power Supply Fail
	Base Unit	Green - Power On; Red - Received Optical Power Low Flashing Green—Antenna Fail

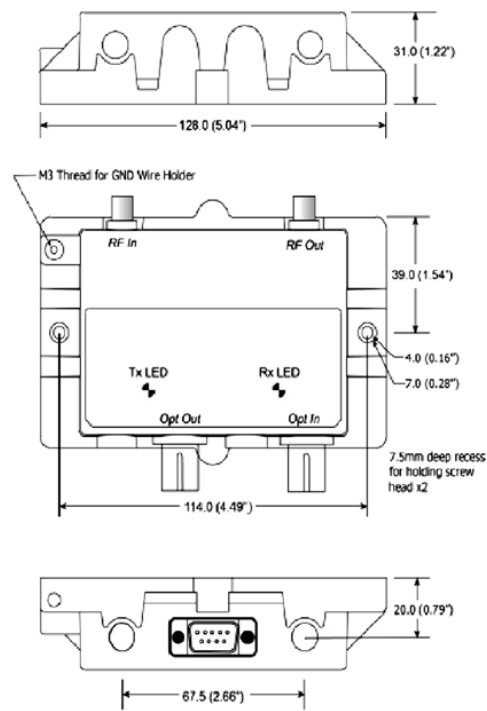
The Optical Zonu Fiber Optic Link Modules contain laser diode sources operating at 1310nm and 1550nm nominal. These devices are rated at under EN60825-1 "Safety of Laser Products" as CLASS 1 radiation emitting devices.

## Mechanical Drawing



All dimensions in mm (inches).

### T Box Dimensions



### Base Unit Dimensions



## Ordering Information

PART NO.

# OZKITGPSCELL - XY



**X** - 1 - 8; Number of Base Units      **Y** - 1, 2; Number of RF Outputs at Each Base Unit

Kit - GPS Small Cell Fiber Distribution

### Contains:

1. High Gain GPS Antenna w/Mtg Collar
2. Coaxial Lightning Arrestor
3. Single Channel Fiber Optical Antenna Unit
4. Fiber Optic Base Unit(s)
5. AC Power Adaptors for Antenna and Base Units
6. Optical Splitter, 19 inch Rack Mount, 1.75 in High



## Contacts

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