

# Antenna Monitoring Sensor

## Antenna WASP

The World's First Antenna Alignment Monitoring Solution



20 yr.  
BOND



Remote Antenna  
View

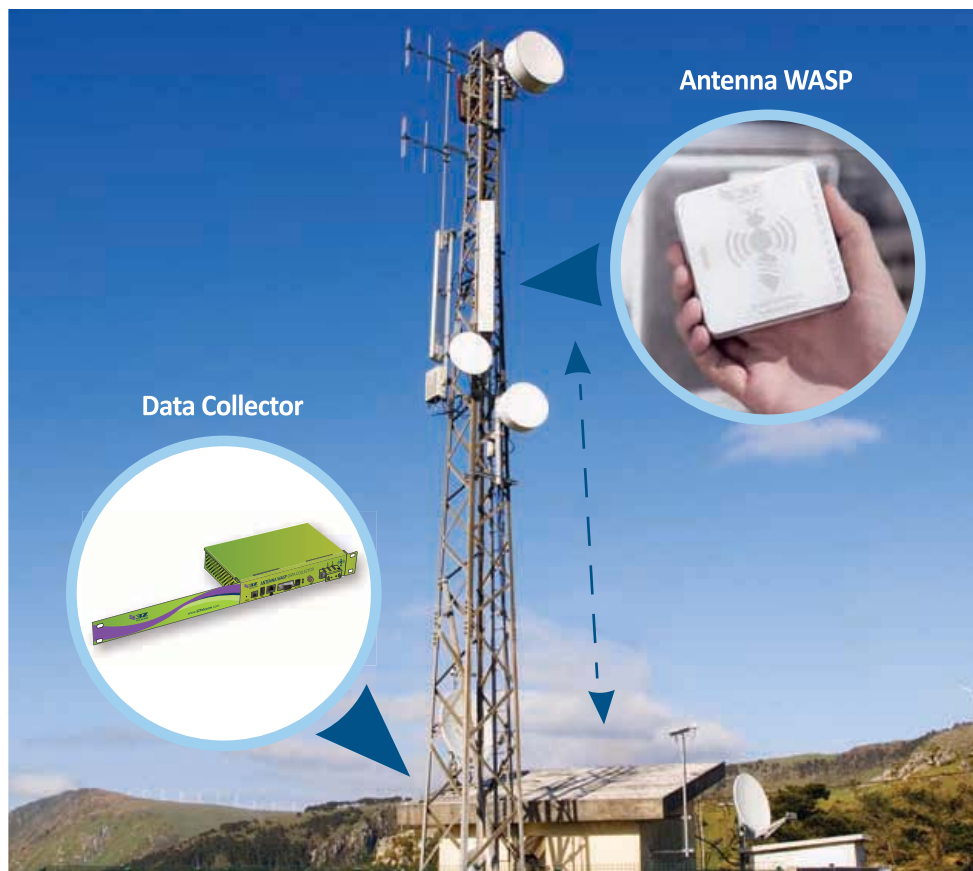


# Antenna WASP (Wireless Antenna Sensor Pod)

## Main Functions


3Z Telecom's Antenna WASP is a wireless Antenna Sensor Pod that when attached to an antenna, hourly monitors its alignment in 3 dimensions: azimuth, down-tilt and skew. The Antenna WASP will detect and report any undesired changes to all antennas being monitored (up to 18 antennas per site).

## Method of Sustaining - **Antenna's Azimuth, Tilt and Roll**



## The Antenna WASP

utilizes a wireless interface between the antenna's Sensor Pod and a Data Collector at the base of the tower or nearby communication facility. Any changes in the antenna's orientation is transmitted and, via SNMP, the Data Collector forwards this information to the wireless carriers' NOC, RF engineers, and/or operations personnel as needed.



**The Antenna WASP** offers virtually real time antenna alignment monitoring on all wireless network antenna arrays. Our patented technology allows network operators the ability to log in to a specific communication facility and view the history of all physical antenna changes.

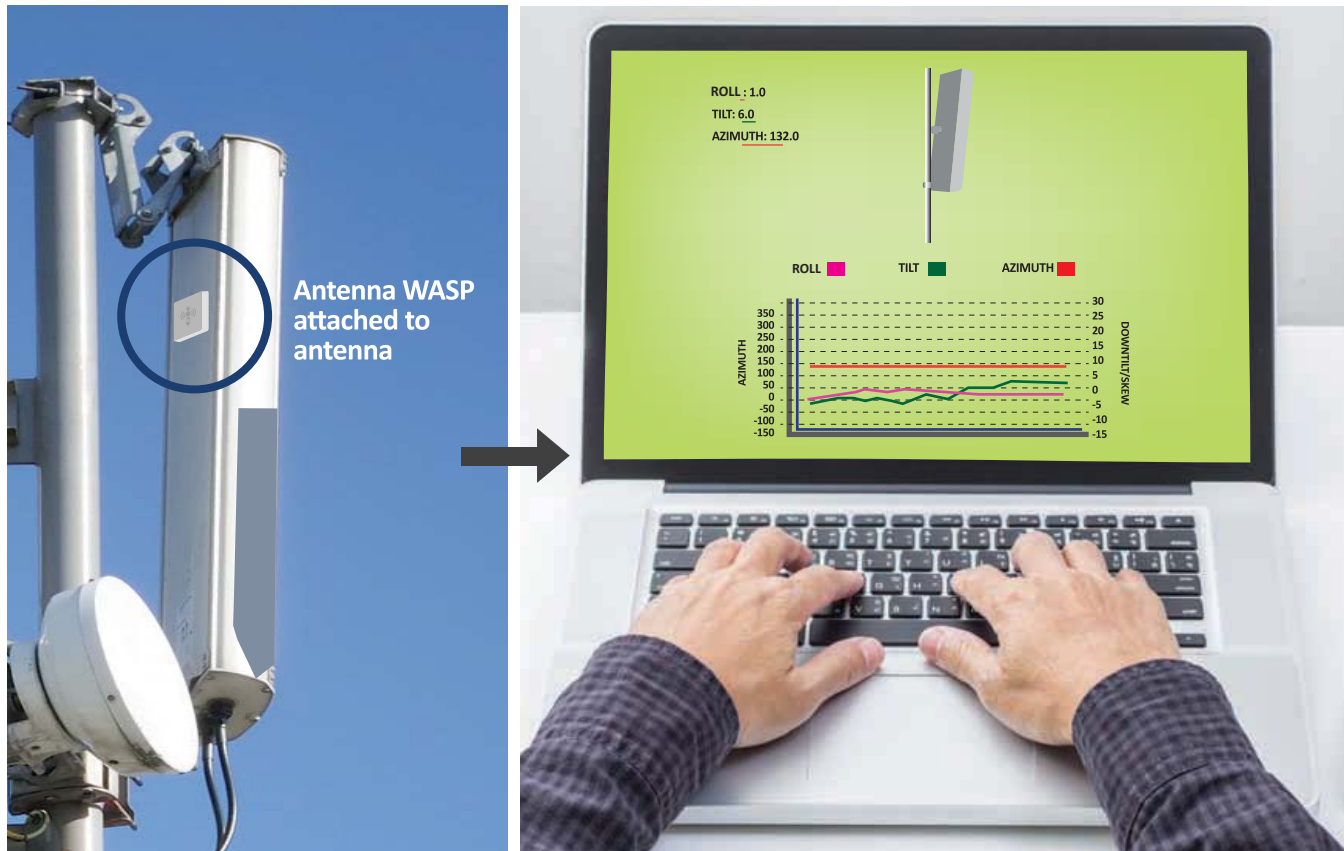
### Product Features

- Extremely reliable
- 10 + year battery life
- Ultra-low power consumption
- +/- 0.5 tilt accuracy
- Weatherproof packaging
- No maintenance
- Easy installation & set up
- On site & remote antenna monitoring
- Priority list creation upon a major network disaster
- Alarming capabilities

# From the Field to Your Desk

## The Antenna WASP is Alarm Capable

Each antenna can be individually identified on a tower or throughout the entire network. Via our robust remote monitoring software, a network operator has the ability to set thresholds for changes in azimuth, tilt and skew. When these thresholds are exceeded, an alarm will be generated and the operator will be notified immediately. If an undesired change occurs, an operator can act quickly to restore communications to optimal performance.



# Antenna WASP

## Technical Specifications

### Power:

- Operating voltage: 3.3V DC
- Battery: lithium-ion
- Battery life: 10 + years

### Dimensions & Weight:

- Length: 3.37 in (8.56cm)
- Width: 2.25 in (5.71cm)
- Height: 0.5 in (1.27cm)
- Weight: 4 oz (113.4gr)

### Accuracy

- Azimuth (See chart A)
- Mechanical tilt: 0.4° RMS
- Roll (skew): 0.4° RMS

### Adhesion to Antenna:

- High strength bonding tape
- Instant bond
- Extreme temperature and UV resistant
- Expansion and contraction
- 20+ year bonding history

### Communications

- Zigbee 802.15.4 2006
- FCC Part 15 compliant
- IC & CE compliant
- 2.4 GHz unlicensed

### Remote Monitoring:

- Alarming Capabilities
- User defined alarming thresholds
- 3D antenna view
- SNMP

### Environmental

- Operating temperature: -30°C to 70°C (-22°F to 158°F)

### Wireless Range

- From antenna sensor to data collector: up to 100 M (328 ft)

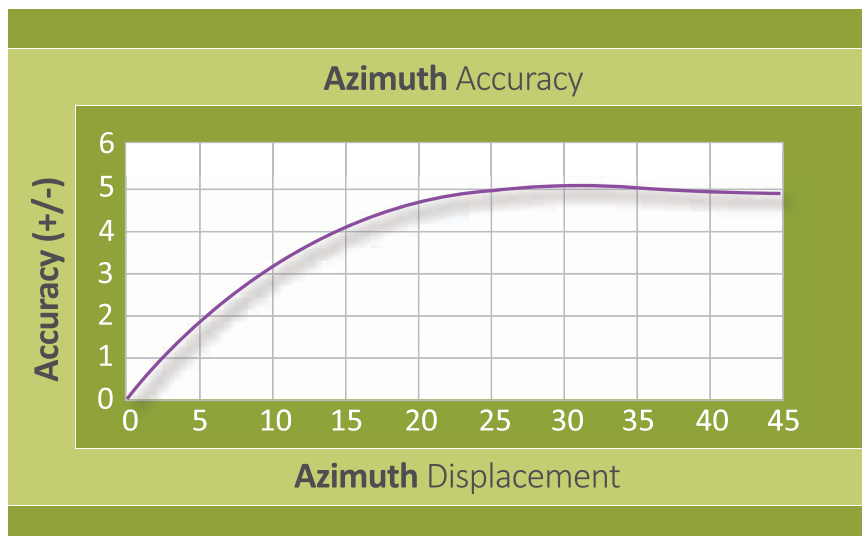


Chart A

### Easy to Set Up

The Antenna WASP's installation is an easy 3 step process, designed with the technician in mind. An average 9-antenna site can be installed and operational within one hour.

### Quality Standards

Every Antenna WASP device is designed to surpass performance standards required for wireless monitoring products. It has a battery lifetime of 10 + years and strictly enforced waterproof sealing standards IP67.

### Technical Support

With the purchase of an Antenna WASP system comes lifetime support, including training, software and field support.

When attached to an antenna, the **WASP** continuously monitors the alignment in three dimensions: Azimuth, tilt and roll.

**Remote Antenna  
View**





The Antenna **WASP** will detect and report any undesired changes to all antennas being monitored.



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## **Antenna WASP**

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**Antenna Monitoring Sensor**