



Model

# Z2400-8

Omnidirectional mast mount collinear  
Wireless Data Link Antenna, 85 cm

## ISM Band

## 2.4 - 2.5 GHz

## 10 dBi Gain

- Mount to a mast using one UB3SS stainless steel parallel clamp - available separately.
- N-type female connector at base of the stainless steel mount tube.
- 50 watts maximum input power.

## INSTALLATION GUIDE

[www.zcg.com.au](http://www.zcg.com.au)

### ANTENNA DESCRIPTION

**Z2400-8** is an omnidirectional collinear mast mount antenna designed for data communications in the 2.4 to 2.5 GHz ISM band.

85 cm tall, the antenna delivers 10 dBi gain.

Construction consists of copper internals, a robust white fibreglass radome and stainless steel mount tube.

An N-type female connector rated for up to 50 Watts input power is located at the base of the mount tube.

A detailed specification sheet is available to download from [www.zcg.com.au](http://www.zcg.com.au)

### TUNING

The antenna has been factory tuned to cover the full ISM band data link frequency range 2.4 to 2.5 GHz.

VSWR has been optimised to better than 1.5:1.

This tuning cannot be altered.

### SELECTING THE MOUNTING POSITION

The antenna is designed to be mounted outdoors to a mast.

**1 x UB3SS** stainless steel parallel clamp is recommended for the purpose and will suit a round mast between 20 and 50 mm in diameter.

Take care not to over-tighten the clamp beyond reason.

To achieve best performance from your antenna, these are the important principles you should consider when selecting the mounting point:

- 1. Mount the antenna in as high a place as possible.**
- 2. Mount the antenna as far away from other antennas and metallic objects as possible to avoid interference and distortion of the 360° omnidirectional radiation pattern.**
- 3. Mount the antenna vertical, not at an angle.**

### GENERAL PRECAUTIONS

- At all times standard OH&S working conditions must be maintained. Use common sense during all installation work.
- Never install an antenna where contact with electrical power lines is possible. Serious injury or death may occur. Power lines, telephone lines and guy wires can look the same. Assume any wire or line can electrocute you.
- Always wear an approved safety harness when climbing an antenna mast or working on a raised platform where a fall could occur.

### FEEDER CABLE and CONNECTORS

- ***IMPORTANT*** : *Signal loss will be high at ISM band data link frequencies. It is therefore most important to select a good quality low loss feeder cable according to the length of run required. Always keep the cable run to the shortest length necessary.*
- ***RU400 low loss is recommended as the minimum standard of feeder cable necessary to reduce signal loss and maintain optimum antenna performance.***
- Cable preparation trim dimensions for numerous connectors can be found in our product catalogue. This information is also available to download from the "Connectors" page of our website.
- ***Secure the cable properly so as it does not flap in the wind and no stress is placed upon any connections.***
- ***If using cable ties, then we highly recommend the stainless steel type for outdoor use.*** Do not pull them so tight as to crush the cable. A damaged feeder cable is a cause of high VSWR and reduced performance.
- Ensure that connector mating surfaces are not damaged and are clean and dry. The male connector pin should be set so as to not damage the female connector pin. Tighten the connectors firmly and make sure they are seated correctly. ***The connection should be sealed with two layers of self-amalgamating tape to prevent ingress of moisture.***
- The feeder cable should be earthed to avoid a destructive power surge in the event of a lightning strike.

### RETURN LOSS TEST

- Following installation of feeder cable, connect an SWR meter and measure the return loss at the feeder cable input to ensure that there is no major departure from the factory specification.

### INPUT POWER

- Only operate the antenna at up to 50 watts input power. Exceeding the maximum power rating will invalidate the warranty.

### MAINTENANCE

- The antenna and it's components have been designed for high reliability and low maintenance. We recommend a routine annual mechanical inspection of the antenna, connections and feeder cable together with a check of the return loss.