ZCG

Model

Z1280

Onidirectional high gain UHF/Wireless data collinear antenna

1.24 metres

1.27 — 1.29 GHz

(1270-1290 MHz)

10 dBi Gain

- Mount to a mast using either parallel or right-angle mount brackets, listed below available separately.
- N-type female connector at base of the stainless steel mount section.
- 50 Watts maximum input power.

INSTALLATION GUIDE

www.zcg.com.au

ANTENNA DESCRIPTION

The **Z1280** is our omnidirectional high gain UHF/Wireless data collinear antenna, designed for data communications or UHF applications in the 1.27 - 1.29 GHz frequency range.

The Z1280 stands at 1.24m tall with internal transposed radiating elements, resulting in a true 10 dBi gain performance and narrow signal path.

Construction consists a robust white parallel fibreglass radome with a 304 stainless steel mount section and bottom mounted N-type female. The N-type female connector is rated for up to a peak **50 Watts input power**.

A detailed specification sheet is available to download from **www.zcg.com.au**

TUNING

The antenna has been factory tuned to cover the full frequency range 1.27 to 1.29 GHz.

VSWR has been optimised to better than 1.5:1 across the entire frequency range.

This tuning cannot be altered.

SELECTING THE MOUNTING POSITION

The antenna is designed to be mounted outdoors to a mast, pole or external steelwork.

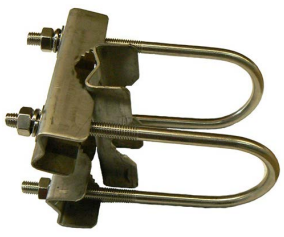
1 x UB3-SS stainless steel parallel clamp or **1 x UB2-SS** are recommended for the purpose and will suit a round mast between 30-50mm in diameter.

Take care not to over-tighten the clamp beyond reason, as this could cause the mount section to distort and possible distort the internal radiating elements.

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.**

1 x **UB3-SS** stainless steel mast mount clamp is recommended for parallel mounting



1 x **UB2-SS** stainless steel mast mount clamp is recommended for right-angle mounting

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 GHz frequency bands. 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, foam PE dielectric, solid copper conductor 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 connectors specification sheets.
- ***Secure the cable adequately, recommende every 600-1000mm, so as no vertical stress is placed upon any connections or cable and no movement of the cable occurs.***
- ***If using cable ties, then we highly recommend the 316 stainless steel type SKU: 8117 + SKU: 8215 for outdoor use.*** Excessive tightening will crush the cable. A damaged feeder cable is a cause of high VSWR and reduced performance.
- Ensure that connector mating surfaces are free from damage, water and debris. 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 self-amalgamating tape and uPVC 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 see ZCG's GK range of grounding kits available.

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.

MAINTENANCE

- We design and manufacture our range of RF solutions to ISO accredited quality assurance. Resulting in a low maintenance, long service life. We recommend a yearly inspection of your entire system for environmental/animal damage.

PO Box 7, Lindenow, Victoria, Australia, 3865
P: +61 3 5157 1203
E: sales@zcg.com.au