

## CMWB2-038-6-NJ

### 1. Introduction

The CMWB2-038-6-NJ is an ultra-wideband low PIM ceiling mounted antenna covering 380MHz to 6GHz. The antenna features an integrated groundplane and can be mounted on metallic or non-metallic ceilings. The antenna can be mounted by way of its N connector mounting bush or utilising optional additional screw fixings concealed beneath the antenna's removable snap fit caps.

### 2. Select a suitable mounting location

The antenna is omni-directional and should be mounted as centrally as possible within the desired coverage area. The roof space should be accessible at this location to permit routing of cables to the radio.

Select a flat, level location on the desired ceiling which is free from obstructions and not too close to other ceiling mounted items - consider downward projection of antenna and any height clearance issues with low ceilings.

Take care to avoid mounting the antenna in close proximity to metal ceiling furniture such as girders, joists and air conditioning units as these objects may affect the antenna's performance.

### 3. Mount the antenna

If the ceiling is constructed with removable ceiling tiles, it may be best to remove the tile, mount the antenna, and then re-fit.

Remove the thumbscrew nut from the N type connector and set aside.

If the mounting hole caps are fitted and use of those holes is required by the installation the caps should be carefully extracted and set aside.

Mark the position of the mounting holes & RF connector and drill appropriate holes. Alternatively if mounting to an appropriate material self tapping screws can be used. Screws should be M6 or 1/4 inch pan head screws of an appropriate length for the installation.

Mount the antenna base plate on the ceiling tile and replace the thumbscrew nut tightening it firmly. Utilise M6 or 1/4 inch screws to secure the installation if required. Replace the snap fit mounting hole caps.

### 4 Route and terminate the coaxial cable

Route the coaxial cable from the radio or combiner to the mounting location, taking care to avoid running it adjacent to existing wiring or ceiling furniture. Next fit a suitable male N-type coaxial connector or adaptor (as applicable) to the cable and connect the cable to the antenna. For a low PIM installation suitable low PIM cables and connectors should be used. When connecting the N male connector to the N female bulkhead located on the antenna the recommended torque is 100 Ncm.

### 5 Commission and test

Using a suitable antenna analyser, carry out a VSWR test in each freq. band. A VSWR of <3:1 should be achieved at 380-400MHz UHF and a VSWR of < 2:1 should be achieved across all other bands.

Fig.1 Rotate off thumbscrew nut from N type bush and remove screw caps (if required).

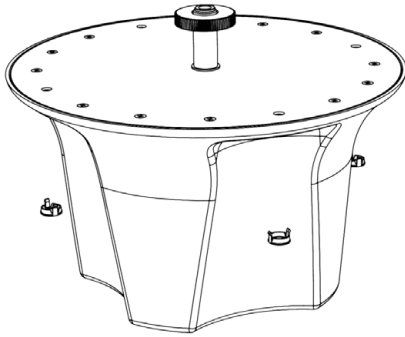


Fig.2 Set aside thumbscrew nut and screw caps. Mark and drill mounting holes.

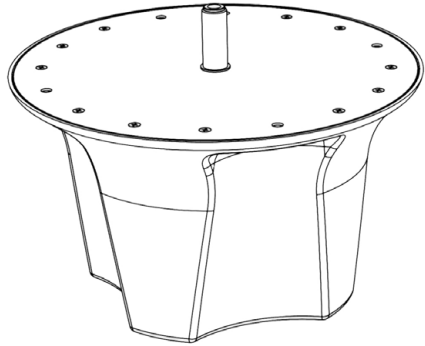


Fig.3 Mount antenna through selected surface.

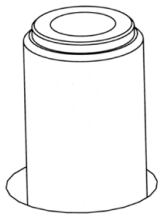


Fig.4 Replace thumbscrew and tighten to secure the installation.

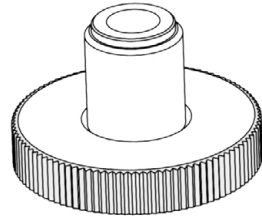


Fig.5 Secure the installation with screws (if required) and replace snap fit caps.

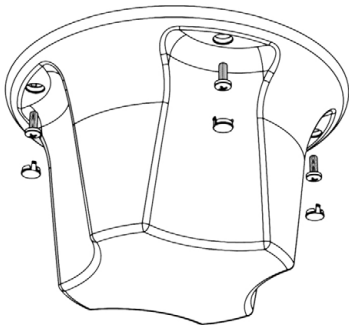


Fig.6 Check over and test installation.

