



Installation Instructions

4x4 MiMo Omni-Directional Antenna

WMM4-7-49

SW3-978 - v1

1. Introduction

The WMM4-7-49-[X] is a range of omni-directional antennas for 4G/5G devices which require a 4x4 MiMo antenna system and covers the cellular bands within the frequency range 698-4900MHz.

Ideal for home, office, branch or failover applications, the antenna is suitable for external or internal mounting and is supplied with mounting hardware for wall or mast installation.

2. Planning and Installation

Choose a suitable location to determine the installation type.

The antenna can be wall mounted using the supplied wall mount bracket and suitable screws and wall plugs (not included).

Alternatively the antenna can be mounted to a mast of 20-50mm (0.71-1.96") diameter using the supplied mast mount clamp.

NOTE: This instruction does not cover installation of a mast, which must be selected and installed as a separate process to ensure that it can support the weight and wind load of the antenna.

To provide the best omni-directional performance, the antenna should be located as far away from other objects and structures as possible, and if wall mounted, the wall must not be of metallic construction. As the antenna is omni-directional, it does not need to be facing any particular direction, but it should be installed in a vertical orientation with the cables exiting downwards.

3. Safety Notes

- Please seek professional advice from an accredited installer regarding the installation if in any doubt.
- If the antenna will be fitted to an existing mast, please ensure that it will not overload it.
- Ensure that the installation location can be safely accessed with the equipment that you have available.
- If mounting in a position which is accessible care should be taken to ensure that no one comes within 0.3m (1') of the antenna during use.



CAUTION

Parts of the antenna are an electrical conductor. Contact with power lines can result in death, or serious injury. Do not install the antenna where there is any possibility of contact with (or high voltage arc-over from) power cables. The antenna and supporting mast must not be close to any power lines during installation, removal or in the event that part of the system should accidentally fall.



CAUTION

If the antenna is installed above the roof line or in an exposed location, it is advisable to fit lightning surge arrestors in the coaxial cable feed line.

Suitable units should be sourced and installed as per the manufacturer instructions.

The installer is responsible for determining if this is a requirement for the antenna installation.

4. Wall Mounting

To mount the antenna to a wall or panel you will need the following supplied parts:

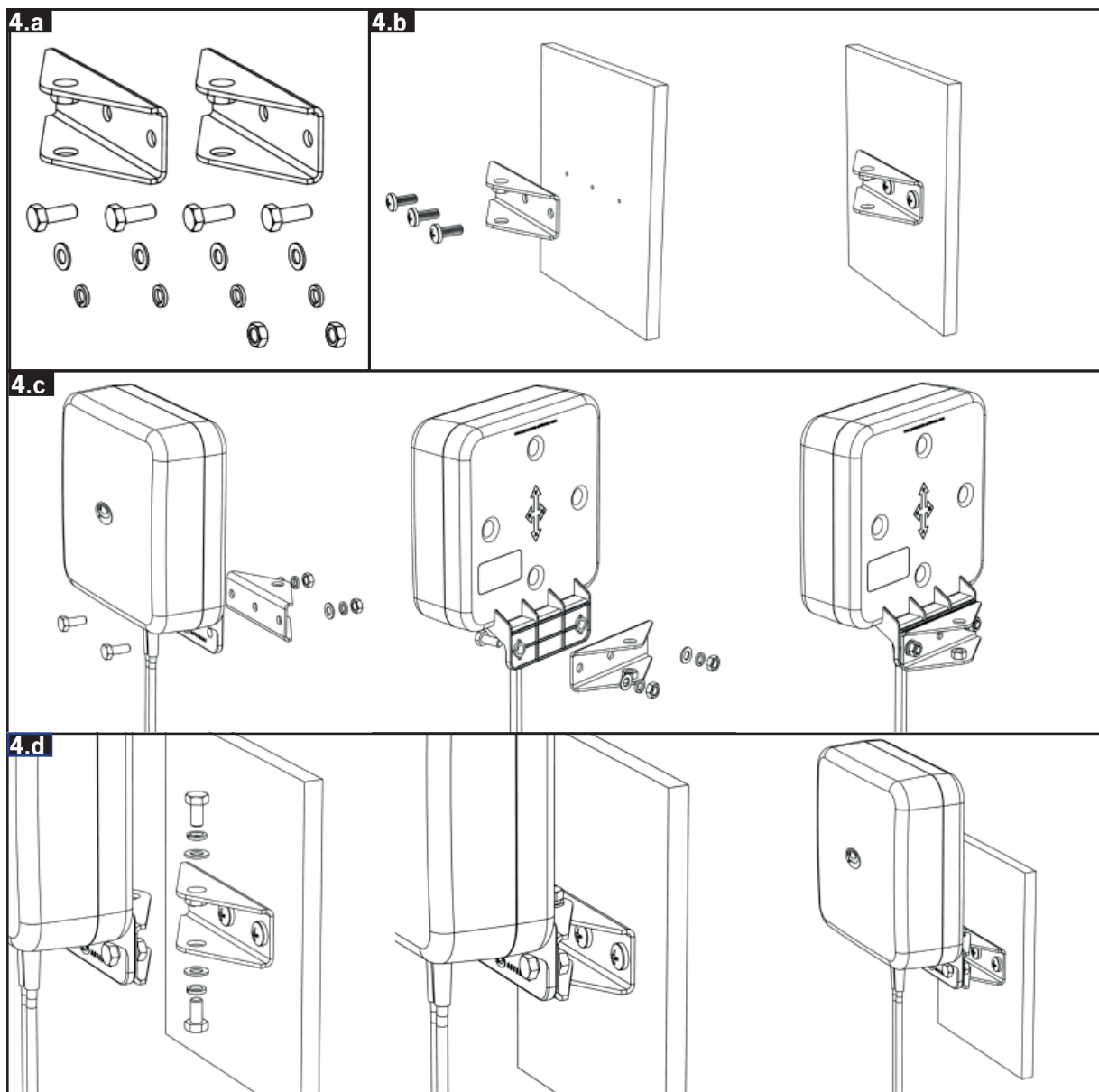
| | | |
|-------------|-------------------------|------------|
| 1 x Antenna | 2 x Wall Bracket Plates | 4 x Screws |
| 4 x Washers | 4 x Spring Washers | 2 x Nuts |

The antenna must be mounted with the cables exiting downwards and should not be fitted directly on to metal walls.

Fit one half of the bracket to the antenna using the screws, nuts and washers provided.

Check the wall / panel to ensure that drilling in the chosen location will not damage any objects, wires or pipes within or behind the panel. Using the other half of the bracket as a template, mark the hole positions ensuring that they are level. Drill pilot holes and then increase to the appropriate hole size for the wall anchors / wall plugs that are being used. Fit the bracket to the wall using appropriate screws/anchors and wall plugs.

Align antenna bracket plate with the wall mounted bracket half and fasten them together using supplied fasteners. Adjust the angle of the bracket as required and tighten securely.



5. Pole/Mast Mounting

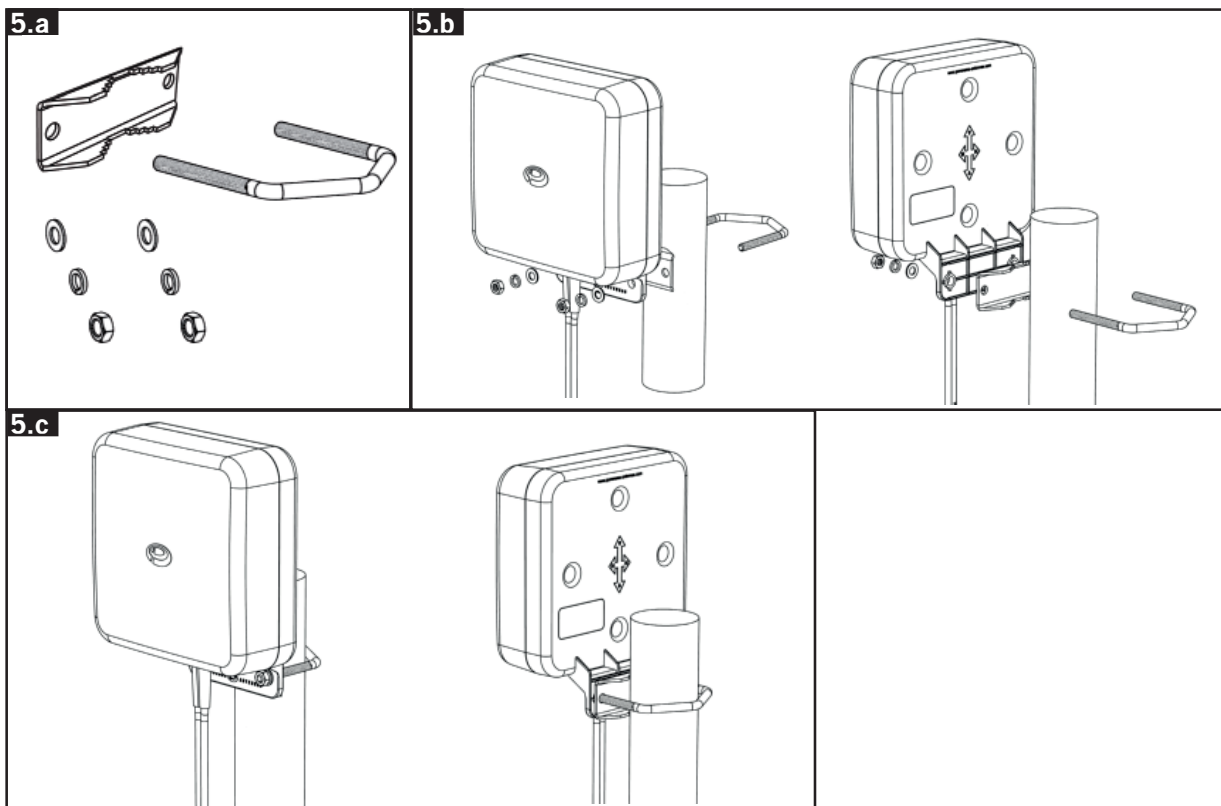
In order to mount the antenna to a pole or mast you will need the following supplied parts:

| | | |
|-------------|--------------------|------------------|
| 1 x Antenna | 1 x U-Bolt | 1 x U-Bolt Plate |
| 2 x Washers | 2 x Spring Washers | 2 x Nuts |

The u-bolt assembly allows fitting to masts of between 20-50mm (0.8" – 2") diameter. Ensure that the selected mounting location can be safely accessed with the equipment that you have available and mount the antenna so that it has at least 1 metre (3.3') of clearance from all obstructions if possible. The antenna must be mounted at the top of the pole so that the body of the antenna is elevated clear of the metal pole.

The supplied u-bolt bracket can then be used to clamp the antenna to the mast. The u-bolt plate should be held against the antenna and the u-bolt passed through both the plate and antenna clamping the mast. The supplied nuts and washers can then be used to tighten the assembly securely to the mast.

Caution: Do not over-tighten the u-bolt as this may damage or distort the mast tube section.



6. Routing Coaxial Cables

Plan the coaxial cable route to the wireless device to avoid running adjacent to any existing electrical wiring and ensuring that they will not be subjected to damage.

Secure the cable run using correct size cable clips, so as not to distort/compress the cable. It is important that the cable is not bent sharply – note that the minimum bend radius for the cable is 25mm (1") and this should be considered when routing to the cable entry point. Where the antenna is installed externally, it is good practice to create a 'drip-loop' at the entry point to avoid water ingress. Any excess cable must not be coiled - it should be laid out in a figure of eight pattern and loosely secured.

SMA (m) connectors are fitted as standard. A 9mm (0.35") clearance hole is required for each connector – ensure it protected whilst feeding through the hole to prevent damage or contamination. Other connector types are also available and may require a different size hole.

7. Commission and Test

- Carry out VSWR check on each cable feed, the VSWR should measure as per the data sheet.
- Connect the cables to the 4G/5G device.

8. Notices



DO NOT

- operate the transmitter when someone is within 0.3m (1') of the antenna.
- operate the equipment in an explosive atmosphere.
- attempt to install the antennas without the proper safe equipment to access the install location.
- install the antenna near power lines.
- chew parts or put them in mouth, keep away from unsupervised children.
- install the antenna in such a way that it may fall and cause injury.



European Waste Electronic Equipment Directive 2002/96/EC

Waste electrical products should not be disposed of with household waste. All electronic products with the WEEE logo must be collected and sent to approved operators for safe disposal or recycling. Please recycle where facilities exist. Many electrical/electronic equipment retailers facilitate "Distributor Take-Back scheme" for household WEEE. Check with your Local Authority or electronic retailers for designated collection facilities where WEEE can be disposed of for free.

Waiver: This document represents information compiled to the best of our present knowledge. It is not intended to as a representation or warranty of fitness of the products described for any particular purpose. This document details guidelines for general information purposes only. Always seek specialist advice when planning installations and ensure that antennas are always installed by a properly qualified installer in compliance with local laws and regulations.