

MIMO-Blade Installation Guidelines

Overview

The MIMO-Blade is a 2 x LTE/4G multiband waterproof MIMO blade antenna designed to complement 4G and LTE routers, modems and gateways in fixed and mobile applications. Housed in a robust, durable and IP67 compliant cover, the MIMO-Blade is a discreet solution for mounting on non-metal surfaces such as vehicle windows, dashboards, inside kiosks or terminals or in locations outside a vehicle or enclosure.

The MIMO-Blade is supplied with two RG174 cables and these can be specified to a customer-specified length and choices of connector, SMA-Male, FME-Female and TS9 connectors are popular.

Standard Installation Methods

IMPORTANT: Please note that the MIMO-Blade should not be mounted directly onto a metal surface

Suction Cups – The MIMO-Blade is supplied with two suction cups as standard. These facilitate the mounting of the antenna onto the inside of a window, plastic housing/enclosure or any other flat, clean, dry, slick/shiny, non-textured, non-porous surface. The suction cups are usually pre-mounted onto the antenna.

To mount the antenna with suction cups, take note of the following points:

1. Make sure the suction cup is clean and free from debris.
2. If the suction cup needs to be cleaned, wash in warm soapy water then dry gently with a lint-free cloth.
3. Clean the surface you are applying the suction cup to with soap and water. It won't adhere well to a dirty surface. De-grease the applied surface with alcohol if necessary and do not clean the surface with bathroom/window cleaners as they usually leave a residue which will affect adhesion.
4. Press the cup all the way down, against the surface.
5. The suction cup may need to be "burped" periodically by pressing down on it to remove any air that may have seeped in.

Fig. 1 shows an example of the MIMO-Blade mounted with suction cups.



Figure 1

Velcro – Adhesive-backed Velcro pads can be used where suction cups are not suitable and the antenna requires regular mounting and de-mounting. Affix the loop-backed Velcro pad to the antenna and the hook-backed to the mounting surface.

The application instructions are as follows:

1. Clean and dry surface before application. You can use any cleaner that will not leave a film or oily surface. We recommend using alcohol prep pads.
2. Peel tape from fastener and press firmly into place.
3. Adhesive reaches maximum strength after 24 hours.

Over time, the hook surface can pick up lint and other debris that can affect its ability to grip the loop surface. Cleaning debris out of the hooks is similar to cleaning hairbrushes: using a stiff brush or another piece of hook are the best methods. It can take some doing – after all, the hooks in the tape are made to grab! The optimal solution is prevention: the hook portion should be covered at all times, so it does not grab onto anything it should not — like a blanket or your hair. Always engage the hook and loop before washing.

Adhesive Tape - To use double-sided adhesive tape to mount the antenna, follow the same procedure as the Velcro mounting. Affix one side of the adhesive tape to the antenna and then stick the antenna to the mounting surface.

The application instructions are as follows:

1. Clean and dry antenna and mounting surfaces before application. You can use any cleaner that will not leave a film or oily surface. We recommend using alcohol prep pads.
2. Peel backing off one-side of the tape and press firmly into place onto the middle of the antenna – make sure you stick tape on rear of antenna i.e. not the side where the cables exit
3. Peel backing off the other side of the tape and press the antenna with the tape firmly against the mounting surface.
4. Press and hold until antenna is held securely in place.

Nylon Screws – The MIMO-Blade can be installed using nylon screws and screwed onto a non-metal surface for permanent mounting. The diameter of the mounting holes on the antenna are 6mm, so the head of the plastic screws should be slightly larger than the hole diameter to ensure secure fixing. Do not over tighten the plastic screws when mounting as there is a risk of damaging either the plastic screw or the antenna cover. A countersunk nylon screw as shown in fig.2 below should do the job.



Figure 2

Figure 3 shows the MIMO-Blade with 6mm x 25mm plastic screws inserted.

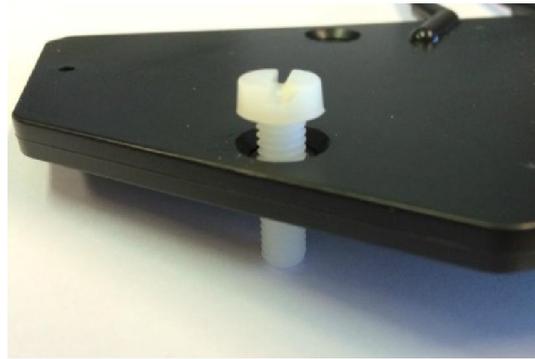


Figure 3

Figure 4 shows MIMO-Blade with 6mm bolt and locking nut



Figure 4

Cable ties – The MIMO-Blade can be installed using nylon cable ties and mounted to a non-metal surface. Such installation locations might be a plastic frame or non-metal pole, bracket or extrusion. Cables ties might also be used to mount the antenna to street furniture or industrial equipment.

Figure 5 shows an example of mounting with cable ties.



Figure 5

Mounting onto a metal surface – There are instances where there is no alternative, but to mount the antenna onto a metal surface. In these environments, non-metal spacers should be used to ensure the antenna is not de-tuned by the metal surface. In addition, when using the spacers, non-metal fixings should also be used.

In Figure 6 below, you can see an example of using spacers. Ideally, a minimum of 20mm keep away distance should be adhered to (in some environments the distance may need to be larger). Here we show an example of acetal spacers with a 6mm hole in the centre mounted via plastic screws to give facilitate keep away space from metal mounting surfaces.



Figure 6

Due to the range of mounting options possible, only the suction cups are supplied as standard with the antenna. 6mm plastic screws, double-sided adhesive, Velcro and cable ties are widely available. If you need assistance with mounting or support on the use of the MIMO-Blade antenna, please contact your local EAD distributor for more information.

EAD reserves the right to make specification changes without notice