JEM ENGINEERING

THE MANY FORMS OF A FLIGHT-QUALIFIED ANTENNA

What makes a flight-qualified antenna?

In order for an antenna to be qualified for mounting onto a non-stationary ground plane, it has to meet stricter vibration testing standards than it would for stationary mounting. Additionally, atmospheric factors need to be considered. A stationary antenna, if mounted outdoors, will also have to withstand harsher temperatures and weather conditions, and therefore pass more rigorous temperature, wind, dust, humidity, and corrosion tests, to name a few.

Naturally, a vehicular antenna, especially one mounted onto the exterior of the vehicle, will need to withstand the aforementioned non-climate-controlled conditions, in addition to increased shock and vibration. A flight-qualified antenna, however, must meet even higher standards than a vehicular antenna. Additionally, it must operate well in high altitudes.

Flight-qualified antennas come in many forms.

JEM Engineering is proud to offer a variety of flight-qualified antennas, ranging from flat panel, to box-type, to blades, and even flexible peel-and-stick antennas. These antennas are suitable for various applications, including multi-band communications, EW, ISR, SIGINT, as well as satellite communications.

Flat Panel Antennas

Our FPA product line features flight-qualified, multi-element antennas that operate within L-band frequencies (1 - 2 GHz).

The **FPA-8296** is an ultra-high frequency (UHF) patch antenna, which features a curved design that allows for less conspicuous mounting.

Blade Antennas

Specifically designed for aerodynamics, blade antennas are often mounted to the exterior surface of an aircraft.

Ranging in size and frequency band, our UVW products used for ground-to-ground, air-to-ground, and ground-to-air communication systems. They are also optimal for unmanned aerial vehicle (UAV) communications.

The **UVW-0430A** is suitable for sensor systems and low drag operations.

Box-Style Antennas

Among our many box-style antennas is the **MBA-0162**, which comes in a low-profile form factor designed for 2.5" (6.4 cm) cavity depth. With an efficiency of over 50% for the aperture across the entire band, the "Sentry," as we've nicknamed it, has unparalleled performance. It can be placed both on conductive and non-conductive surfaces, behind a radome or other nonconductive skin.

All measuring less than 9" (22.6 cm) long and weighing 1lb (0.45kg) and under, our box-style wideband sector antennas (WSAs) are portable and multi-functional. They feature 90-degree angle brackets, which allow for easy mounting and dismounting.

About JEM Engineering

In addition to readily available antenna products, JEM Engineering offers custom antenna development. We create antenna designs to meet our customers' unique requirements.

JEM Engineering's team boasts over 150 years of combined experience, allowing it to take an antenna concept all the way through to full-scale production. Not only do we deliver quickly, we also extend our full satisfaction guarantee to all of our customers on all of our products, as well as our services. We are a 100% woman owned small business based in the United States.