

Antenna Assemblies

Design Knowledge

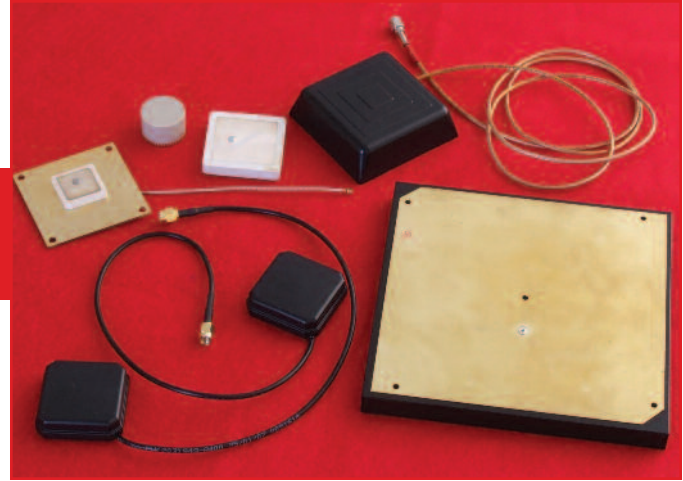
Spectrum Advanced Specialty Products has vast knowledge and experience in advanced computer simulation, allowing us the ability to manufacture custom solutions and military hardened assemblies for any of your antenna assembly needs.

Features

- Design multi-antenna systems
- Quick “hand-tuned” prototypes for testing
- Design considerations:
 - Frequency vs. size
 - Pin tapping point
 - Impedance and resonant frequency
 - Axial ratio and polarizations
 - Voltage standing wave ratio
 - Bandwidth

Antenna Types

- Aperture
- Slots
- Loops/magnetic dipole
- Planar
- Helical
- Beam forming-static
- Custom networks
- Switched arrays



Applications

- Portable defibrillators and patient monitors
- Thoroughbred and sport dog racing monitoring
- Asset tracking devices
- Tank monitoring
- Fish, golf range and directional finders
- Toll meter equipment
- Down-hole drilling
- Automatic meter reading
- Weather recorders/balloons
- Short distance wireless data transfers
- Ocean buoys
- Survey equipment
- Homeland security
- Marathon tags

Performance Attributes

- Frequency ranges within -300 MHz to 6 GHz
- Low VSWR
- High efficiency
- High gain

For complete specs and drawings, visit www.SpecEMC.com/antenna

Patch Antenna Assembly Options

Features

- Available in partial assembly to complete "Plug-n-Play" assemblies
- Single or multifrequency packages
- Optimized designs for peak performance
- 100% tested
- Custom designs
 - Flexibility on cable and connector selection
- Standard designs available
 - AeroAstro SENS
 - Globalstar
 - Iridium
 - GPS
- RoHS compatible parts available

Optimizing Performance

Don't trust your wireless reception to luck. Let us help you design it right the first time. Our engineering team is ready to help identify critical issues such as the board layout, ground plane size, mounting methods and port measurement that will influence the efficiency of the antenna. We'll look at the polarization and radiation patterns, gain, impedance matching and frequency tolerance to determine the ideal patch for your design. With our computer modeling abilities, we can quickly determine your best options. In addition, we also have an on-site anechoic chamber to validate performance. Our flexible manufacturing and testing processes allow us to easily accommodate the required adjustments to supply an optimized antenna.

Our designs can be modified to meet your mechanical, cable length, connector and other specification. Each design is evaluated to provide an optimized performance to exceed your electrical and mechanical parameters.

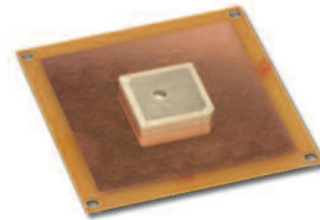
Please consult factory with your specific details.

Quick Turn Prototypes

We can provide quick turn prototypes by using our on-site engineering lab to hand tune an existing design to meet your specific needs. For advanced designs, we utilize 3-D computer modeling to optimize antenna performance and provide expected real world results of high volume production.

AC Series

Patch Antenna mounted on a ground plane with a connector mounted directly to the PCB. Standard connector is MMCX.



AR Series

Patch Antenna mounted on an optimized ground plane with a pigtail cable to a connector, which is tuned and packaged for the plastic radome that covers the complete assembly. Standard cable is RG-316 to MMCX or SMA connectors, others available.



AP Series

Patch Antenna mounted on a ground plane with a pigtail cable to a connector. Standard designs have 6" (15.2 cm) RG-316 cables, connector varies by application. Alternative lengths and connectors available.

