Omni Antenna Solutions

Optisys offers a variety of omni antenna designs between L-band and Ka-band. Additive manufacturing allows for use of our library of predesigned components to rapidly create custom antennas. These designs have short lead times to create prototypes and full rate production antennas.

Optisys Capabilities

Optisys is an antenna design company that specializes in designing compact, lightweight, and high-performance antennas. We leverage metal 3D printing to create integrated antenna structures that achieve the smallest volume physically necessary for RF performance.

Antennas Options

- Traditional Omnis
- Conformal Antennas
- High Power Handling
- Integrated Connectors
- Integrated Cooling Features
- Integrated Mounting Features
- Aluminum or Stainless Steel
- High Shock/Vib designs

Optisys Overview:
- High Performance Antennas
- Reduced Size
- Reduced Weight
- Custom Designs

Product Services:
- Antenna/RF Design
- Mechanical Design
- Systems Engineering
- Additive Manufacturing
- Antenna/RF Testing

Applications:
- Soldier C4ISR
- Satellites, CubeSats
- Air/Ground
- UAV Communications

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Mass Customization

Optisys uses modular designed antenna components to significantly cut design costs, reduce weight, decrease size, and shorten design time and manufacturing cycles. We combine RF/electrical, mechanical/structural, and thermal requirements into a single metal 3D printed component.

- Unit Horn
- Polarizer
- Connectors
- Frequency Scaling
- Mechanical Specs
- Thermal Features
- Combiner
- Monopulse
- Array Size
- Switches
- Gearing
- Filters

Product Description (L/S/C) Omni

Omni antenna fabricated with few parts: Any spec can be easily modified

- 1.6 – 5.9 GHz frequency
- Linear polarization
- Integrated TNC connector
- Optimized for C-band
- Max gain at 25-45 degrees

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Value (typ.)</th>
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<tbody>
<tr>
<td>Size</td>
<td>3.5 x 1.5 in</td>
</tr>
<tr>
<td>Weight</td>
<td>&lt; 85 g</td>
</tr>
<tr>
<td>Peak Gain (L-band)</td>
<td>-1 dB</td>
</tr>
<tr>
<td>Peak Gain (S-band)</td>
<td>+2 dB</td>
</tr>
<tr>
<td>Peak Gain (C-band)</td>
<td>+3 dB</td>
</tr>
<tr>
<td>Return Loss</td>
<td>&lt;-10 dB</td>
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</tbody>
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