



UGS[™] ANTENNA

Breakthrough performance in a wideband, on-the-ground antenna from the fractal antenna innovators.

- **VHF to microwave**
- **Omnidirectional**
- **VSWR < 3:1**
- **2.5 inch diameter**
- **One yard tall**
- **Easily integrated**
- **Handles 15W**
- **Inherently 50 Ohm**

Unattended ground sensor (UGS) nodes must be low profile, lightweight, and have the widest bandwidth, highest gain antenna possible. That's no easy task, yet Fractal Antenna Systems has the answer.

Traditional approaches require a large suite of antennas that are cumbersome to deploy and invite reliability risks. Integrating a single fractal antenna into an UGS node results in an easily deployed lightweight package that is less than a yard tall. Innovative raised phase center design minimizes ground losses while improving radiation pattern and launch angle. This fractal antenna is an excellent design-in solution to the extreme RF challenges of unattended ground sensors.

Feature	Advantage	Benefit
High Performance	Long range operation	Fewer nodes for complete coverage
Wideband	Huge frequency range in one antenna	Instantaneous spectrum access
Very Compact	Thin and low profile	Reduced visual and RF detection
High Phase Center	Reduced ground losses	Lower launch angle and superior gain
Omnidirectional	Receive/radiate in any direction	No need to point nodes
Inherently 50 Ohm	Eliminates lossy components	Lowers system complexity and cost

OTHER PRODUCTS

Universal Access™ Antenna

With excellent standing wave ratios over a 25:1+ range of frequency, the Universal Access family of antennas delivers superior performance in compact form factors. With versions for vehicle or mast mount, the Universal Access antennas are ruggedly built to operate in extreme environments. Targeted for signal gathering and high power transmit applications from VHF through microwave.



RFsabre™

With outstanding lower frequency gain and less than 3:1 VSWR over a very wide frequency range, the RFSabre antenna delivers great performance in a distinctly compact form factor. The vehicle-mounted version can survive impacts with solid objects at speeds up to 25 MPH. Geared for security, communications, signal gathering, and high power transmit applications. New hanging or tripod mounted versions available.



Custom Antennas

Fractal Antenna Systems offers custom antenna development for applications where small size, unusual form factor, and wideband or multiband performance is needed. Tell us what you need and we'll tell you what we can do. You will be amazed. The antenna shown here was developed for telemetry of in-car video from Indy Racing League cars.



ABOUT FRACTAL ANTENNA SYSTEMS

Fractal Antenna Systems, Inc. (Fractal Antenna) develops and builds the most compact, highest performance wideband/multiband antennas in the world. Our antennas are typically two to four times smaller than traditional aeriels, while achieving unique frequency coverage and excellent gains and power patterns.

Fractal Antenna's patented geometric approach and design methodology are based on decades of experience and lead to innovative antennas not possible using conventional techniques. FRAGO, our proprietary evolutionary optimization tool, allows rapid analysis of millions of possible antenna candidates to assure the best solution.

Fractal Antenna's products have been proven in the toughest commercial, military, and government applications. In the military sector, we provide practical solutions for communications, intelligence, and electronic warfare. Fractal Antenna has been awarded contracts from DARPA, USAF, USMC, and USA-CECOM, among others. We provide OEM, custom, and off-the-shelf antennas that push the limits of gain, bandwidth, and size. Please contact us today to discuss your antenna needs.

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