

GTA SERIES

Mobile GPS/RF Tracking Antenna



GTA/TTA-17/24

GTA/TTA-17/58

> Applications

- Military
- UAV
- Surveillance
- TCDL
- RVT
- Public Safety

> Benefits

- Combination of L, S, C, and Ku Models
- Designed for use with BMS or Customer Supplied Receivers, Transmitters, and PC computer
- Automatically Tracks Aircraft Using:
 - Auto-track
 - Aero-track
 - Slave-track
- Self Calibrating
- Easy to Use
- Compact Size
- Optional Uplink Amplifiers
- Options:
 - Portable tripod and case
 - 30 foot portable mast
 - Antenna transportation case
 - Ethernet or control cable (up to 130 ft.)
 - RF cable (specify length)
 - Tracking receiver

> Description

The GTA Series is a family of receive and transmit antennas with fully automatic tracking intended for use with either BMS or customer supplied receivers and/or transmitters. These self-contained, compact and rugged antennas are perfect for use wherever mobility and easy operation are required.

Weighing less than 25 lbs., the antenna is typically deployed on a tripod, or mounted on top of a telescoping air mast. The antenna tracks continuously 360° in Azimuth and is easy to operate requiring minimum operator intervention. The system is controlled by a customer-furnished PC connected directly to the antenna and running Multi-Control Point™ software.

Set up of the system is easy and typically takes less than 5 minutes. Hook up the antenna to a PC system with a single cable, turn on and the system automatically self calibrates, detecting its GPS position and magnetic north. Every GTA antenna ships with BMS' Multi-Control Point™ software application for Windows®.

The GTA Series requires 28 VDC, 2 A power in receive configuration.

Some GTA models are available with an optional tracking receiver that eliminates reliance on a receiver RSSI feedback connection.

Many configurations are available. Contact the factory for further details. Control and RF cables, transportation case and other associated equipment will be quoted to meet user's operational requirements.



> GTA Series Mobile GPS/RF Tracking Antenna

| Antenna | |
|-----------------------|--|
| Frequencies Available | 1.71-1.85, 2.2-2.5, 4.4-5.85, 14.4-15.35 GHz |
| Gain (Primary) | 12 - 25 dBi (frequency dependent) |
| Beamwidth | See table, below. |
| Polarity | See table, below. |

| Pedestal | |
|----------------|--------------------------|
| Azimuth Travel | 360° Continuous Rotation |
| Tracking Rate | Up to 20°/sec. |
| Acceleration | 40°/sec ² |

| Physical | |
|-----------------|--|
| Operating Temp. | -20° to +60°C |
| Wind Load | 65 MPH Operate 90 MPH Survive |
| Power | 28 VDC, 2 Amp Max. (Not including PA option) |
| Size | Pod: 18" Diameter x 17" High or x 21" High (frequency dependent) |
| Weight | Pod: 24.75 lbs Typical (11.22 kg) |
| Color | White (Other Colors Available) |

| Options | |
|--|--|
| Internal Uplink Power Amplifiers (contact BMS) | |
| Integrated Tracking Receiver | |
| Antenna Transportation Case | |
| BTA-170 Medium Duty Tripod | |
| Tripod Transportation Case | |
| Nycoil™ Spiral Conduit with Cable for Use with Telescoping Mast | |
| Multi-Control Point™ Windows® application for controlling multiple downlinks and uplinks | |

| Connectors | |
|--------------------|------------------------------|
| RF | Type N (f) |
| Control (RS-232) | Mates with PT06E-22-32S (SR) |
| Control (Ethernet) | RJ-45 |

| Specification | GTA-17/24 | TTA-17/24 | GTA-17/25 | TTA-17/25 | GTA-44/150 | TTA-44/150 | GTA-17/58 | TTA-17/58 |
|---|------------------|------------------|-----------------|-----------|-----------------|------------|-----------------|-------------|
| Frequency | L/S ² | L/S ² | L/S | L/S | C/Ku | C/Ku | L/S/C | L/S/C |
| Gain (dBi) | 12/14 | 12/14 | 12/14 | 12/14 | 18/25 | 18/25 | 12/14/18 | 12/14/18 |
| Polarization | Linear | Linear | Linear | Linear | Linear/RHC | Linear/RHC | Linear | Linear |
| VSWR | 2.0:1 | 2.0:1 | 2.0:1 | 2.0:1 | 2.0:1 | 2.0:1 | 2.0:1 | 2.0:1 |
| AZ Beam width (deg.) | 27/27 | 27/27 | 27/27 | 27/27 | 10/8/4 | 10/8/4 | 27/27/10/8 | 27/27/10/8 |
| EL Beam width (deg.) | 42/42 | 42/42 | 42/42 | 42/42 | 20/15/12 | 20/15/12 | 42/42/20/15 | 42/42/20/15 |
| Tracking method | Auto/Aero/Slave | Slave | Auto/Aero/Slave | Slave | Auto/Aero/Slave | Slave | Auto/Aero/Slave | Slave |
| Azimuth speed (deg./sec.) | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Elevation speed (deg./sec.) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| LNA noise figure (dB) | 2/2 | N/A | 2/2 | N/A | 3/4 | N/A | 2/2/3 | N/A |
| LNA gain (dB) | 20/20 | N/A | 20/20 | N/A | 20/20 | N/A | 20/20/20 | N/A |
| Amplifier gain (dB) optional ¹ | N/A | 30/30 | N/A | 30/30 | N/A | 30/30 | N/A | 30/30/30 |
| Amplifier 1 dB compression (watts) | N/A | 5/5 | N/A | 5/5 | N/A | 20/15 | N/A | 5/5/5 |
| Group delay (nS) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| IP3 (dB) | N/A | >50 | N/A | >50 | N/A | >50 | N/A | >50 |

* Auto-track is pseudo-monopulse tracking of the downlink RF signal.

* Aero-track is tracking using the GPS location of the aircraft.

* Slave-track is tracking slaved to another BMS tracking system.

¹ Contact factory for power amplifier options.

² GTA-17/24 and TTA-17/24 upper frequency limited to 2400 MHz

| Legend | |
|--------|--|
| L | = 1710 - 1850 MHz |
| S | = 2200 - 2500 MHz NOTE: GTA-17/24, TTA-17/24 upper frequency limited to 2400 MHz |
| C | = 4400 - 5850 MHz |
| Ku | = 14.4 - 15.35 GHz |

Broadcast Microwave Services, Inc. | www.bms-inc.com

Corporate Headquarters
12367 Crosthwaite Circle | Poway, CA 92064 US
Phone: +1 (858) 391-3050 | Fax: +1 (858) 391-3049

BMS European Office
Schwalbacherstr. 12 | 65321 Heidenrod-Kemel GERMANY
Phone: +49-6124-7239-00 | Fax: +49-6124-7239-29

