

LRTA LONG RANGE TRACKING ANTENNA SYSTEM



The LRTA enables long-range command and control within direct line of sight between the antenna and the aircraft. It provides complete control of an aircraft and payload, video display and recording, mission planning, real-time moving map display, status information, and high-resolution image capture. The directional antenna is mounted on a tracking positioner and allows for automatic or manual tracking of an aircraft. An omni antenna provides redundancy and 360-degree coverage with reduced range capabilities.

The LRTA is designed to be operated in a two-tier system, meaning there is a launch and recovery group in the field and a command and control group in a command center. At the appropriate time, the launch and recovery group “hands off” control of the aircraft to the command and control center allowing for a greater situational awareness perimeter. Maximum range is 60 km, but actual performance is based on each SUAS endurance capability.



SPECIFICATIONS

SYSTEM PERFORMANCE

LINK RANGE, RVT MODE 60 km nominal range to DDL-equipped UAV

LINK RANGE, GCS MODE 60 km nominal range to DDL-equipped UAV

PAN RANGE 360 degrees continuous

TILT RANGE -20 to +90 degrees

DDL OPERATING BANDS M3/M4/M6, M1/M2/M5 in future

ANTENNA BEAM WIDTH (3DB) M3/M4/M6: >6° Horizontal, >7° Vertical

LINK MARGIN @ 60KM RANGE WITH FOS UAS M3/M4/M6: 7.2 dB

FIBER OPTIC LINK DISTANCE Up to 2000 m [30 m cable supplied]

PHYSICAL

WEIGHT, DEPLOYED 300 lbs
(Includes tracking antenna assembly, GCS, cables, battery. Does not include shipping container weight)

ANTENNA HEIGHT (C/L) ABOVE GROUND: 63 in (min.) / 106 in (max.)

POWER

TRACKING ANTENNA POWER (WITH UPS/ POWER COND.) 90–250 V ac, 47–65 Hz
275 W (nom., heater off) 460 W (max., heater on)

GCS POWER 120/240 V ac, 50–60 Hz, TBD W

KEY FEATURES

- High-gain antenna for long-range UAV communications
- Omni-directional antenna for short range communications
- Automatic switching between antenna range modes
- Automatic UAV tracking function (two-axis positioner)
- Available in AeroVironment™ DDL Military Operating Bands M3/M4/M6
- AC prime power with remote power enable
- Fiber optic link from antenna to remote Ground Control Station (GCS)
- Uninterruptable Power Supply (UPS)/Power Conditioner for Tracking Antenna