

VT-006™ Auto-tracking Antenna

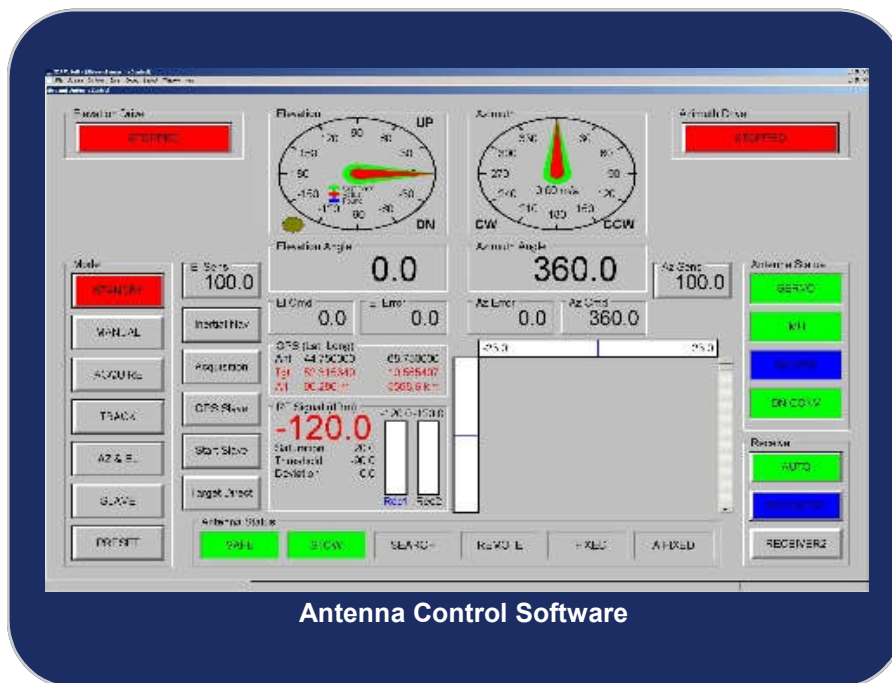
The VT-006 is a high gain portable auto-tracking antenna, it is self-contained and is simple to setup and operate. The VT-006 has a dual polarization head that can receive signals from L thru C band with full data recovery and auto-tracking using a unique JDA Systems developed auto-tracking technique. It can point from directly overhead down to the horizon with unlimited rotation in azimuth. The recovered combined data and clock signal outputs from the inbuilt bit synchronizers are provided from the integrated dual channel tracking receiver within the VT-006, along with the dual amplified RF feeds, so it is possible to operate the VT-006 standalone without the need for an external data receiver if required.



Features

- Simultaneous RHCP/LHCP or Vertical/Horizontal
- Simultaneous L, S & C Band Reception
- Triband Cavity Filters per Channel
- Digital Rotary Scan Head
- Autonomous auto-tracking
- Multiple mode slave tracking
- DC Brushless overrated motors
- Absolute encoders better than 0.002° accuracy
- Fully integrated auto-calibration system
- Solid Carbon Fiber Reflector
- Windows 10 Based ACU Software
- Ethernet remote control and monitoring
- No special ACU hardware needed
- Light weight composite construction
- Corrosion resistant throughout
- Fully Integrated Tri-Band Tracking/Data Receiver
- Optional Items
 - Bore site video camera
 - Acquisition aid antenna
 - Receive & optional transmit

The VuSoft software is used to provide the Antenna Control Unit (ACU) functions. This provides auto calibration, slaved "pointers", Program Tracking, Pre Tracking, Slaved Tracking and Full Auto-tracking systems together with optional data acquisition and data storage. The VT-006 is controlled via Ethernet that allows the antenna to be placed virtually anywhere that can be reached by a LAN making it possible to remote control or slave multiple antennas together even over exceptionally long distances



The VT-006 is controlled via an Ethernet link that allows the antenna to be placed virtually anywhere that can be reached by a satellite link or WAN making it possible to remote control or slave multiple antennas together even over exceptionally long distances.

SPECIFICATIONS

Operating & Performance	
Type	Flat Panel
Reflector Size(S)	0.6 Meter / 1.97 Feet
Operating Frequency	L-Band 1435.5-1540.5 MHz S-Band 2185 - 2485 MHz C-Band 5090.0-5250.0 MHz OR 4400.0 to 4900.0 MHz
G/T	Approximately -0.54 dB/K at S-Band
Polarization	Simultaneous dual polarization reception (Vertical/Horizontal or RHCP/LHCP)
Main Antenna Gain (Minimum)	17.0 dBi @ 1435 MHz 21.0 dBi @ 2350 MHz 25.0 dBi @ 5150 MHz
Side-lobes	-20 dB Under Main Beam @ S-Band
Beam Width 3db	10.2° @ L-Band 6.8° @ S-Band 3.2° @ C-Band
Acquisition Angle (Maximum)	±16.0° @ L-Band ±10.0° @ S-Band ±5.5° @ C-Band
VSWR (Maximum in band)	Better than 2:1
Tracking Receiver	Fully integrated dual channel L, S & C band, TIER0, TIER1, TIER2. 30MHz maximum input BW. Offers improved tracking speeds and accuracy over older style external tracking receivers.
RF Outputs	Dual amplified wide band (L, S & C simultaneous), approximately 30dB throughput gain, filtered via first stage tri-band cavity filters for ultimate external RF noise rejection.
DRIVE PEDESTAL	
Motor	Dual Brushless Motors with Closed Loop Feedback For Constant Positional Accuracy and Full Power At Standstill
Stabilization	Integrated 9 axis INU
Bearings	Sealed, maintenance-free bearings, designed to carry at least double the weight of the moving parts (reflector, feed, etc.).
Servo Amp	State-of-the-art closed loop servo amplifiers with comprehensive DSP motor protection and ACU monitoring.
Connectors	MIL-DTL-38999 aerospace grade sealed connectors for outdoor connections
Slip Rings/Joints	Sealed slip rings and dual channel rotary joints for continuous 360-degree azimuth/elevation rotation.
Environmental (System)	
Velocity	Up to 120°/sec Azimuth & 120°/sec Elevation (simultaneously)
Acceleration	Up to 110°/sec ²
Azimuth Travel	Continuous Unlimited (Slip Rings and Rotary Joints Fitted)
Elevation Travel	-3° to +183° (Horizon to Horizon)
Temperature Non-Operating	-40° C to +70° C
Temperature, Operating	-40° C (with optional heating) to +65° C Plus Solar
Relative Humidity	Up to 100% Including Condensation
Rain	Up to 5-inches Per Hour
ICE	One-half Inch, Radial
WIND, Operating	110 km/h / 68 Mph
WIND, Survival	200 km/h /120 Mph
Weight	25 kg / 55 lbs. (approximate)

Power & Electrical	
Power Requirement	100 W Typical, 200 W Peak
Voltage/Frequency	100/245 VAC, 50/60 Hz, 1 \emptyset
Antenna Operation & Control, Positioning	
<i>Selectable Types</i> VuTrack Software	Windows 10 OS based – Customer Computer/Laptop
ACU-022 Antenna Control Unit	19-inch Rack Mount with Remote/Client Control
Antenna Control Interface	Ethernet
Camera	On Axis Fully Integrated Color High Resolution CCD with 20x Optical zoom, night vision, H264 network video broadcast
GPS	Position and Height with Inbuilt Geodetic Model
SIZE	80 cm (w) x 80 cm (d) x 80 (h); 31.2 in. (w) x 31.2 in. (d) x 31.2 in. (h)
Optional Components	
Optional Tripod Stand	1.5m Height (adjustable), High Capacity Tripod Stand
Optional Slaved Video Camera	Network HD Video Camera with H264 network video broadcast, 20 x Optical Zoom,