VT-012™ Autotracking Antenna

The VT-012 is a dual axis 1.2m parabolic reflector autotracking antenna, it is self contained and is simple to setup and operate. The VT-012 has a dual polarization head that can receive signals with gains of L band 24dB, S band 26dB, C band 28dB and track using a digital rotary scan autotracking technique with continuous rotation in both azimuth and elevation via slip ring assemblies with dual channel rotary joints.

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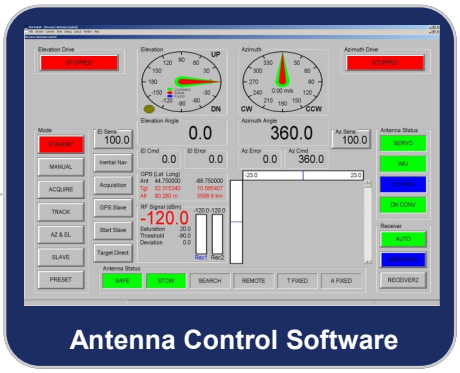
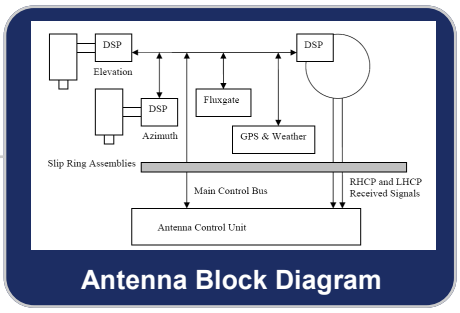


Antenna Control Software



Antenna Block Diagram

Features

- Simultaneous RHCP/LHCP or Vertical/ Horizontal parabolic reflector antenna
- L, S & C Band Reception
- Digital Rotary Scan Head
- Autonomous autotracking
- Multiple mode slave tracking
- Easy maintenance modular design
- DC Brushless overrated motors
- Absolute encoders in all rotating parts with better than 0.002° accuracy
- Optional on bore site video camera
- Bus based internal communication
- Ethernet remote control and monitoring
- No special ACU hardware needed
- Fully integrated auto-calibration system
- Simultaneous receive and optional transmit
- Optional acquisition aid antenna
- Light weight carbon fiber, composite and corrosion resistant construction throughout
- Greatly reduced cabling
- Less weight and better portability
- Windows 7, 8, 10 Based ACU Software

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The VuSoft software is used to provide the Antenna Control Unit (ACU) functions. This provides auto calibration, slaved "pointers", Program Tracking, Pre Tracking and Full Autotracking systems together with optional data acquisition and data storage.
The VT-012 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 Frequencies	1435.5-1540.5 & 2185.0-2485.0 & 5090.0-5250.0 MHz
G/T	Approx 6.0 at S-Band
Polarization	Simultaneous dual polarization reception
Main Antenna Gain (Minimum)	24.0 dBi @ 1435 MHz
	26.0 dBi @ 2350 MHz
	28.0 dBi @ 5150 MHz
Sidelobes	Min -20 dB Under Main Beam @ S-Band
Beam Width	±4.0°@ L-Band
	±3.5°@ S-Band
Acquisition Angle	±8° @ L-Band
	±7°@ S-Band
VSWR (Maximum in band)	2:1
Velocity	Up to 42°/sec Azimuth & 32°/sec Elevation
	(Higher speeds availbale with optional gearboxes)
Acceleration	Up to 110°/sec^2
Azimuth Travel	Continuous Unlimited
Elevation Travel	Continuous Unlimited
Temperature Non-Operating	-40° C to +70° C
Temperature Operating	-30° 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 KPH
WIND, Survival	200 KPH
Weight Approx	255 kg
Power Requirement	290 W Typical, 460 W Peak
Voltage/Frequency	110/220 VAC, 50/60 Hz, 1 ø
Control Interface	Ethernet
Camera	On Axis Fully Integrated Color High Resolution CCD
Stabilization	9 axis INU
GPS	Position and Height with Inbuilt Geodetic Model
Optional Acquisition Aid	Dual channel L&S band monopulse, 15dBi, ±11° BW in S-Band
Optional Safety	Ion Shedding Lightning Protection

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