Troll’s A600 is simply the most scalable ground antenna system on the market today. Awarded multiple patents for tracking methods and design, The A600 has, for more than a decade, proven itself in demanding physical and challenging radio frequency environments. The antenna provides multi-band diversity reception and long range asset tracking in up to four bands simultaneously.

The combination of high-gain directional feed elements and a medium-gain diversity array enables the A600 to automate signal acquisition and signal tracking on up to eight antenna inputs at a single time. In the most sophisticated systems, Troll provides unique RF tracking technologies that continue to optimize signal-lock for long-range, bidirectional video data links. These unparalleled capabilities can concurrently support multiple fast moving airborne, terrestrial or marine platforms.

The A600:
- Operates at long distances
- Minimizes multi-path interference
- Minimizes operator workload
- Lowers installation costs
- Automates set-up and tracking
- Provides plug and play network management

Operation
The A600 is designed for completely automatic operation. Once the receive channel has been set, the A600 manages everything from asset acquisition, tracking, video capture and automatic peaking of the directional antenna to optimize signal performance. This ground-breaking antenna system is designed to identify and evaluate both direct and reflected RF signal quality by utilizing five onboard diversity antennas and a self-aligning, high-gain directional antenna. When the A600 recognizes the signal with the highest quality, the rotating high-gain antenna is automatically repositioned to ensure the best possible reception. As the signal source moves away, the system continuously adjusts the rotating high-gain antenna to seek out and maintain the best possible signal reception.

Performance
Using Troll’s multi input diversity receiver, the A600’s high-gain directional antenna and surrounding sector panels present a truly a unique system. Its precision offset feeds provide multi-path immunity and robust long-range operation with auto-tracking capability. Its diversity panels can accommodate additional airborne or terrestrial transmission assets or be used to automatically locate and lock-on a particular signal to track.
Long-Range Auto-Tracking Antenna with Medium-Gain Diversity Panels

SPECIFICATIONS

Specifications subject to change without notice.

General:
- System Type: High-Gain Cavity Array
- Main Antenna: One (1) High-Gain Offset Fed Truncated Parabolic
- Diversity Antennas: Five (5) Medium-Gain, Slotted Dipole
- Down-Converters: Six (6) UHF Down-converters with LNA.
- Receiver: DVB-T/COFDM
- System Interface: Multi-Input Maximal-Ratio Combining ASI Output
- Control: Single Control Cable
- Power: 28 VDC (3 Amps) or 110 / 220 VAC
- Outputs: 2 ASI, 75 ohm
- Control Device: DMR Site Controller (DMR6000)

Options:
- Self-enclosed Remote Panel Antennas
- Multi-Bands Available (up to quad-band)
- Dual Receiver Mode (High-Gain / up to Eight-Channel Diversity)
- Filtering per System Requirements
- Bidirectional Systems Available

Main Antenna:
- Type: Offset Fed Truncated Parabolic
- Frequency: 300 MHz to 15GHz
- Gain: 18 dBi to 33 dBi (Dependant on Frequency)
- Antenna Polarization: Vertical (Quad Polarization Optional)
- Steering Azimuth: Continuous Rotation, Max Speed 60° per Second
- Steering Elevation: Steering +35 to 5° (Recommended above 3GHz)

Diversity Antennas:
- Type: Cavity Backed Dipole
- Number: Up to Five Evenly Spaced Around the High-Gain Antenna
- Antenna Gain: 12 dBi minimum (Frequency Dependant)
- Antenna Polarization: Vertical (Quad Polarization Optional)
- Antenna Beamwidth: Azimuth 75° / Elevation 38°

Block Down Converter:
- Frequency Range: 1.4 GHz to 15GHz
- RF Frequency Range: <1.5:1
- RF Input VSWR: 810 – 300 MHz
- IF Frequency Range: 75 ohms
- RF Input Impedance: <3.0 dB
- Noise Figure: Six -Channel UHF COFDM

Receiver/Demodulator:
- RX Multi-Input Maximal-Ratio Combining (MRC)
- Transport stream: ASI
- Control: Serial Control via Troll Control System
- COFDM num of Carriers: 2K
- Modulation Types: QPSK, 16 & 64-QAM
- Forward Error Correction: 1/2, 2/3, 3/4, 5/6, 7/8
- Guard Intervals: 1/32, 1/16, 1/8, 1/4
- Input Frequency: 49 - 862 MHz
- Input Impedance: 75 ohm
- Bandwidth Selections: 6, 7 or 8 MHz
- Decryption Options: AES- 128/256

Frequency | UHF Optional | L Band | S Band | Lower C | Upper C | Ku
--- | --- | --- | --- | --- | --- | ---
Diversity Array | Dual Can | Dual Slot | Dual Slot | Quad Slot | Quad Slot | Quad Slot
Tracking Antenna | 13 dBi | 21.0 dBi | 24.0 dBi | 30.0 dBi | 32.dBi | 37.0 dBi
*HPBW (EL)* | ± 18°EL | ± 8°EL | ± 5.5°EL | ± 3.5°EL | ± 3°EL | ± 1°EL
*HPBW (AZ)* | ± 11°AZ | ± 4°AZ | ± 3°AZ | ±1.5°AZ | ± 1.25°AZ | ± 0.75°AZ
Polarization: Vertical | Vertical | Vertical | Vertical | Vertical | Vertical | RCP

The Data Link Experts
www.trollsystems.com
sales@trollsystems.com
Corporate: 24950 Anza Dr. Valencia, California 91355
+1 (661) 702-8900
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