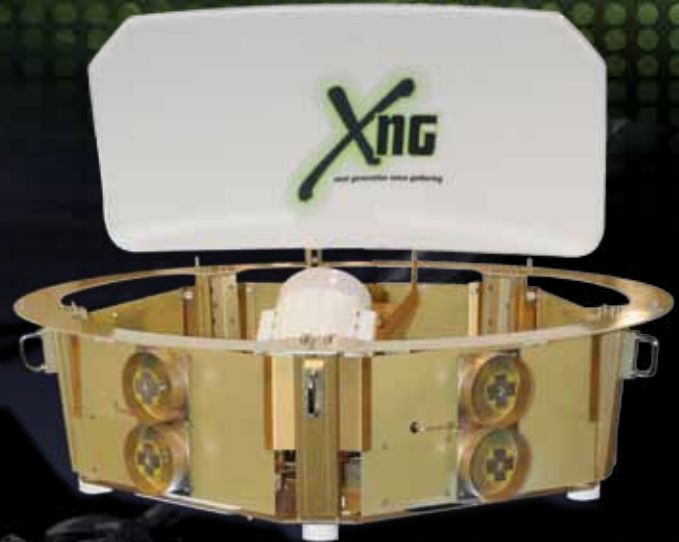


DESIGNED AND MANUFACTURED IN THE USA BY TROLL SYSTEMS  
THE DATA LINK EXPERTS

# A600 High-Gain Tracking Directional Diversity Antenna System

Troll's A600 is simply the most scaleable ground antenna system on the market today. Awarded multiple patents for tracking methods and design, for the past ten years the system has proven itself in challenging physical and saturated 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 differential GPS and unique RF tracking technologies to automate signal acquisition and signal-lock for bidirectional video and data links. These unparalleled capabilities can concurrently support an almost infinite variety of 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 allows the operator to **concentrate on the content, not the capture of the signal.** The system is designed to be completely **hands-off**, once the receive channel has been set. The A600 manages everything from capture via the panel antennas, the automatic peaking of the directional antenna, and the complete optimization of the system. No other antenna system looks like this or performs like this.

## Performance

Using Troll's two to eight input diversity receiver, the A600's high-gain directional antenna and surrounding sector panels is truly a unique system. Its redundant and precision offset feeds provide multi-path immunity and robust long-range operation with minimal operator interaction.

## Installation

A single multipurpose fiber cable carries bidirectional video, data and control to Troll's DMR diversity receiver to simplify installation, minimize cost and improve performance.

- ▶ Easy-to-operate and install
- ▶ Unidirectional and bidirectional systems
- ▶ ASI or Ethernet transport output
- ▶ Long-range and short-range operation
- ▶ Multi-path immune
- ▶ Self-optimizing/auto-tracking
- ▶ Multiple system configurations available
- ▶ Resists signal jamming or interference



[www.TROLLSYSTEMS.com](http://www.TROLLSYSTEMS.com)

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## Tracking - High-Gain, Panel Diversity System

# A600 Directional Diversity UHF to Ku Band

## Up to (8) Channel Diversity Receive System

### A600 Physical Characteristics

#### 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  
 Multi-Input Maximal-Ratio Combining (MRC) ASI Output

#### System Interface:

Connection: Single Control Cable  
 Control: Serial RS485  
 Power: 28 vdc (3 Amps) or 110 / 220 VAC  
 Outputs: 2 ASI, 75 ohm  
 Control Device: DMR Site Controller (DMR6000, S750, X750)

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 Degrees/Second  
 Steering Elevation: Steering + 35 to 5 degrees (Recommended azbove 3GHz)  
 optional

#### 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:

RF Frequency Range: 1.4 GHz to 15GHz  
 RF Input VSWR: <1.5:1  
 IF Frequency Range: 810 - 300 MHz  
 RF Input Impedance: 75 ohms  
 Noise Figure: <3.0 dB

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	RCP
* HPBW Half Power Beam Width						

### SPECIFICATIONS CONTINUED

**Receiver/Demodulator:** Six (6) Channel UHF  
 Main: COFDM 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-QAM & 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

