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

TROLL SYSTEMS

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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 Azmuth	Continuous Rotation, Max Speed 60 Degrees/Second
Steering Elevation optional	Steering + 35 to 5 degrees (Recommended azbove 3GHz)

Diversity Antennas:

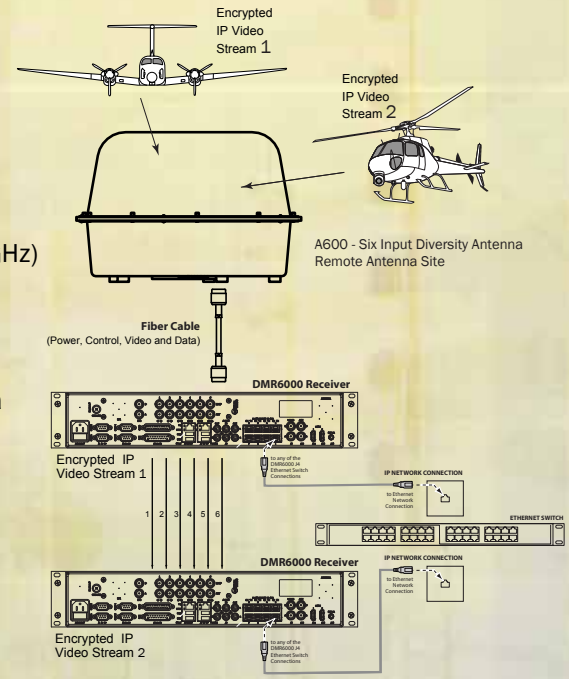
Type:	Cavity Backed Dipole
Number:	Up to Five Evenly Spaced Around the High-Gain Antenna
Antenna Gain:	12 dBi minimum (Frequency Dependant)
Antenna Polarization:	Vertical (Quad Polarization Optional)
Antenna Beamwidth	Azmuth 75° / Elevation 38°

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

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



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*

MADE IN USA

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