A6 Diversity Antenna
Six-Channel Multi-Band Antenna System

The A6 diversity ground antennas were designed to provide high-gain 360° diversity signal reception without the cost and complexity of a dedicated tracking system. Each antenna uses five or six independent sectors with overlapping reception beam-widths. Integrated into the design are high-performance UHF down-converters with exceptional selectivity characteristics. This conversion to UHF frequency bands is designed to lower cost, improve efficiency, minimize cable loss and reduce noise.

A6 sector antennas can produce up to 15dBi of gain in any one direction, and are available in single to tri-band configurations.

The antennas are specifically designed to take advantage of Troll Systems’ diversity infrastructure equipment. The DMR series of diversity receivers and the VNS (Video Network Server) provide IP packet switching, video decryption, transcoding and secure Cloud Video Streaming. Troll’s sector antennas are an ideal way to improve your air-to-ground network coverage and provide a low cost platform to extend your reach.

Benefits
- Lower installation costs
- Provide 360° reception on up to three frequency bands simultaneously
- Minimize operator workload
- 1.4GHz to 7.1GHz converted to UHF

Installation
Installation costs are reduced by minimizing the equipment and cables required to configure a system.

Typical applications include
- Electronic News Gathering
- Defense Infrastructure
- Military Surveillance
- Airborne Law Enforcement
### A6 Physical Characteristics

**General**
- **System Type:** Static Diversity Antenna Array
- **Diversity Antennas:** Diversity Antennas:
- **Down-Converters:** 1.5 GHz - 8 GHz down converted to UHF
- **Receiver:** DMR Series Maximal Ratio Combining - DVB-T demodulation

**System Interface**
- **Connection:** RF Input SMA Female — IF Output SMA Female
- **Control:** Passive
- **Power:** 12-18VDC
- **Outputs:** UHF 400 - 800 MHz

**Options:**
- **Diversity Antennas:**
  - **Type:** Wide-Band Slot, Sector, MicroStrip, Dipole
  - **Number:** Six Antenna
  - **Antenna Gain:** Up to 15 dBi in any direction
  - **Antenna Polarization:** Vertical
  - **Antenna Beamwidth (Az):** ± 30°

**Block Down Converter**
- **RF Frequency Range:** 1.4 to 7.4 in bands
- **RF Input Impedance:** 50 Ω
- **IF Frequency Range:** UHF - 50 MHz to 900 MHz
- **Noise Figure:** L & S band < 2dB — C band <4dB

Specifications subject to change without notice.

### Antenna Characteristics

<table>
<thead>
<tr>
<th>Type</th>
<th>High L Band</th>
<th>Low L Band</th>
<th>S Band</th>
<th>Lower C</th>
<th>Upper C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mid-Band:</strong></td>
<td>Dual Slot 1.7-1.9 GHz</td>
<td>Dual Can 1.4-1.5 GHz</td>
<td>Dual Slot 4.4-5.0 GHz</td>
<td>Quad Slot 6.4-7.1 GHz</td>
<td>Quad Slot 6.4-7.1 GHz</td>
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<tr>
<td><strong>Beamwidth:</strong></td>
<td>63°AZ / 33°EL 12 dBi Vertical</td>
<td>65°AZ / 35°EL 11 dBi Vertical</td>
<td>60°AZ / 30°EL 13 dBi Vertical</td>
<td>60°AZ / 12°EL 15 dBi Vertical</td>
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<td><strong>Antenna Gain:</strong></td>
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### Environmental
- **Operating Temperature:** -15°C to +55°C
- **Mechanical**
  - **Dimensions:** 15.5” Dia x 12.7” H
  - **Weight:** 20 lbs

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