A6 Tactical Diversity Antenna
Six-Channel 360° Sector Antenna System with Embedded Diversity Receiver and Ethernet Decoder
Tactical receive site case with Ethernet, WiFi, 3G and 4G LTE video distribution

The A6 diversity ground antennas are designed to provide high-gain 360° diversity signal reception using six independent sectors, with up to 15dBi of gain in each sector. Integrated into the design are high-performance down-converters, and a six-channel diversity receiver. Power for the system is provided over Ethernet to further simplify installation. The A6 antenna system decodes up to six channels of video and incorporates Maximal-Ratio Combining and packet switching to ensure robust signal reception.

Local video monitoring, transmission control and POE (Power over Ethernet) is provided by Troll’s TacCase. Live video is processed by the TacCase and bandwidth optimized for real-time distribution via Ethernet, local WiFi, 3G and 4G LTE cellular infrastructure to the cloud.

Benefits
• Lower installation costs
• Provides 360° reception and tactical video decoding
• Automated control software designed to minimize operator workload
• Video distribution to cellular and network infrastructure
• 1.4GHz to 7.1GHz (in bands)

Installation
Installation costs are greatly reduced by minimizing size, weight, cables and equipment required to configure a system.

Typical applications include
• Electronic News Gathering
• Defense Infrastructure
• Military Surveillance
• Airborne Law Enforcement

Six-panel diversity antenna with embedded diversity receiver and Ethernet decoder
Video distribution via the Cloud, WiFi or Ethernet
AES 128 or AES 256 encryption
MPEG 2 (4:2:2) and H.264 (4:2:2) decoding
Up to 15dBi gain
Multi-band 1.5GHz to 7GHz
Internal block down converters and filters
500 GB DVR available
Optional Tripod
A6 Diversity Antenna
With Embedded Receiver and Ethernet Decoder

A6 Physical Characteristics

General
- System Type: Static diversity antenna array
- Diversity Antennas: Diversity antennas:
- Down-Converters: 1.5 GHz - 7.1 GHz down converted to UHF
- Receiver: DMR series Maximal-Ratio Combining - DVB-T demodulation

System Interface
- Connection: RS-45
- Control: TacCase video server
- Power: 48 VDC POE (Power Over Ethernet)
- Outputs: Ethernet

Antennas:
- Type: Wide-band slot, sector, microstrip, dipole
- Number: Six antennas
- Antenna Gain: Up to 15 dBi in any direction
- Antenna Polarization: Vertical
- Antenna Beamwidth (Az): ± 30°
- Antenna Beamwidth (El): ± 15°

Block Down Converter
- RF Frequency Range: 1.4 to 7.1 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

Antenna Characteristics
- Type: Low L Band: Dual Slot
- Mid-Band: 1.4-1.5 GHz
- Beamwidth: 65°AZ / 35°EL
- Antenna Gain: 11 dBi
- Polarization: Vertical

- High L Band: Dual Slot
- 1.7-1.9 GHz
- 63°AZ / 33°EL
- 12 dBi
- Vertical

- S Band: Dual Slot
- 2-2.5 GHz
- 60°AZ / 30°EL
- 13 dBi
- Vertical

- Lower C: Quad Slot
- 4.4-5.0 GHz
- 63°AZ / 14°EL
- 14 dBi
- Vertical

- Upper C: Quad Slot
- 6.4-7.1 GHz
- 60°AZ / 12°EL
- 15 dBi
- Vertical

Environmental
- Operating Temperature: -15°C to + 65°C

Mechanical
- Dimensions: 15.5" Dia x 12.7" H
- Weight: 20 lbs

Specifications subject to change without notice.
Tactical Video Server

Tactical receive site controller with Ethernet, WiFi, 3G, 4G LTE and managed cloud-based internet distribution

Troll’s TacCase is a mobile data terminal designed to receive live air-to-ground video and sensor data in tactical environments. TacCase provides power over Ethernet (POE) to Troll’s tripod mounted six-channel diversity antenna/receiver system. Together they link stabilized video taken from an aircraft with tactical operations on the ground. TacCase provides external HDMI and composite video outputs as well as an integrated touchscreen display for local monitoring and control of antennas, receivers, encoding, decoding and encryption.

TacCase also records and transmits video in real-time over Ethernet, WiFi and cellular 3G, 4G, LTE. Encoding of video and data for transmission to these other networks is automatically bandwidth optimized based on the data rate available. This prevents TacCase from overloading the network during critical operations. TacCase is ideal for airborne law enforcement, military ISR and commercial broadcasters trying to manage and respond to security situations and news gathering opportunities as they unfold on the ground.

TacCase Includes:
- Integrated 15” Monitor
- System CPU, with video streaming
- Integrated Ethernet router
- Two (2) LTE modems requires data plan
- Multiple Ethernet ports, WiFi and WAN
- Load balancing WAN port speed control
- Easy to deploy tactically
- Video outputs Ethernet, HDMI, composite
- 500 GB digital video recorder DVR

Internet Access is provided via Troll Cloud Video Streamer. Troll’s web server application makes it possible to securely manage access to encrypted video anywhere in the world to any device connected to the internet.
### Portable Ethernet Data Link

**Tactical receive site controller with Ethernet, WiFi, LTE video distribution**

### Controller Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antennas controlled</td>
<td>A6, MT 300/200, SkyLink Mini, SkyLink Mini S</td>
</tr>
<tr>
<td>Streaming IP Video</td>
<td></td>
</tr>
<tr>
<td>Encryption</td>
<td>ASE 128-256</td>
</tr>
<tr>
<td>Cellular</td>
<td>3G, 4G LTE</td>
</tr>
<tr>
<td>Frame rate</td>
<td>30fps @720x480</td>
</tr>
<tr>
<td>Power input</td>
<td>110-240VAC</td>
</tr>
<tr>
<td>LAN/WI-FI</td>
<td>Load balanced dual-band WI-FI, 802.11 a/b/g/n</td>
</tr>
<tr>
<td>Remote Control Ethernet WEB GUI</td>
<td></td>
</tr>
<tr>
<td>Local Control</td>
<td>8 button control (soft-programmable)</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>110/220 VAC</td>
</tr>
</tbody>
</table>

### Environmental:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature Range:</td>
<td>Full Specification: –15° to +55°C</td>
</tr>
<tr>
<td>Storage</td>
<td>–40° to +80°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>0 to 95% non-condensing</td>
</tr>
</tbody>
</table>

### Altitude

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating</td>
<td>20,000ft (6,000 m)</td>
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<tr>
<td>Storage</td>
<td>50,000ft (15,000 m)</td>
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</tbody>
</table>

### Physical Characteristics:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>22” x 13.81” x 9” (LxWxH)</td>
</tr>
<tr>
<td>Weight</td>
<td></td>
</tr>
</tbody>
</table>

### Accessories

- Ethernet cable real assembly
- Cable real flight case
- Tripod
- Tripod flight case

Specifications subject to change without notice.