The A1 is a ground sector antenna designed to provide approximately 60° of coverage. The A1 is lightweight and easy to mount on buildings or the sides of towers. The A1 is designed to be installed around a structure to create an overlapping high-gain reception system. Multiple A1s can be used to form a 360° diversity antenna system capable of up to 15dBi of gain in any one direction when positioned correctly.

The A1 can be purchased in either single or multi-band versions. It incorporates a high-performance down-converter that has exceptional selectivity and noise figure characteristics. This enables the A1 provide a UHF output regardless of the input frequency. Power for the A1 is provided through coaxial cable that connects the antenna to the diversity receiver.

The output of each antenna is fed into Troll Systems’ DMR receiver capable of selecting the correct antenna for maximum performance. Troll’s new DMR series receivers provide from two to eight antenna inputs.

Benefits
- Lower installation costs
- Reception on up to three frequency bands simultaneously (one set of antennas – separate receiver per band)
- Packet-based IP distribution
- 1.4GHz to 7.1GHz down-converted to UHF Band
- Ethernet backhaul capability (from DMR)
# A1 Sector Antenna - Single to Tri-Band

## Compact, Sector Antennas for High-Gain Diversity Systems

### A1 Specifications

#### System Properties
- **Connection:** TNC for RG6 Cable
- **Control:** NA
- **Input Power:** Power over coax 11-32VDC
- **Input Current:** 3W
- **Output:** UHF
- **Control Device:** Troll DMR Series Diversity Receiver

#### Antenna Characteristics

<table>
<thead>
<tr>
<th>Band</th>
<th>Type</th>
<th>Mid-Band</th>
<th>Beamwidth</th>
<th>Antenna Gain</th>
<th>Polarization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low L Band</strong></td>
<td>Dual Can</td>
<td>1.4-1.5 GHz</td>
<td>65°AZ / 35°EL</td>
<td>11 dBi</td>
<td>Vertical</td>
</tr>
<tr>
<td><strong>High L Band</strong></td>
<td>Dual Slot</td>
<td>1.7-1.9 GHz</td>
<td>63°AZ / 33°EL</td>
<td>12 dBi</td>
<td>Vertical</td>
</tr>
<tr>
<td><strong>S Band</strong></td>
<td>Dual Slot</td>
<td>2.2-2.5 GHz</td>
<td>60°AZ / 30°EL</td>
<td>13 dBi</td>
<td>Vertical</td>
</tr>
<tr>
<td><strong>Lower C</strong></td>
<td>Quad Slot</td>
<td>4.4-5.0 GHz</td>
<td>63°AZ / 14°EL</td>
<td>14 dBi</td>
<td>Vertical</td>
</tr>
<tr>
<td><strong>Upper C</strong></td>
<td>Quad Slot</td>
<td>6.4-7.1 GHz</td>
<td>60°AZ / 12°EL</td>
<td>15 dBi</td>
<td>Vertical</td>
</tr>
</tbody>
</table>

#### Block Down Converters
- **RF Frequency Bands:** 1.2GHz - 7.2 GHz (specify frequency range)
- **IF Frequency Range:** 150 - 900 MHz
- **Noise Figure:**
  - L-S Bands < 2dB
  - C Bands < 3 dB
- **Gain:** 35dB nominal

#### Environmental
- **Operating Temperature:**
  - -15C to + 55C
  - -40C to + 80C

#### Mechanical
- **Dimensions:** 8.7” W x 20.7” H x 5.4” D
- **Weight:** 8lbs
- **Mounting:** 2” to 4” pipe mount
- **Downtilt Bracket:** + 20° to -20°

Specifications subject to change without notice.