Ultra Wide Band High Gain Grid Antenna

SKU-UWB Grid HW- SISO NF

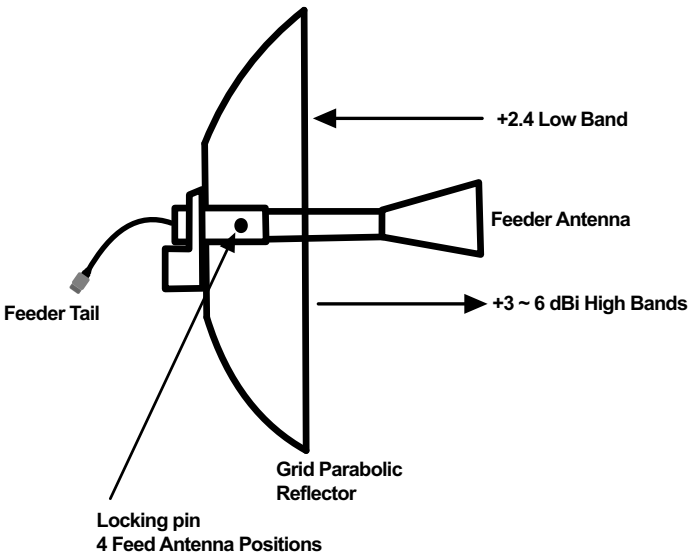
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Designed and Engineered by Antenna World in Miami Florida USA -- AUS Patent 2020204437 -- US Patent 10847892

Imported by Proeye Communications & Security Systems.

Assembled from imported and locally sourced items



The Ultra Wide Band Grid Antenna (UWB Grid) presents high continuous gain, high directivity, across a broad frequency range in comparison to other antenna types.

Antenna applications and use examples:

- Land Mobile Radio, Point to Point / Point Multipoint
- Cellular GSM, 3G, 4G, 5G, ISM Bands
- WiFi, Wi-Max, GPS
- Military, Satellite, Aerospace
- Amateur Radio.

Specifications

RF Electrical	
Frequency Range	Low 600-960MHz / Mid 1700-2700 / High 3000 - 6500MHz
Polarisation	Vertical / Horizontal / 45 Deg
Gain dBi	14 Low / 21 Mid / 26 High (Typical)
3dB Beam-width Low Band - Feeder set to Vert Pol	23 Degrees (+/- 10 Degrees)
3dB Beam-width Mid Band - Feeder set to Vert Pol	12 Degrees (+/- 6 Degrees)
3dB Beam-width High Band - Feeder set to Vert Pol	7 Degrees (+/- 3.5 Degrees)
Front to Back Ratio - Low ~ High Bands	18 ~ 24 dB AVG
Impedance	50 Ohm
VSWR	1.6:1 ~ 1.4:1 Typical
Max Input Power	100
Lightning Protection	DC Ground
Connector Type	N-Female /Available 4.3-10 on special order)
Mechnical	
Height	24" / 60mm
Width	39" / 990mm
Depth	16" / 400mm
Weight	5.3lb / 2.4 Kg
Packing Weight	7.2 lb / 3.3 Kg
Rated Wind Velocity	130 mph / 209 kmph
Wind Loading	150 M / 68 K
Mast Mounting Diameter	1.5~2" / 32 ~ 50mm
Reflector Material	Aluminium
Reflector Finish	Electrostatic Powder Coated
Radome Material	ASA UV Stabilised
Antenna System Colour	Grey
Water Resistance	IPX Weather Rated
Operating Temperature	-40 to 60 Celsius
Origin	
Country of Manufacture	Designed and assembled in the USA with imported parts

Features and Functions

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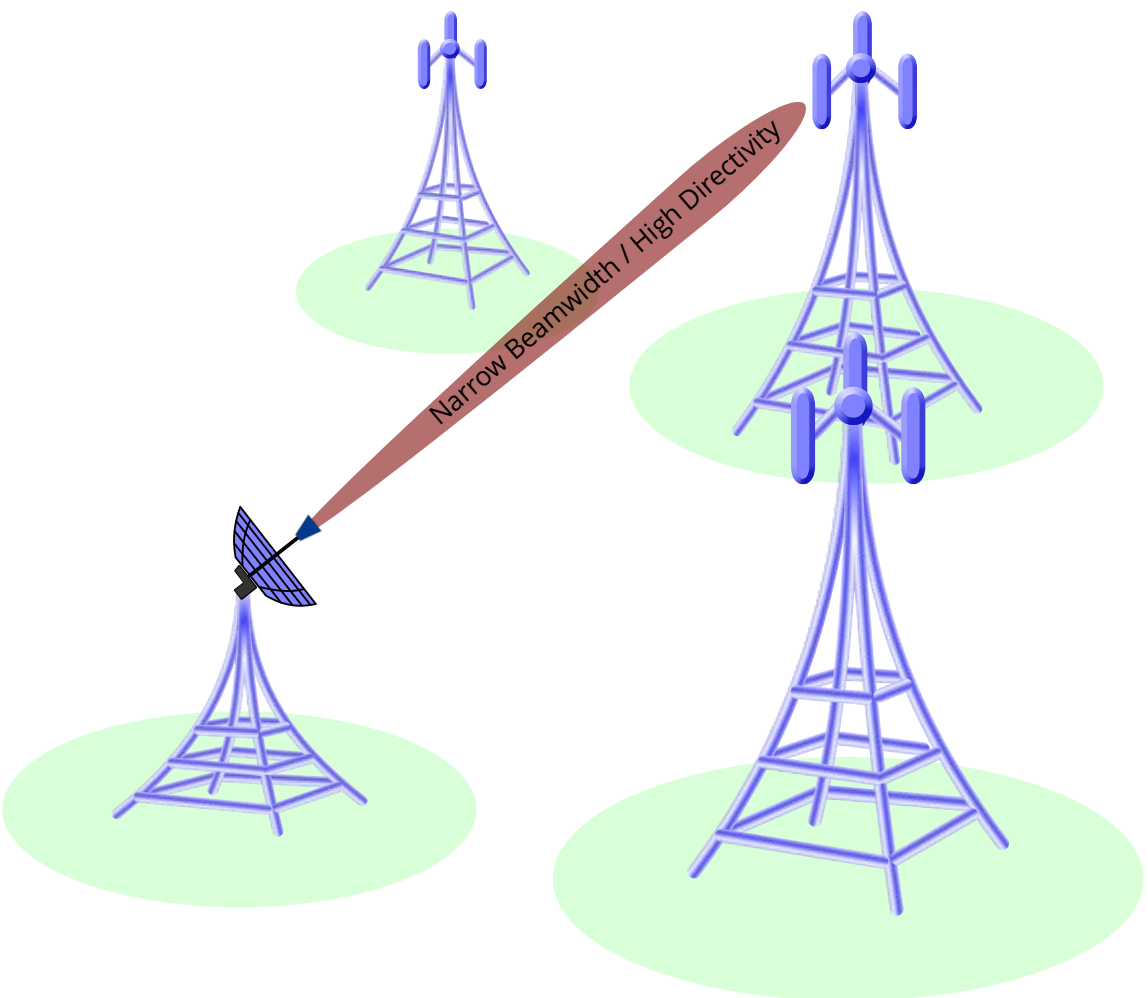


Ultra Wide Band Frequency Coverage, High Gain, and Narrow Beam-width

The antenna has a relativity high gain, 14~23dBi and narrow beam-width over a broad frequency range 600~6500MHz by combing broadband antenna feed into a parabolic reflector.

Features and functions:

- High level signal level and quality link
- High level signal dominance from subject antenna versus other surrounding antennas.
- Maximise throughput by improving signal quality
- Broad frequency range to support a multitude of Telecommunications equipment 2G,3G,4G,5G and beyond.
- Skew and match antenna polarity +45, -45, V and H.
- Angle diagonally down or upward



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Antenna L Bracket Assembly

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FIGURE 1 - Bracket Assembly Back

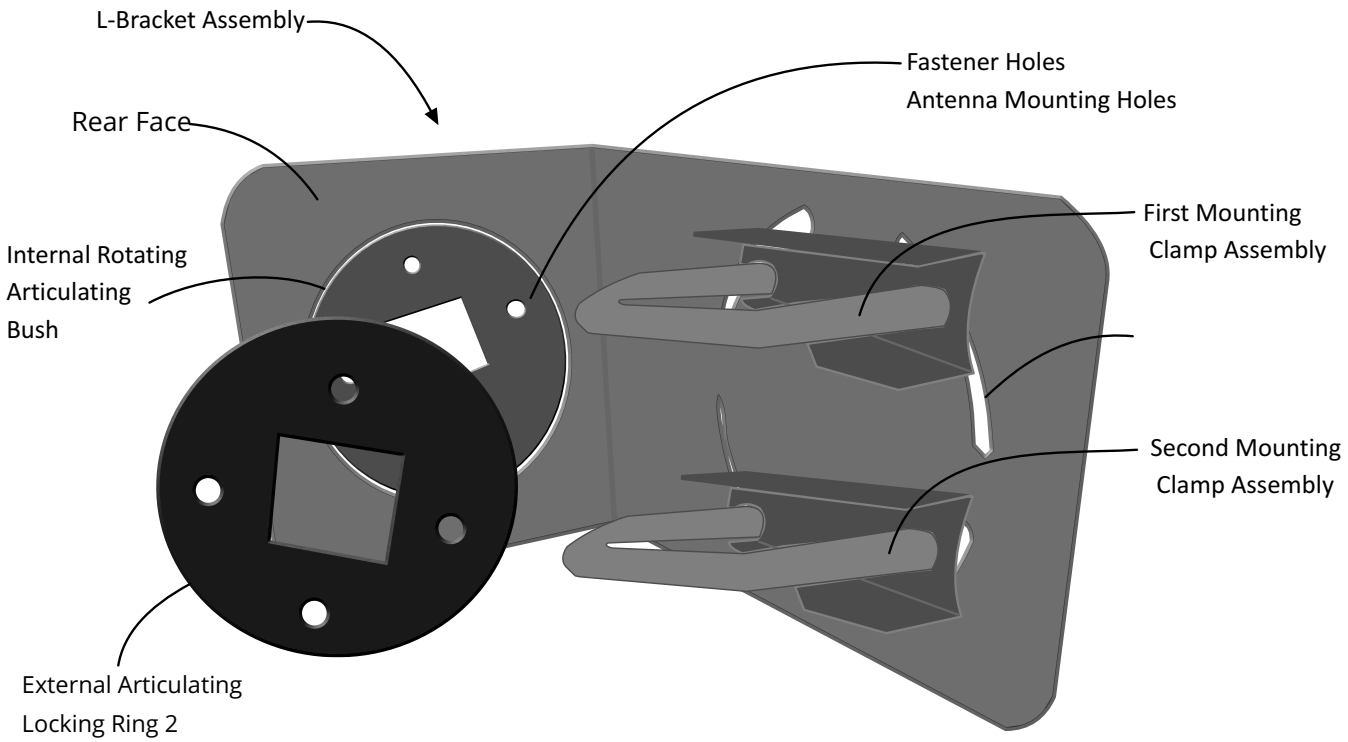
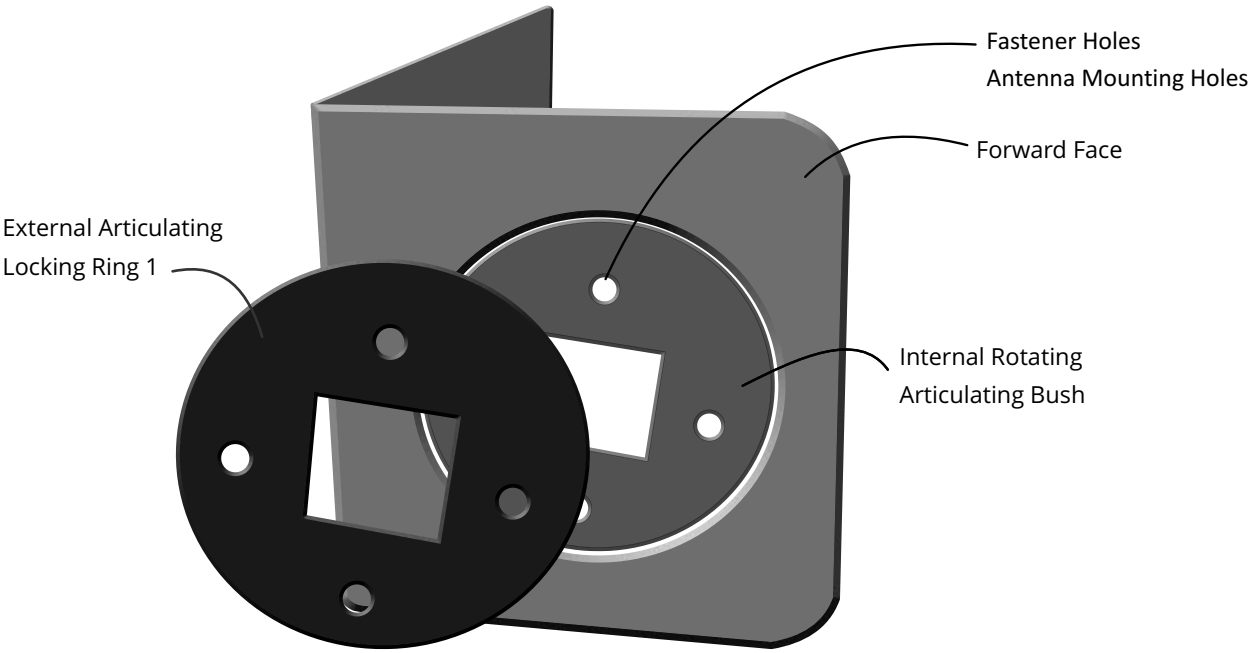
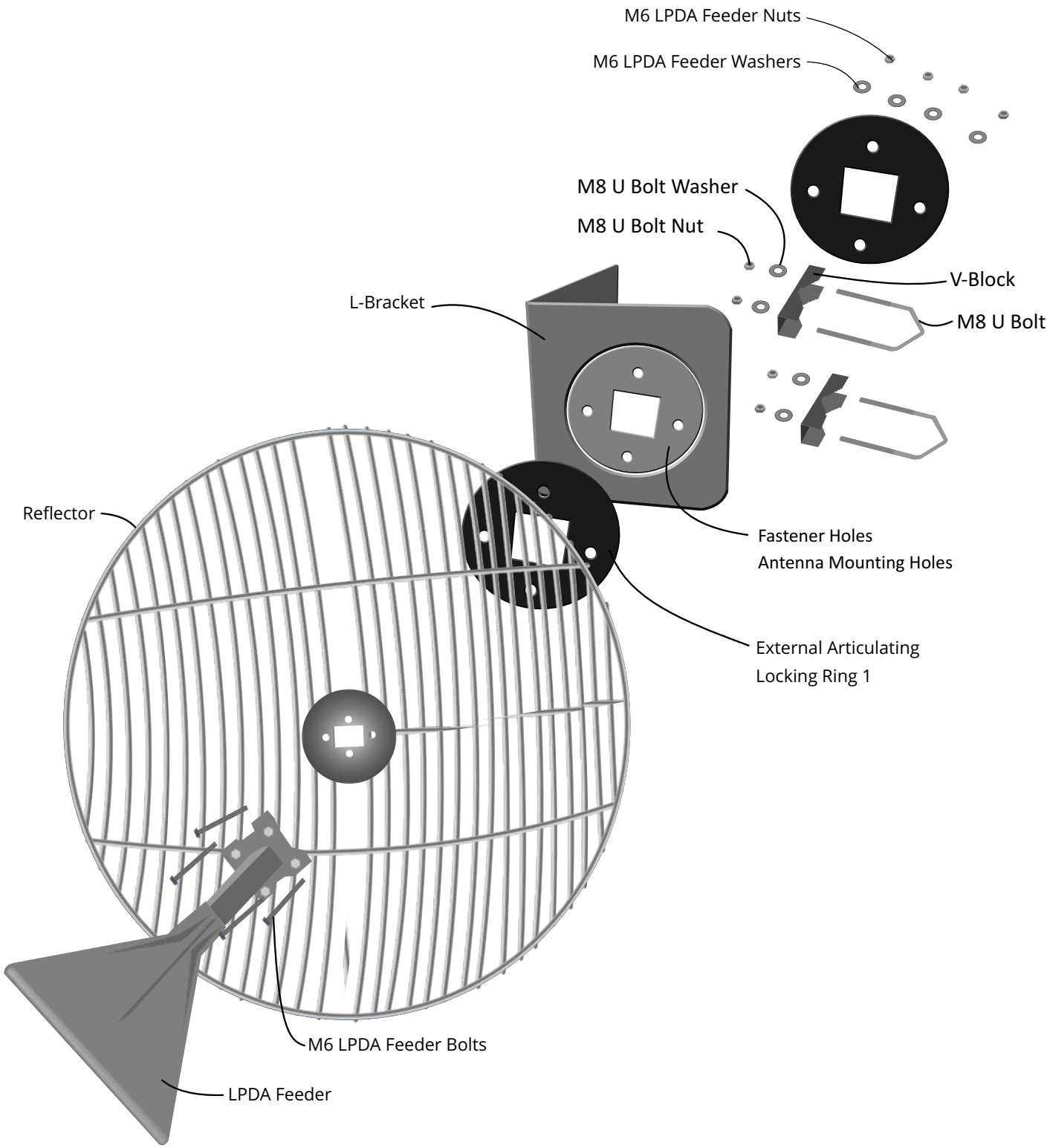


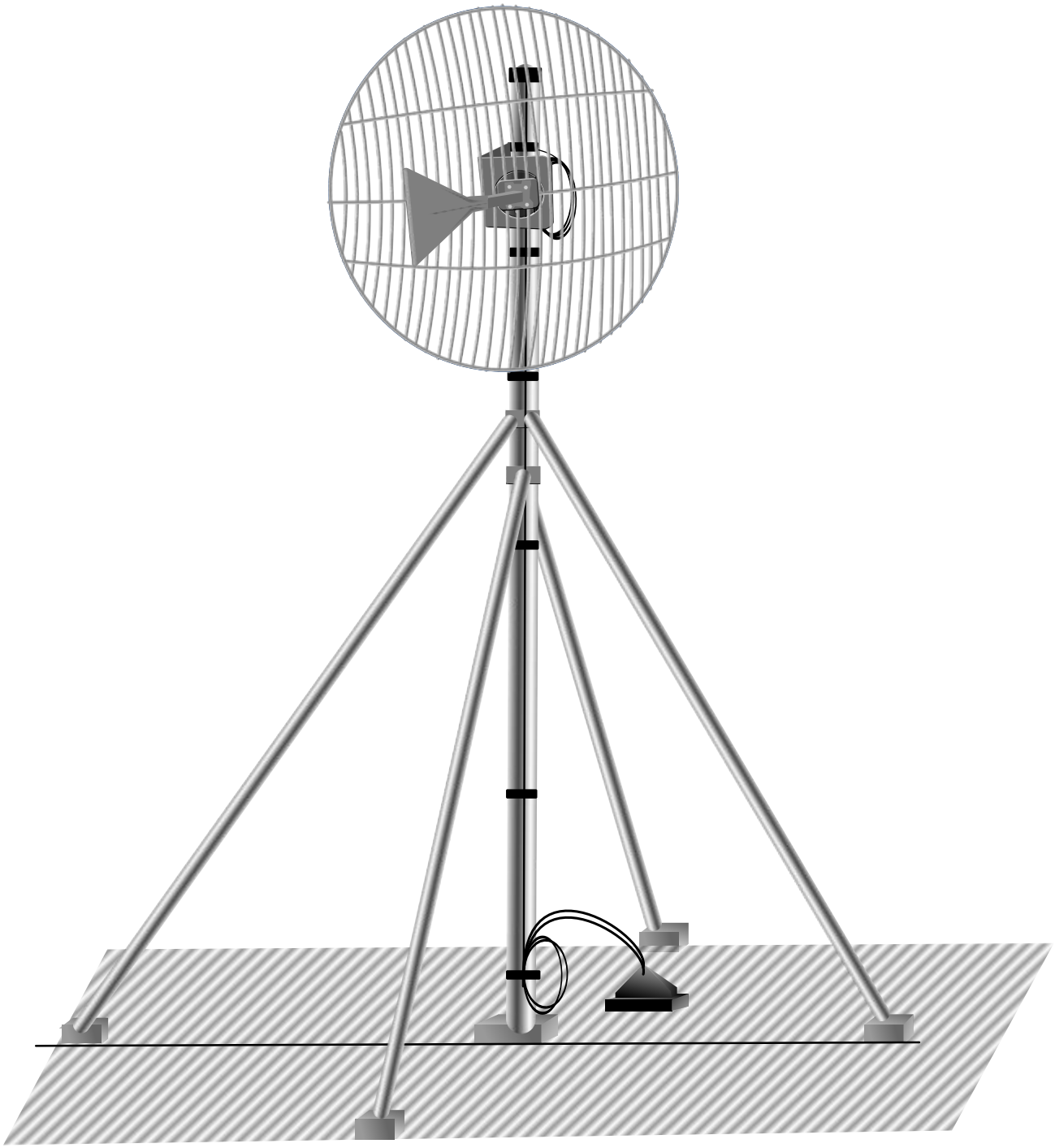
FIGURE 2 - Bracket Assembly Front



Antenna Assembly

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Installation Guide

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Professional installation by a trained installer of this antenna is recommended!
Note: This is a highly directional antenna. It will work when aimed correctly at the intended target.

1. Guide for Cellular Installation for Cellular Modems and Repeaters and other devices:

- Identify the serving cell towers in your area, by using online tools or available apps.
  If you are unsure your supplier can provide you a desktop engineering analysis to provide you with the location data.
- Point the antenna at the intended cell tower/s.
- If you are using a spectrum analyser, confirm the wanted signal is from that tower.
- Check the quality of that signal with test equipment or the end user device.

Notes:
In high density urban areas, there may be a lack of cellular dominance from multiple cell towers received at your location. You will need Spectrum Analysers/Cell advisers to pan and point to different cell towers to locate the best serving cell tower to your location.

- Low Band - 600-960MHz - beam-width is approx 23 degrees, +/- 11.5 degrees
- Mid Band - 1700-2700MHz - beam-width approx 12 degrees, +/- 6 degrees
- High Band - 3000-6500 - beam-width approx 7 degrees, +/- 3.5 degrees

2. Optimising signal quality for experienced installers
The Antenna can be skewed (rotated +/- 45 degrees) to match the cell tower antenna elements and confirmation of signal quality can be verified by checking RSRQ, RSRP and SINR.

3. Optimising/focusing the feeder antenna
The feeder antenna has four positions to increase signal quality.

- Slide the feeder antenna closer to the reflector to optimise signal quality for higher frequencies.
- Slide the feeder away from the reflector to optimise signal quality for lower frequencies.

2dB gain and increased directivity is achieved by optimising the signal, thus antenna gain on other bands drops by 2dB.
Note. The antenna specifications may change with future revisions.

4. Tips

- Use high quality low loss coaxial cable such as LMR400 or better.
- Ensure line of site
- Use two Grids for MIMO

