



MiMo ROOFTOP ANTENNA

RAIL ROOFTOP ANTENNA WITH GPS

The MiMo Rooftop Antenna is designed specifically for use on trains, trams and buses. Incorporating two elements operating wideband across all frequencies from 698MHz to 6000MHz the MiMo Rooftop Antenna range is versatile and future proof. The MiMo series has two DC grounded radiating elements, in versions with a GPS module it is protected by an integrated gas discharge surge arrestor.

Housed in a high impact, flame retardant Polycarbonate housing, the MiMo Rooftop Antenna is weatherproof and environmentally sealed to IP67, ensuring that the antenna's performance is never compromised.

Technical Features

- Covers all LTE, WiFi & WiMAX frequencies used worldwide, including GSM-R, Cellular 700-6000MHz
- 2x Elements (700MHz to 6GHz)
- Optional active GPS GLONASS antenna with built in surge arrestor
- Compliant with rail standards, EN45545, EN50155, EN61373 & EN50121
- Housing Polycarbonate 1000 PEI & Aluminium base
- Industry standard 4 hole mount
- DC Grounded Elements
- Defined isolation and Correlation
- Rated IP67 (When installed according to the installation instructions)

Applications

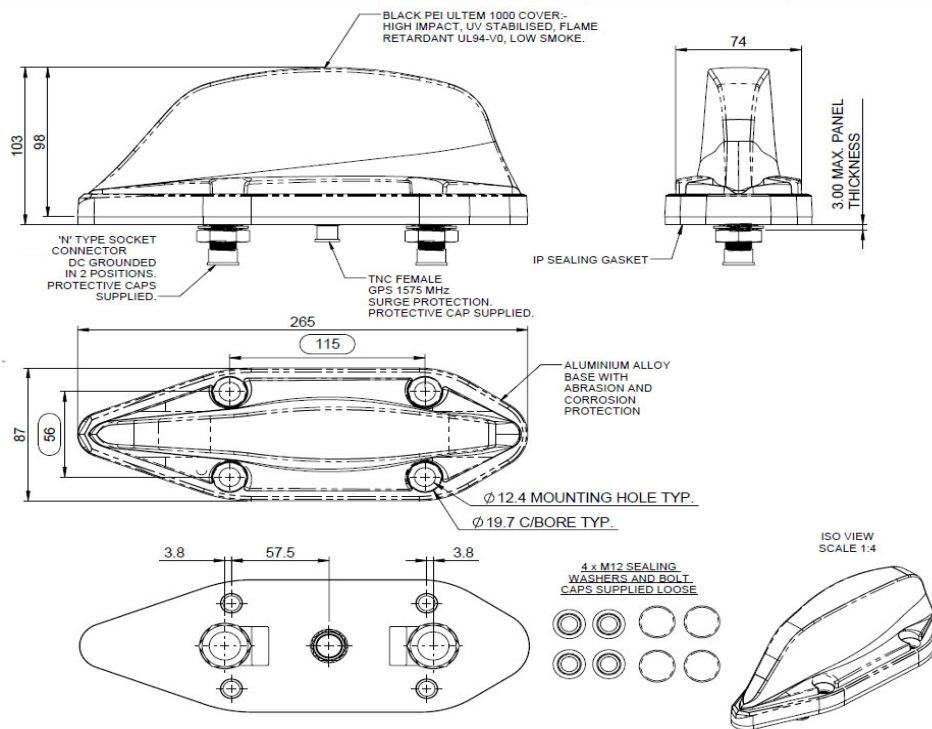
- High speed trains & locomotives
- Trams
- Buses / coaches
- Mass transit systems
- Heavy duty machinery (quarry trucks etc.)

Ordering Information

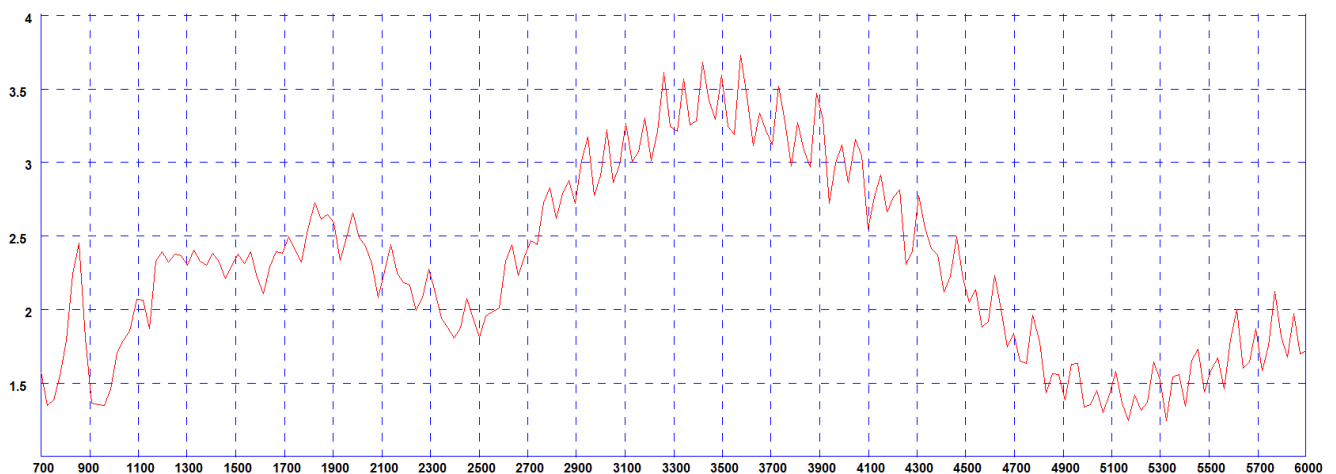
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| MiMo Rooftop Antenna with GPS | 1-2823592-1 |
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MiMo ROOFTOP ANTENNA

Rail Rooftop Antenna

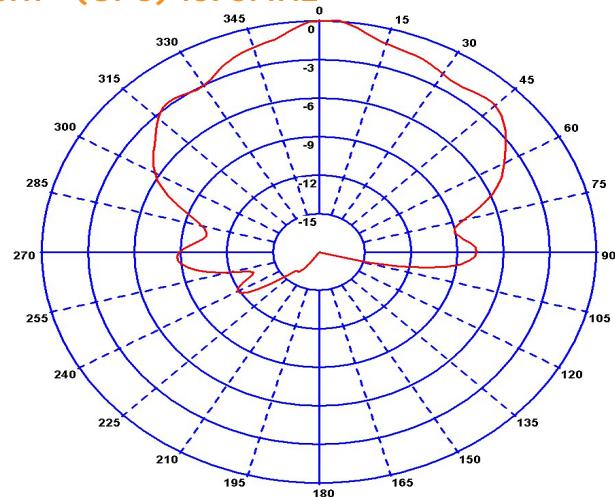


Typical VSWR*



* Measured on a 600 x 600mm (2' x 2') ground plane with 1m (3') of low loss cable.

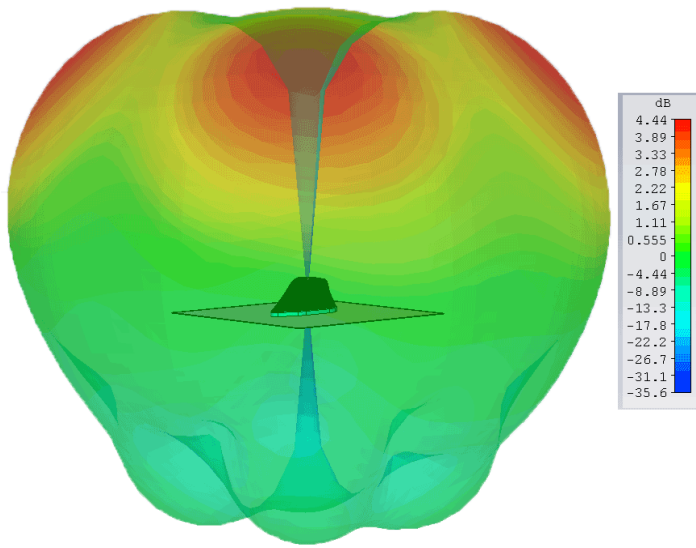
Typical E-Plane Pattern - (GPS) 1575MHz



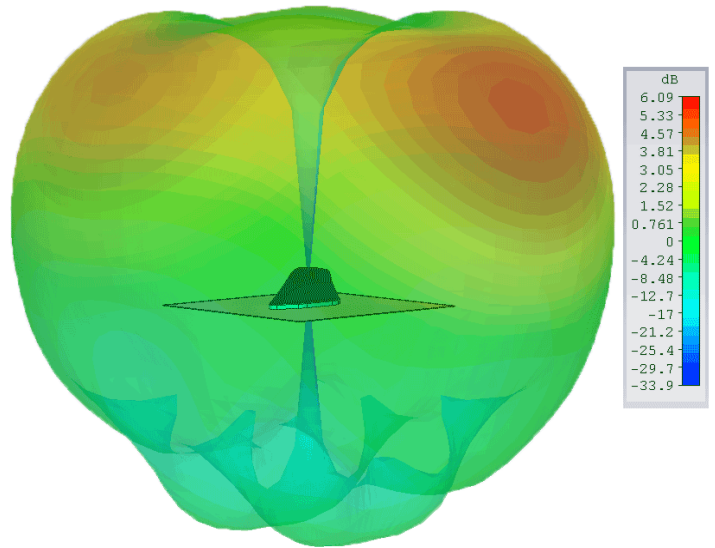
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Rail Rooftop Antenna

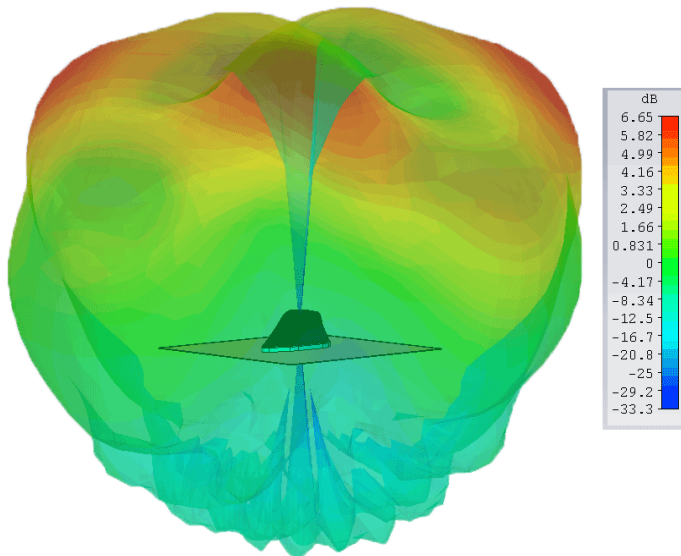
Typical 3D pattern - 700MHz



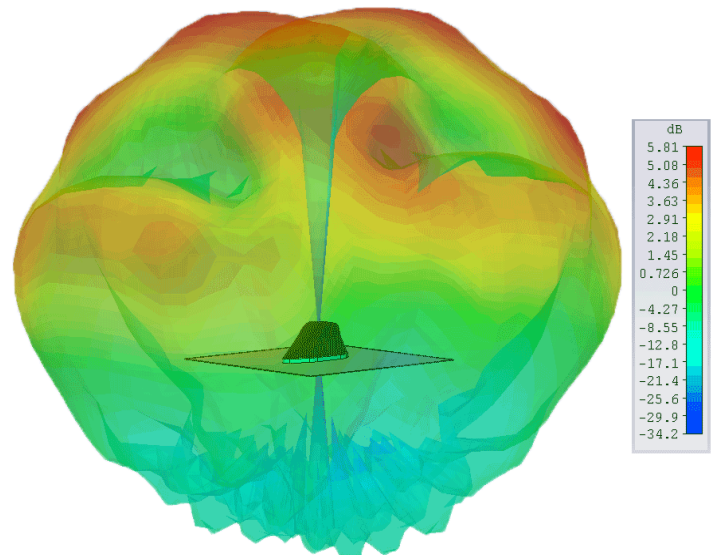
Typical 3D pattern - 900MHz



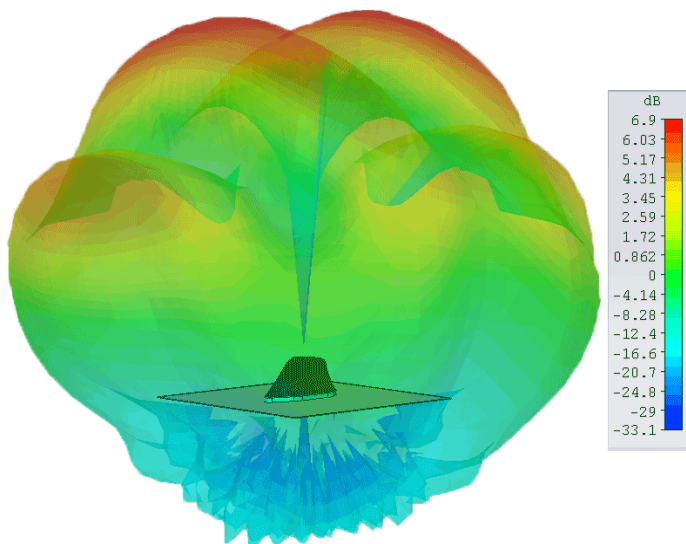
Typical 3D pattern - 1800MHz



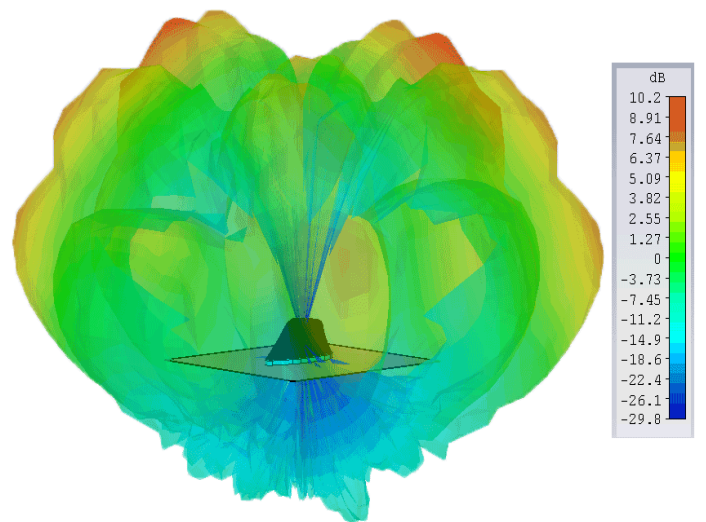
Typical 3D pattern - 2100MHz



Typical 3D pattern - 2500MHz



Typical 3D pattern - 5500MHz



3D patterns simulated with both elements fed on a 600 x 600mm (2' x 2') ground plane without cable

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MiMo Rooftop Antenna with GPS

Electrical Data

| | | |
|-----------------------|-----------------------------|-------|
| Frequency Range (MHz) | 2 X 698-960 / 1700-6000 MHz | |
| Peak Gain Isotropic** | 698-960 | 6dBi |
| | 1710-2700 | 6dBi |
| | 4.9-6GHz | 10dBi |
| Polarisation | Vertical | |
| Typical VSWR* | <2.5:1 | |
| Pattern | Omni-directional | |
| Impedance | 50 Ω | |
| Max Input Power (W) | 60 | |

GPS Data

| | |
|----------------------------|--|
| Frequency Range (MHz) | 1560-1612 |
| Impedance | 50 Ω |
| LNA Gain | 26dB ± 3 |
| Polarisation | Right Hand Circular |
| Operating Voltage | 3-5V DC |
| Current (Typical) | 15mA |
| GPS Antenna EMC Compliance | EN 301 489-1 V1.81 & EN 301 489-3 V1.6.1 EN 50121-3-2:2015 |

Mechanical Data

| | | |
|------------|--------------------|---------------|
| Dimensions | Height (N/inc pad) | 98mm (3.86") |
| | Width | 87mm (3.42") |
| | Length | 265mm (10.4") |

Environmental Specification

| | |
|--------------------------------|--|
| Operating Temp | -40°C / +80°C (-40°F / +176°F) |
| Radome Material | Polycarbonate 1000 |
| Radome Flame Retardance Rating | V0 (UL94) |
| Base Material | Cast Aluminium (corrosion protected & powder coated) |
| Sealing | IP67 (When installed according to the installation instructions) |

Approvals Data

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|----------------------|--|
| Regulatory Approvals | EN50155:2007 (Dry heat & Cooling) EN61373:2010 / EN50155:2007 (Shock & Vibration) EN 45545:2013 (Fire & Smoke) |
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Mounting Data

| | |
|--------|-------------------------------------|
| Fixing | 4x mounting holes to suit M12 bolts |
|--------|-------------------------------------|

Termination Data

| | | |
|-------------|-------|--------------------------------|
| Termination | Comms | 2 x N (female) - DC grounded |
| | GPS | TNC (female) - surge protected |

** Measured on a 600 x 600mm (2' x 2') ground plane with both elements fed and without cable.

* Measured on a 600 x 600mm (2' x 2') ground plane with 1m (3') of low loss cable.

MiMo ROOFTOP ANTENNA /// DATA SHEET

1-1773876-3 CC 0316

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