



Satellite IoT D2D Ready

TN & NTN Dual-Mode Antenna - Satellite IoT Direct to Device Ready

Remote Mount Antenna

Covering 4G/Satellite Band 25

The L001257-01 direct to device (D2D) antenna is a tough low-profile antenna for outdoor or indoor applications. This antenna provides frequency agility, low visibility, and improved gain in many applications.

The L001257-01 antenna is available in various industry standard mounting configurations including a threaded permanent stud mount model for vandal resistant mounting on brackets, panels, ceilings, or any other kind of housing.

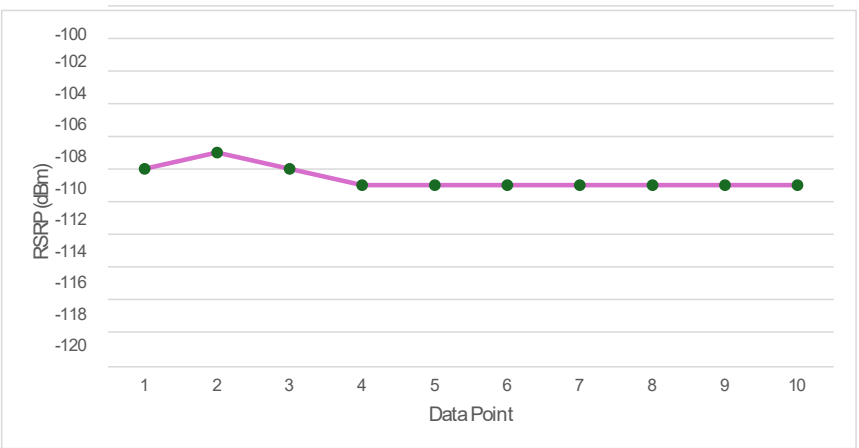
SATELLITE IOT D2D COMMUNICATIONS

Low Earth Orbit (LEO) satellites, positioned a few hundred km's above Earth, orbit rapidly and are ideal for IoT networks. A LEO satellite constellation can now support low data rate communications through specific LTE frequencies.

- Dual-mode capable - Supporting Terrestrial Networks (TN) and Non-Terrestrial Networks (NTN) from a single antenna
  - 698-2700 MHz terrestrial cellular coverage
  - Band 25 (1900 MHz) cellular satellite coverage
    - Testing available for other/future cellular satellite D2D frequency bands used by various network providers
- Enabling dual-mode communications via IoT devices
    - Prioritizing terrestrial networks but capable of automatically switching to satellite when the signal is weak or unavailable

REFERENCE SIGNAL RECEIVED POWER (RSRP) VALUES

The L001257-01 antenna was live-tested for receive signal strength. Data encompasses multiple satellite pass-overs, showing signal strength variation; exceeding the -120 dBm minimum for IoT devices.



An RSRP value of -120 dBm is generally the recognized minimum requirement suitable for the data rates of SMS, CAT-1, CAT-1 Bis connectivity.

RSRP can be susceptible to fluctuations for a variety of reasons. These can include: satellite elevation angle: antenna radiation patterns; solar flares; atmospheric conditions, and more.

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FEATURES AND BENEFITS

- Multi-band operation: 698-960 MHz/1690-2700 MHz
- Meets IP67 protection rating for dust tight seal and temporary water immersion
- Permanent mount with coaxial pigtail is ideal for radios within a metal enclosure
- Conformance to RoHS

ELECTRICAL SPECIFICATIONS									
Operating Frequency (MHz)	698-824	824-894	880-960	1427-1710	1690-1880	1850-1990	1920-2170	2300-2500	2500-2700
Peak Gain – Avg (dBi) 2ft Square Ground Plane	2.4	3.4	3.5	-1.0	5.3	5.1	5.6	5.7	5.0
Peak Gain, dBi (Average), 1ft Circle Ground Plane	0.7	1.2	1.3	-3.1	2.2	2.3	2.8	3.2	3.5
Peak Gain, dBi (Average) 2ft Square Ground Plane	3.1	3.7	3.7	5.4	5.6	5.4	6.3	6.0	5.3
Peak Gain – Max (dBi) 1ft Circle Ground Plane	1.5	1.4	1.4	2.1	2.3	2.8	3.3	3.4	4.1
Efficiency (%) 2ft Square Ground Plane	66	82	81	38	84	76	80	83	80
Efficiency (%) 1ft Circle Ground Plane	72	79	76	36	79	72	77	86	81
VSWR, dBi (Average) 2ft Square Ground Plane	1.6	1.5	1.9	4.7	1.4	1.6	1.4	1.3	1.4
VSWR, dBi (Average) 1ft Circle Ground Plane	2.0	2.4	2.4	4.7	1.5	1.7	1.5	1.2	1.4
VSWR, dBi (Max) 2ft Square Ground Plane	1.9			9.6	1.6				
VSWR, dBi (Max) 1ft Circle Ground Plane	2.6			9.7	1.7				
Ground Plane	2ft Square Ground Plane and 1ft Circle Ground Plane								
Nominal Impedance, Ω	50								
Polarization	Vertical								
Max Power (Ambient 25°C/77°F),	10 watts								
Cable & length of cable, mm	Ultralink 092463, 608 (2 ft)								

MECHANICAL SPECIFICATIONS	
Dimensions – height x diameter – mm (inches)	80.0 x 37.0 (3.2 x 1.5)
Weight – kg (lbs.)	0.10 (0.22)
Radome	PC, Lexan EXL9330, UV Resistant, UL94 V-0
Antenna Color	Black/white
Installation Torque (Nm)	4~6

ENVIRONMENTAL SPECIFICATIONS	
Operating Environment (Indoor or Outdoor)	Indoor and Outdoor
Operating Temperature – °C (°F)	-30 to +70 (-22 to +158)
Storage Temperature – °C (°F)	-40 to +85 (-40 to +185)
Ingress Protection Rating	IP67
Material Substance Compliance	RoHS

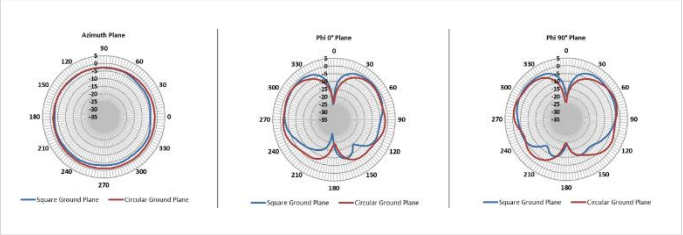
CONFIGURATION

PART NUMBER	CABLE TYPE	CABLE LENGTH	CONNECTOR	COLOR
L001257-01	Ultralink 092463	60.8 cm (24 in.)	SMA Male	Black

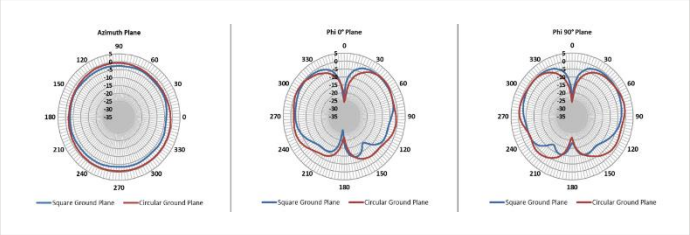
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RADIATION PATTERNS

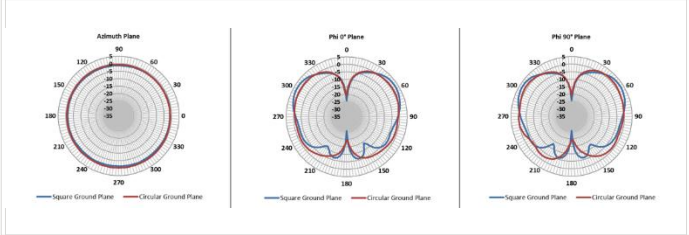
698 MHz



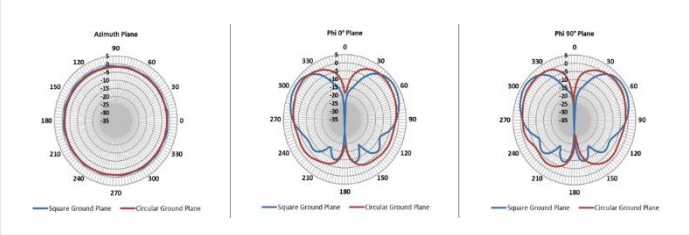
725 MHz



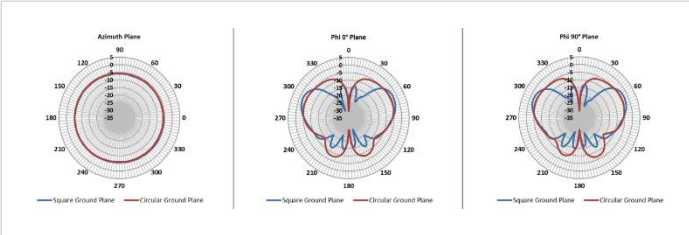
850 MHz



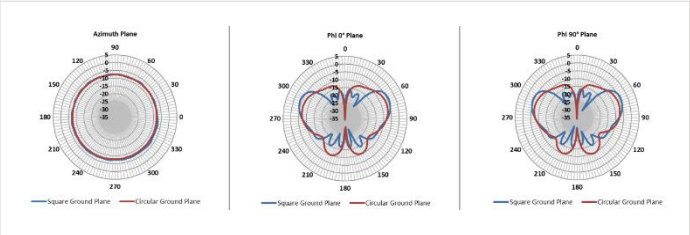
960 MHz



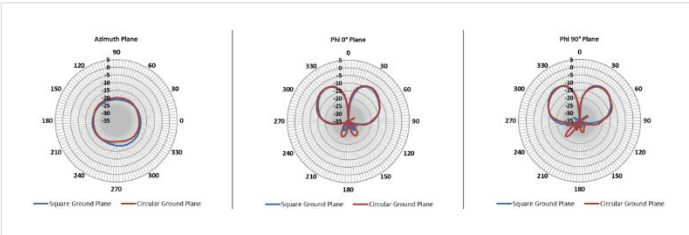
1427 MHz



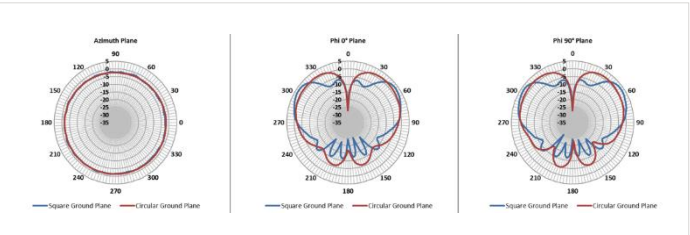
1460 MHz



1518 MHz



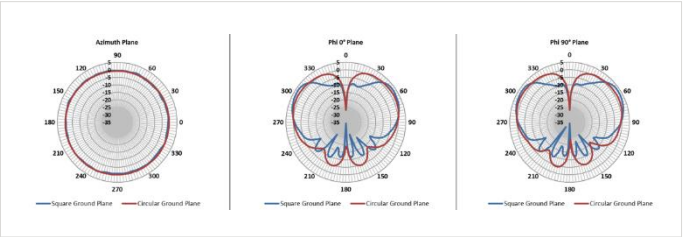
1620 MHz



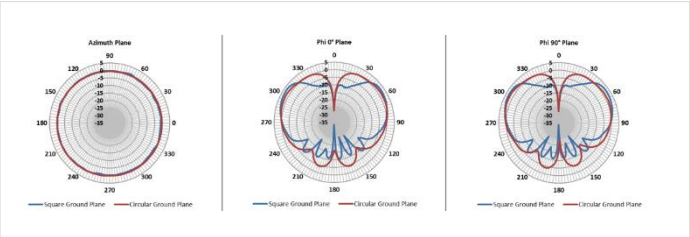
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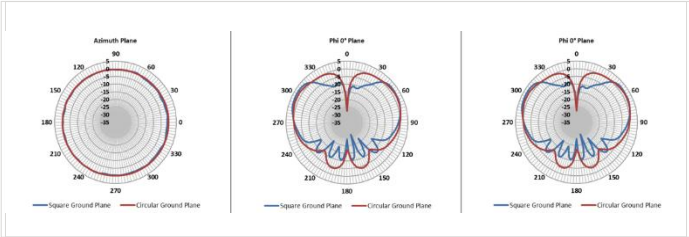
1690 MHz



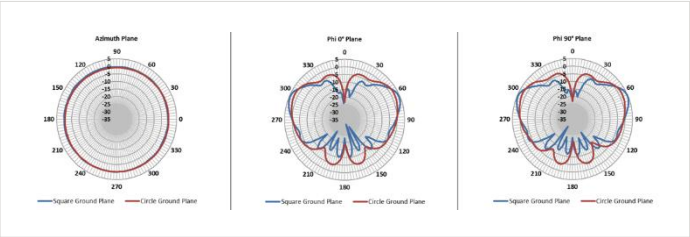
1710 MHz



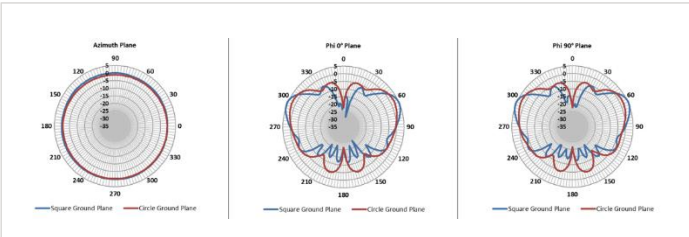
1730 MHz



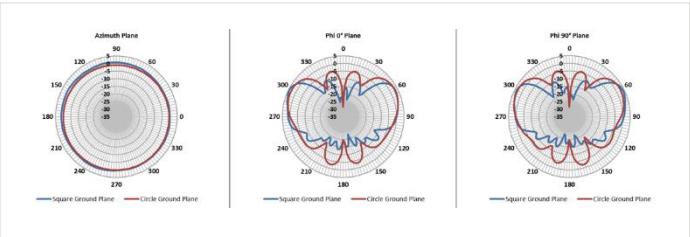
1880 MHz



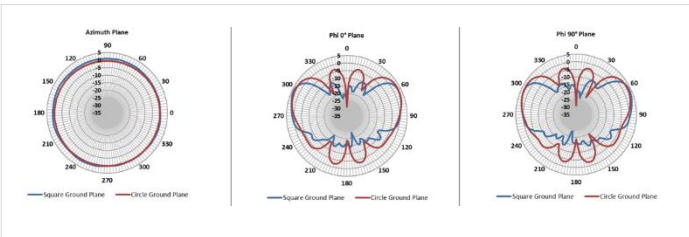
1930 MHz



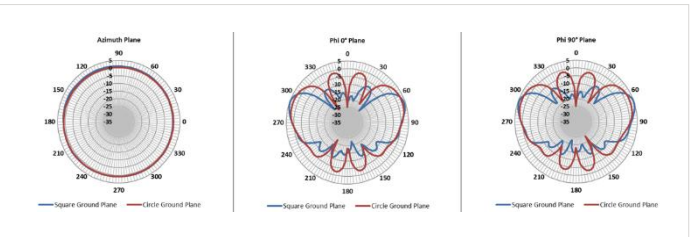
2130 MHz



2170 MHz



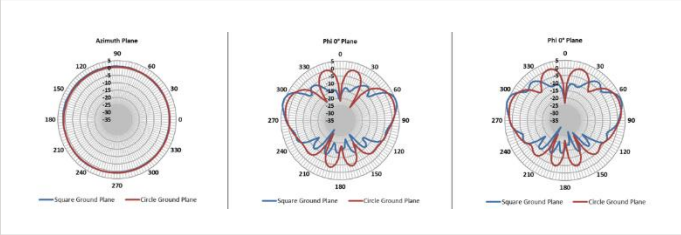
2310 MHz



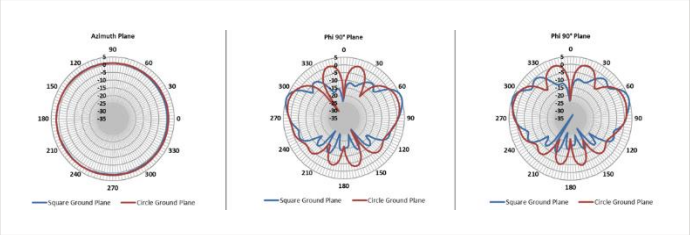
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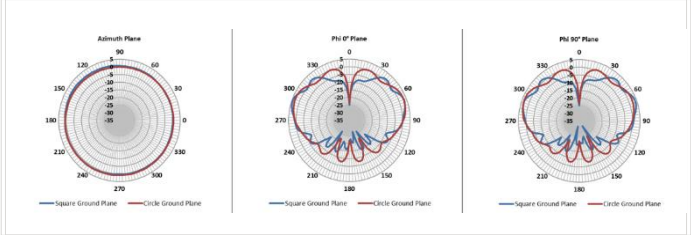
2412 MHz



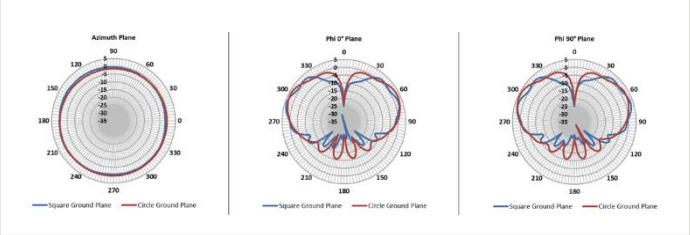
2500 MHz



2600 MHz



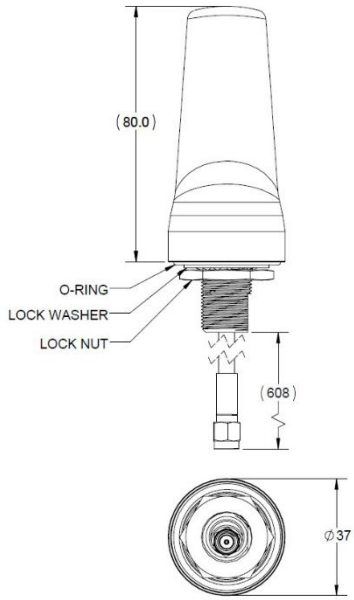
2700 MHz

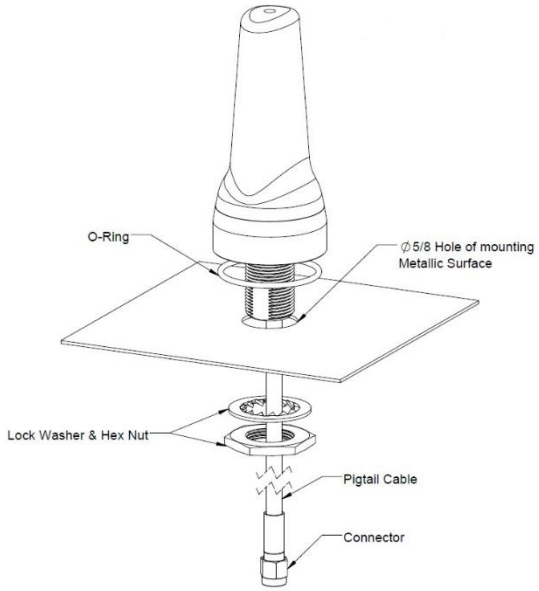


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PACKAGED DIMENSIONS	CARTON	AIR PALLET	OCEAN PALLET
Number of Antennas	50	900	1,200
Height – cm (in.)	30.1 (11.85)	104.0 (41.0)	135.0 (53.15)
Length – cm (in.)	26.6 (10.47)	120.0 (47.24)	120.0 (47.24)
Width – cm (in.)	52.6 (20.71)	80.0 (31.5)	80.0 (31.5)
Shipping Weight – kg (lb.)	7.325 (16.15)	141.85 (312.73)	185.8 (409.62)

PACKAGING INFORMATION





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