

# PCTEL® 5G/LTE-Antennas - PCTUWB-W

PCTUWB-W



## Ultra-Wide-Band Antenna for 5G and 4G frequencies

The PCTUWB-W (Ultra-Wide-Band) antenna from PCTEL® provides coverage of all LTE bands (600 MHz - 6 GHz) including the 5G frequencies in the 3,400 - 3,800 MHz range. This makes it a flexible antenna solution for future-proof infrastructures. The high gain in the individual frequency bands (1.7 - 3.5 dBi average antenna gain) ensures consistently good performance, especially in areas with poor reception. Its robust UV-resistant IP67 housing and low-profile design ensure easy installation even under harsh environmental conditions, both indoors and outdoors.

- Ultra-wide-band antenna for 5G and 4G frequencies
- Highly efficient, carrier-grade design to support modern voice/data mobile networks
- Covers the new 5G frequencies and is ready for the existing 4G frequencies
- Attractive, flat design for maximum installation flexibility without restrictions to orientation
- High-performance, low-loss cable and high-quality connectors for maximum HF power

MODELS	DESCRIPTION	ANTENNA CONNECTOR	ANTENNA CABLE
PCTUWB-W	Ultra-Wide-Band antenna for 4G and 5G frequencies	SMA (m)	5.2 m (Pro-Flex™ Plus low loss RG-58)

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## PRODUCT FEATURES



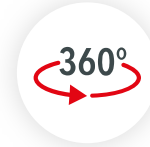
### 5G support

Supports the most used 5G frequency bands.



### 4G/LTE support

Supports all 4G/LTE frequency bands



### Omnidirectional antenna

Omnidirectional radiation characteristic ideal for most applications.



### Made for vehicles

Designed and optimized for the use on public transport vehicles.



### Frequency range

This antenna offers 600 - 6.000 MHz frequency range.



### Antenna gain

1.7 - 3.5 dBi antenna gain



### IP67 protection

Suitable for outdoor use with IP67 protection against water and dust.

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## SPECIFICATIONS

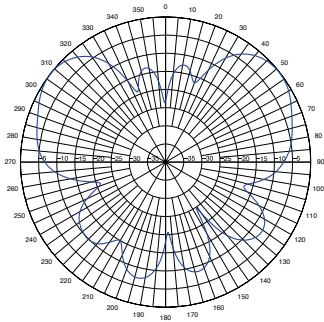
PCTUWB-W	
Antenna elements	1 x 5G/4G
Frequency range	600 - 6000 MHz
Antenna gain	1.7 - 3.5 dBi
Antenna cable	5.2 m (Pro-Flex™ Plus low loss RG-58)
Antenna connector	SMA(m)
Compatible with	GSM/GPRS/EDGE, UMTS, 4G, 5G, WIFI (2.4/5 GHz), Bluetooth, Zigbee, LoRa, Sigfox, 869 MHz

GENERAL INFORMATION	
Antenna type	5G/4G-Antennas
Construction type	Low-Profile Antenna
Application area	Indoor/Outdoor
Radiation characteristic	Omnidirectional
Integrated Antenna elements	1 x 5G/4G
Groundplane needed?	Yes
GSM/GPRS/EDGE- frequencies	850 / 900 / 1800 / 1900 MHz
4G-frequencies	700 / 2100 / 3500 / 3600 / 3700 / 3800 MHz
5G-frequencies	2100 / 3600 / 3700 / 3800 MHz
WiFi-frequencies	2.4 / 5 GHz
License-free bands	869 MHz range
Gain (typical)	1.7 - 3.5 dBi
VSWR	<2.0:1
ELECTRICAL CHARACTERISTICS	
Transmission power (max)	50 W
Impedance	50 Ohm
Polarization	Vertical, linear
PHYSICAL CHARACTERISTICS	
Material	Polycarbonat (UV-stable)
Dimensions	132 x 71 mm (Diameter x height)
Protection class	IP67
Mounting options	Screw mounting
Operating temperature range	-40 - +85°C

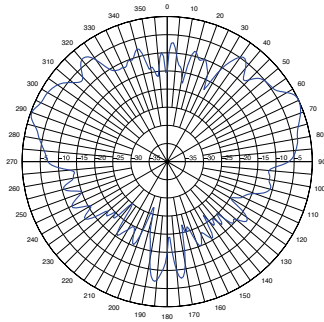
# PCTEL® 5G/LTE-Antennas - PCTUWB-W

## RADIATION PATTERN

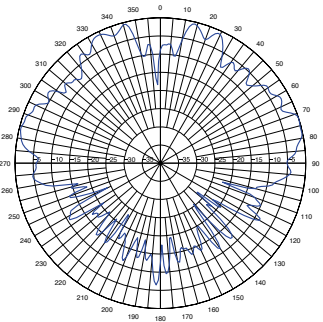
750 MHz Elevation Pattern



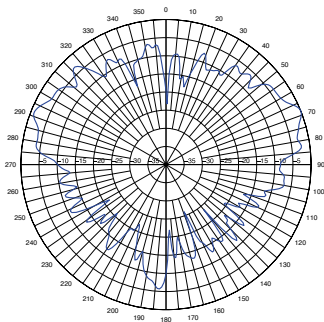
2 GHz Elevation Pattern



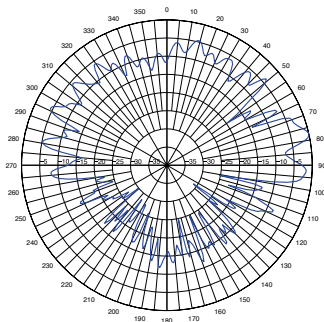
2.7 GHz Elevation Pattern



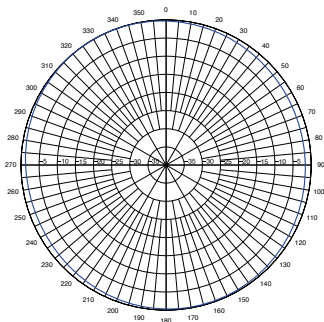
3.6 GHz Elevation Pattern



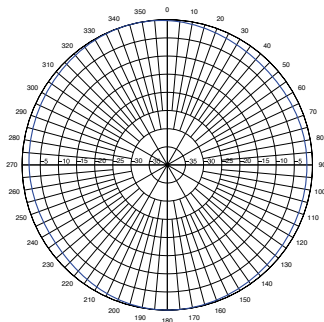
5 GHz Elevation Pattern



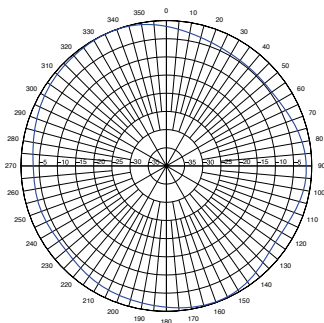
GSM 800 Azimuth Pattern



GSM1710 Azimuth Pattern

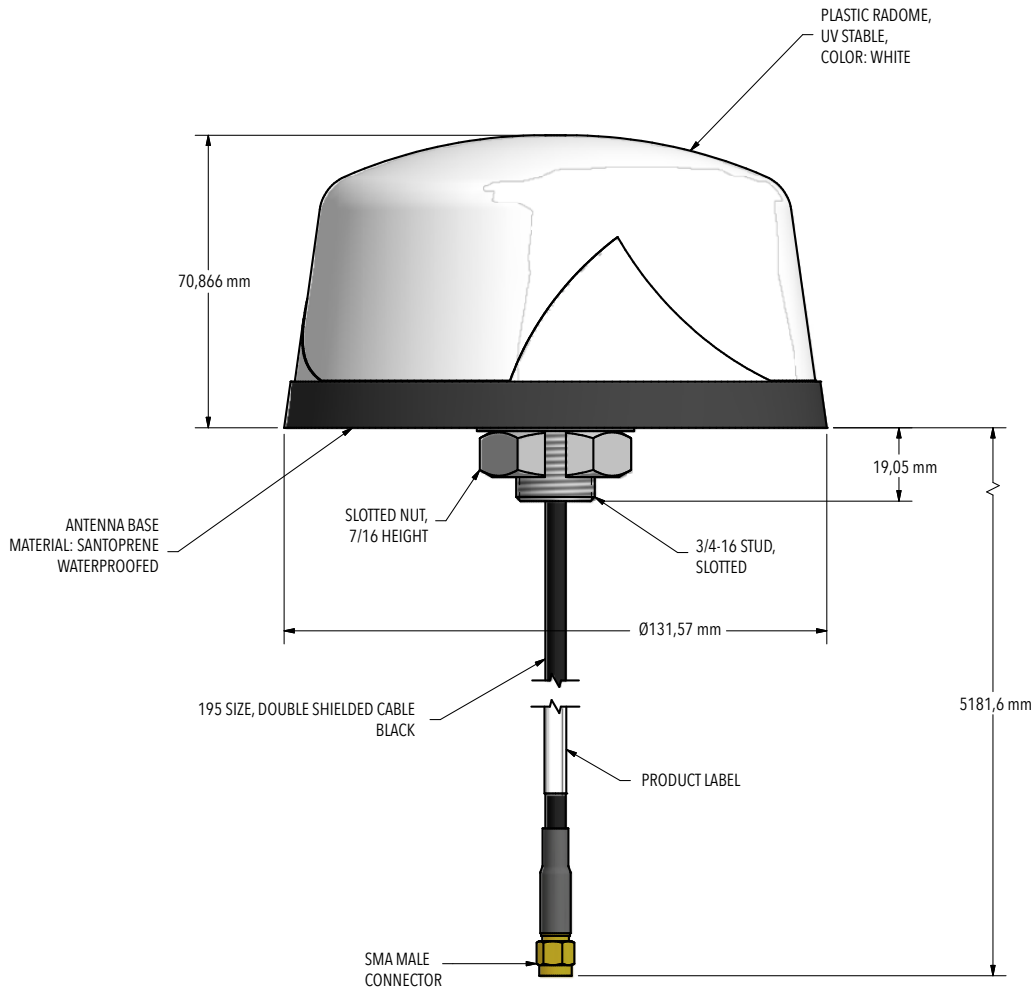


2.5 GHz Azimuth Pattern



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PRODUCT DIMENSIONS (MM)



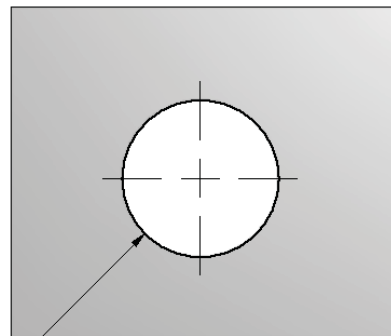
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## MOUNTING

### Stud mount (typical installation)

1. Select mounting position. When choosing a mounting location attempt to center the antenna on a ground plane, attempt to position the antenna so that it has 8-inches of ground plane in any given direction, attempt to space at least 16-inches from adjacent antenna or metallic structure, and choose a location with gentle surface curves to ensure proper sealing. Ensure there is 2-inches of clearance below mounting surface for mounting stud and cable routing. Ensure that there is 2-inches diameter around mounting hole for mounting nut and torquing procedure.
2. Cut or drill a 1-inch hole through mounting surface (Fig 1).
3. Ensure hole has been de-burred of sharp edges to prevent cable damage during installation.
4. Clean mounting surface around hole. The surface must be free of any debris that would otherwise prevent the inner VHB foam gasket from adhering or the outer rubber gasket from forming a seal.
5. Feed cables through hole with care not to damage jacket and route them to desired location.
6. Remove the liner from the inner VHB foam gasket, insert the mounting stud through the hole and position the antenna onto the mounting surface.
7. Beneath the mounting surface, install the slotted lock nut onto the mounting stud and hand tighten. Then wrench tighten until antenna is fully seated, or with a torque wrench, tighten the nut to 8Nm (6 lbf\*ft) minimum.
8. Visually inspect the outer rubber antenna gasket to ensure it has been compressed to make a seal against the mounting surface and radome. If the locking nut includes a set screw locking feature, torque down the locking nut as above and then torque the set screw to 3.5Nm (2.2 ft-lbs).

**Figure 1**



Diameter of the mounting hole: 30 mm

**MOUNTING-HOLE**

## ACCESSORIES ANTENNA CABLE



### Antenna cable - Configurator

With the Welotec cable configurator it is easy, to find the right coax cable for your needs.

Choose your desired cable from a large selection on cable types and combine it with the suitable connection.

#### Available connections:

SMA, RP-SMA, TNC, RP-TNC, BNC, N

#### Available cable types:

RG174, RF195, Aircell 5, RG58, RG223, H155 PE, Aircell 7