



38485

4G/3G 9 dBi MIMO Cellular Antenna with 2 Type N Female Connectors



Overview

The 38485 antenna is a wideband, dual-port, directional-panel antenna with slant 45 polarization that covers US LTE700/Cellular/PCS/AWS/MDS and global GSM900/GSM1800/UMTS/LTE2600 bands. The antenna is ideal for both indoor and outdoor applications. It includes a UV-stable radome enclosure that provides years of use without degradation to either mechanical properties or aesthetics.

This antenna boosts both the received and sent radio signals to and from the attached device in a single direction. Because of its directivity, it can reject adjacent unwanted

side signals, allowing for better signal reception while rejecting interference from adjacent signal sources. This high-gain, directional, Yagi-like antenna has a narrow beam width that requires precise aiming.

The 38485 antenna is designed for fixed installations. It is not intended for mobile applications. The antenna includes a mount assembly that allows the antenna to be secured to a mast or user-supplied pole using the two provided hose clamps. It can also be directly mounted on a wall using the supplied wall/mast mounting bracket.

Benefits and Features

- › Low passive intermodulation
- › Applicable for both 3G and 4G solutions
- › Ideal for both indoor and outdoor applications
- › Can be used in Wi-Fi applications
- › Domestic (US) cellular and global GSM
- › Weatherproof UV-stable radome
- › Included mast-mounting hardware with optional wall-mount kit available

Technical Description

For best results, Campbell Scientific recommends mounting the 38485 antenna facing toward the center of the coverage area (at the cellular tower or Wi-Fi access point). A line-of-sight path between the antenna and the active floor (ground) typically works best. Avoid mounting the antenna next to a column or vertical support that could create a shadow zone and reduce coverage to only a portion of the area or room. A clearance of 0.91 m (3 ft) around the antenna is also recommended.

In external applications, Campbell Scientific recommends that customers install two surge protection kits—one for each port of the antenna. Surge protection kits are not included with the antenna and must be purchased separately.

Because the 38485 antenna ships with two antenna connectors, it can be used in cellular applications where Multiple Input Multiple Output (MIMO) or Multiple Input Single Output (MISO) is required by the cellular provider, which is likely for 4G applications. These two antenna



connections can also help in 3G cellular applications for diversity purposes.

Even though this antenna is uniquely suited for use with cellular modems, it can also be used in Wi-Fi applications.

For more information about the 38485, refer to the following plots/radiation patterns:

› 698 MHz

› 880 MHz

› 960 MHz

› 1710 MHz

› 1950 MHz

› 2170 MHz

› 2700 MHz

Specifications

Operating Temperature Range	-40° to +70°C
Storage Temperature Range	-40° to +85°C
Frequency Range	700 to 2600 MHz
Peak Gain (typical)	› 9.7 dBi (2600 MHz) › 9.5 dBi (2300 MHz) › 8.4 dBi (2100 MHz) › 8.5 dBi (1900 MHz) › 7.5 dBi (1800 MHz) › 9.8 dBi (900 MHz) › 9.0 dBi (850 MHz) › 8.7 dBi (700 MHz)
Peak Gain (maximum)	› 9.7 dBi (850 MHz) › 9.1 dBi (700 MHz) › 10.4 dBi (900 MHz) › 8.5 dBi (1800 MHz) › 9.1 dBi (1900 MHz) › 9.1 dBi (2100 MHz) › 10.1 dBi (2300 MHz) › 10.0 dBi (2600 MHz)
Average SWR	› < 1.8:1 (2600 MHz) › < 2.0:1 (700 MHz) › < 1.9:1 (850 MHz) › < 1.7:1 (900 MHz) › < 1.6:1 (1800 MHz) › < 1.5:1 (1900 MHz) › < 1.5:1 (2100 MHz) › < 1.6:1 (2300 MHz)
Impedance	50 ohm

Horizontal 3 dB Beam Width	› 52° to 82° (2100 MHz) › 58° to 63° (2300 MHz) › 48° to 54° (2600 MHz) › 57° to 60° (900 MHz) › 56° to 85° (1800 MHz) › 52° to 64° (1900 MHz) › 65° to 74° (700 MHz) › 59° to 65° (850 MHz)
Vertical 3 dB Beam Width	› 46° to 72° (2100 MHz) › 48° to 55° (2600 MHz) › 46° to 62° (1900 MHz) › 57° to 66° (2300 MHz) › 66° to 70° (700 MHz) › 61° to 65° (850 MHz) › 56° to 60° (900 MHz) › 57° to 84° (1800 MHz)
Front/Back Ratio	21 dB
Maximum Input Power	50 W (per port at 25°C)
Polarization	Slant ±45°
Connector	Dual Type N female
Wind Rating	150 km/h 93 mph
Bands	› WiMAX 2300/2500 › US LTE700/Cellular/PCS/AWS/MDS › Global FSM900/SM1800/UMTS/LTE 2600
Dimensions	29.5 x 29.5 x 8.2 cm (11.6 x 11.6 x 3.2 in.)
Weight	1.46 kg (3.2 lb)

For comprehensive details, visit: www.campbellsci.eu/38485 



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