

## Wi-Fi Antenna Module CL-9 (2.4 – 2.5 GHz)

The antenna module 2.4-2.5GHz have linear polarization, 8.4dBi Gain for Wi-Fi, Bluetooth, ZigBee, other applications in this frequency band. Antenna increases space selectivity and link distance. There are versions for indoor or outdoor use.



Application (Supported wireless standards): Wi-Fi 2.4 GHz, Bluetooth, ZigBee

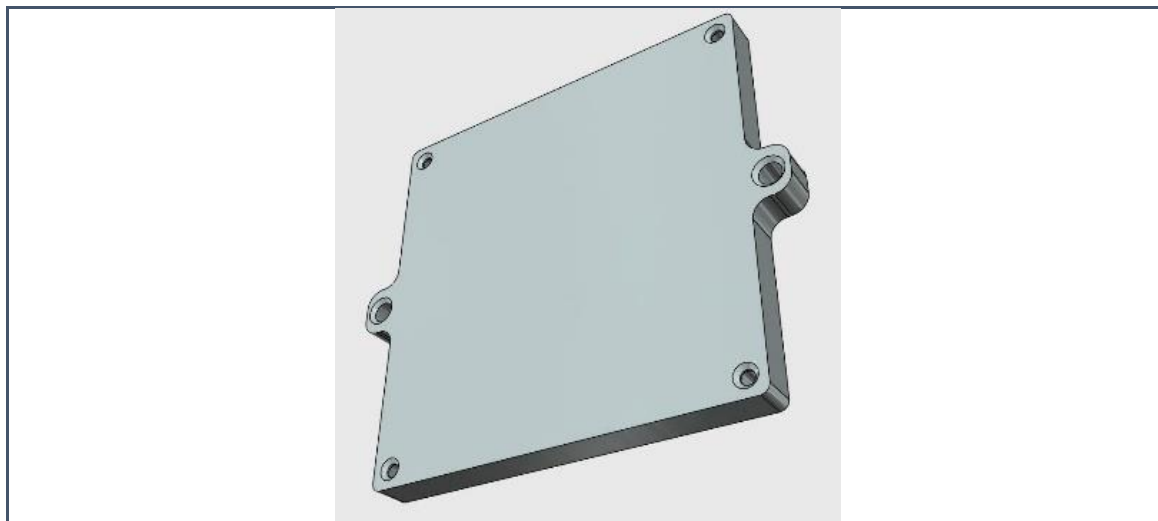
This document presents the following data:

1. Technical specification
2. System requirements
3. Safety instructions
4. Installation guide
5. Contacts and Support

Antenna module can have several mounting options:

- Foot-holder (PLA, Acrylic)
- Mounting on the pipe or pipe aluminum stand.
- Two holders for custom mounting

## 1. Technical specification

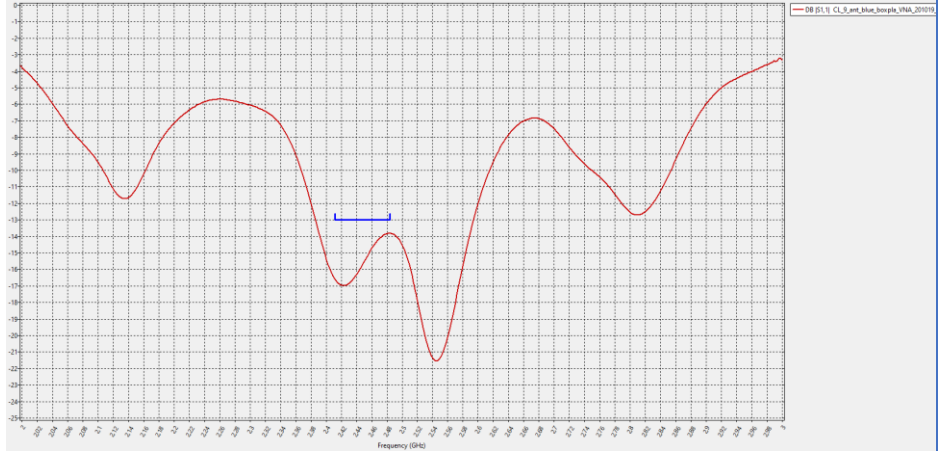


Antenna type	4-Patch Antenna Patch Array
Frequency band WiFi (S11 better than -13 dB)	2.4-2.5 GHz
Polarization	Linear
Gain max	8.4 dBi
Horizontal and vertical beam width (3dB level)	60°/60°
The ratio of the radiation power forward / backward	20 dB
Connector type	SMA, RP-SMA (optional)
Cable recommended	50 Ohm (RG174 or similar)
Application (allocation)	Indoor/Outdoor (optional)
Impedance	50 Ohm
Dimensions	94*94*9mm (without connector and mounting parts)

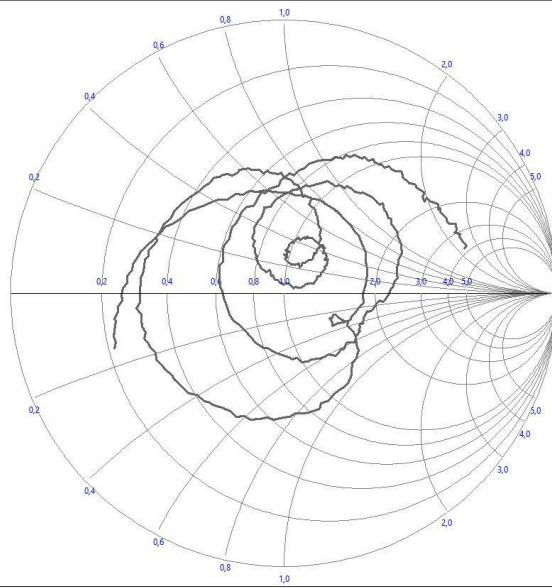


**Picture 1 – Antenna tube mounting**

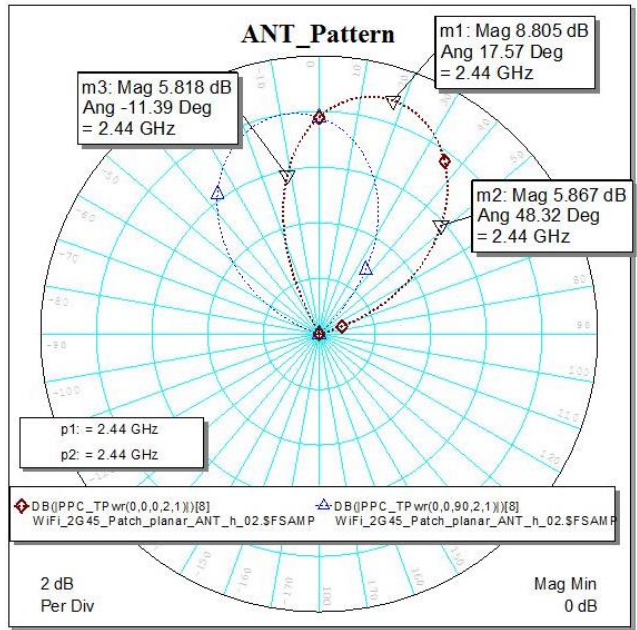
Matching, S11, dB,  
Measurements 2-  
3GHz  
See the limits – Wi-Fi



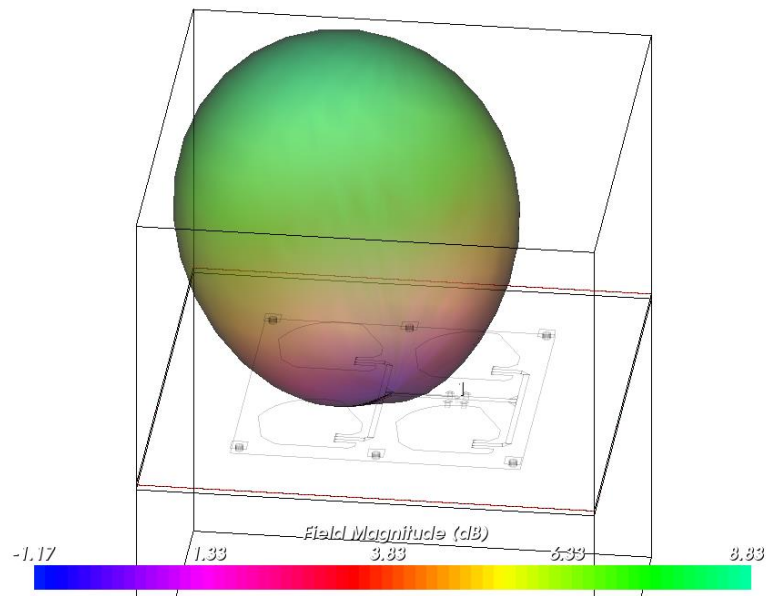
Matching, Smith  
Chart, Measurements

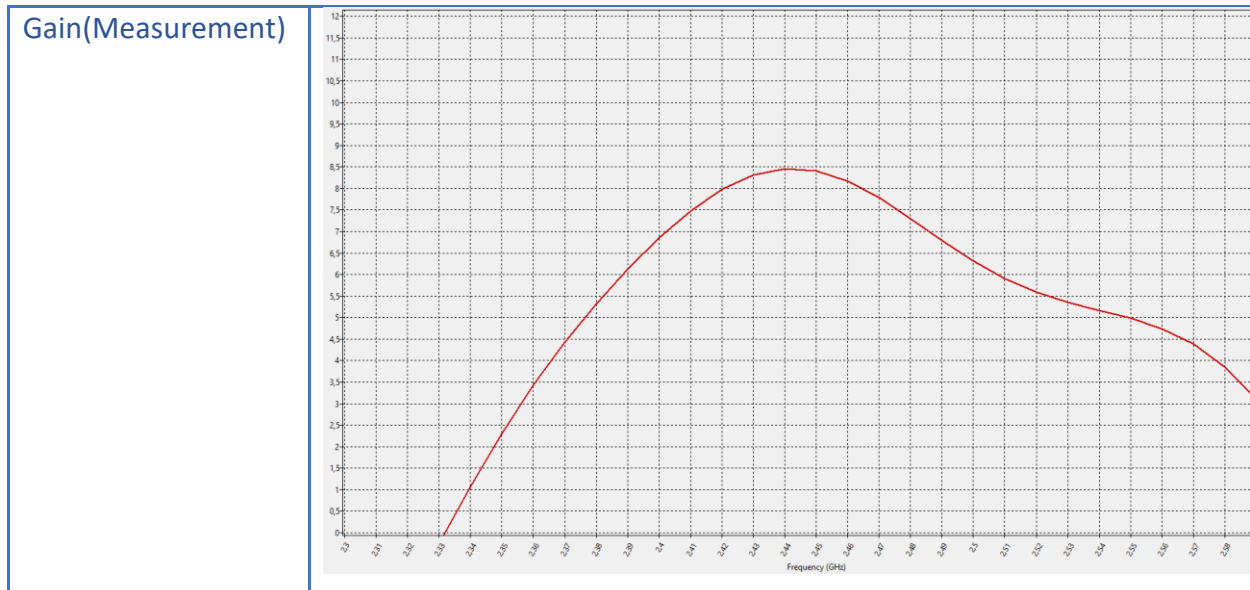


2D Antenna Radiation Pattern



3D Antenna Radiation Pattern





## 2. System requirements

This antenna is designed for any Wi-Fi access points or receivers in the 2.4 GHz band with SMA or RP-SMA input. This type is suitable for most USB Wi-Fi adapters and modems. It is also possible to connect the device with the antenna directly using the RP-SMA connector.

## 3. Safety instructions

It is recommended not to install the device closer than 5 cm from the body. Otherwise, it is recommended to limit the operation time.

Do not use the device and do not connect the cable during the period of thunderstorm activity

Do not place devices near transmission lines and power circuits.

When installing the antenna, remember:

- a. do not use a metal ladder.
- b. do not work on a wet or windy day

## 4. Installation Guide

This antenna is designed for installation in rooms. There are two ways of fasteners:

1. Installation using a plastic stand
2. Installation with side holes to the tube

## 5. Contacts and Support

Web: [www.ag-rf-engineering.de](http://www.ag-rf-engineering.de)

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Installation example