

SMA and RP-SMA: What's the difference?

Description

SMA (SubMiniature Version A) belongs to the category of **coaxial connectors** for high frequency-applications. It can be characterized by an extremely low electromagnetic interference, respective a good electrical shielding.

In earlier days, this plug connection was used for aerial input at WLAN devices.

The **SMA aerial input** thereby shows a **female thread** with an **inner plug** whereas the port has a **male thread**.

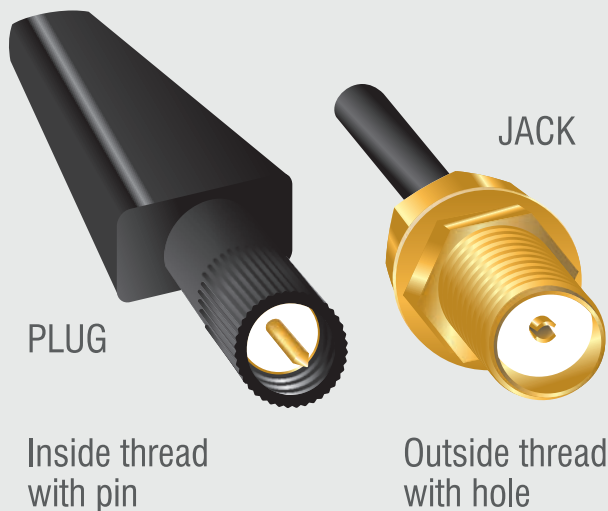
To stop the unauthorized use of an aerial with a higher signal strength, RP-SMA (**R**everse **P**olarity SMA) has been developed. The **RP-SMA aerial input** also has a female thread as is the case with SMA but **no plug** (see figure below).

As a result, a SMA aerial input mechanically fits the RP-SMA port but not electronically.

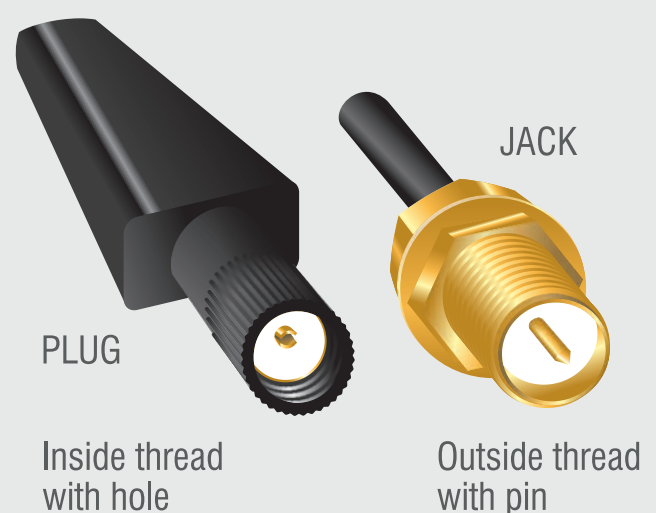
The difference between SMA and RP-SMA as for their construction forms is shown in the following illustration.

SMA form compared to RP-SMA form

SMA



RP-SMA



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- ▶ [RP-SMA antennas here](#)
- ▶ [RP-SMA antenna cables here](#)