

## FOLLOW THE SIGNAL - RF INTERCONNECT TO ANTENNA TECHNOLOGY

Radio frequency antennas are designed to send and receive RF signals. They are intended to mate with a broad range of RF connector interfaces or be mounted directly to a PCB, and are available in various internal and external configurations. Amphenol RF offers a wide range of RF antennas that can be used across various applications along with standard RF interconnect.

The off-the-shelf (OTS) antenna portfolio includes embedded, internal and external antennas which include cellular, Wi-Fi, GNAA, BT/BLE, LoRa, WLC and NFC options. These antennas are specifically designed for IoT devices, are easy to implement and provide high efficiency and superior performance.



### Types of Antennas



#### Embedded Antennas

The most compact antenna option, embedded antennas are mounted directly to the surface of a PCB and require no cabling. They can be made from a variety of materials, with monopole, loop, IFA or PIFA configuration options. Embedded antennas are ideal for the smallest applications, like RFID readers and IoT devices, and are also commonly used in set-top boxes and wireless gateways.



#### Internal Antennas

Internal antennas are mounted inside of a device and typically connect to an ultraminiature PCB jack by way of flexible micro-coaxial cable. The NFC style antenna features a design that solders directly to a PCB with a short trace lead. The flexible antenna pad has an adhesive back that easily mounts to the inner wall of an application housing, making them easy to install and taking up very little space. GPS units and autonomous or remote controlled devices commonly use internal antennas.



#### External Antennas

External antennas are mounted on the outside of an applications by means of an RF connector interface, like an SMA or RP-SMA. They can be used indoors or outdoors, with robust designs available for harsher environments. Variations for electrical types and physical features exist to fit many applications and performance needs. External antennas are used extensively on handheld radios, surveillance equipment, routers and set-top boxes, and many more.

### RF Applications

- Mobile Phone (4G, LTE, 3G WCDMA, WiFi, BT, FM)
- Laptop/Tablet (4G, LTE, 3G WCDMA, WiFi, BT)
- Access Point (4G, LTE, 3G WCDMA, WiFi)
- Active/Switchable Antennas
- NFC Antennas
- FM Antennas
- CMMB Antennas
- Wireless Charged Antennas
- Automotive Connectivity (Cellular, FM, WiFi, BT)

