

Wireless Device Testing

Assessing compliance with the essential requirements of European Directive 2014/53/EU and FCC regulation, Title 47, Part 15 (USA)



The incorporation of wireless communication modules in electrical and electronic devices has revolutionised the industry. Connectivity technology has enabled the development of new features in both industrial and consumer equipment and has provided a real impetus for innovation. Such a transformation necessarily brings with it new product-conformity requirements.

In order to gain access to the EU market, wireless devices must comply with the essential requirements set out in Directive 2014/53/EU (Radio Equipment Directive /RED). The aim of this directive is to ensure efficient use of the radio spectrum, a suitable level of electromagnetic compatibility, and the health and safety of people, domestic animals, and property.

To obtain market access to the United States, radio equipment must comply with part 15 of FCC regulations. In turn, each national market has its own specific regulations (IC in Canada, VCCI in Japan, KC in South Korea, etc.) and manufacturers must ensure they comply with the legal requirements of every country in which they wish to market their products.

Accredited radio-testing laboratory

Applus+ Laboratories is equipped with all the facilities and recognitions required to play a pivotal role right from a product's conception through to it going to market. Our aim is to help manufacturers to reduce their products' time to market.

We offer a one-stop shop for wireless technologies:

- Design of testing protocols
- Pre-conformity testing
- Compliance testing for [Directive 2014/53/EU \(European Union\)](#) and [FCC part 15 \(USA\)](#)
- [Radio-type approval services for global market access](#)
- Interoperability testing for devices equipped with wireless technology

Applus+ Laboratories is a European leader in radio testing with more than 10 years of experience in the field. We are an active member of a number of international standardisation committees and a "Full Member" of ETSI (European Telecommunications Standards Institute).

Testing capabilities for wireless devices

- **Electromagnetic compatibility testing** of wireless devices, in particular short-range, RFID, NFC, Private Mobile Radio and WLAN/WPAN/RLAN (Bluetooth, Wi-Fi, ZigBee, etc.) devices, GNSS receivers, and mobile phones (2G/3G/4G):
 - EN 301 489-1
 - EN 301 489-3
 - EN 301 489-5
 - EN 301 489-7
 - EN 301 489-17
 - EN 301 489-24
- **Radio-spectrum protection testing** of equipment intended for use in local and personal wireless networks, encompassing WLAN/WPAN/RLAN technologies (Bluetooth, W-iFi, ZigBee, etc.), short-range radio equipment up to 40GHz (generic, RFID, NFC, ISM bands, etc.) and GNSS receivers:
 - EN 300 220
 - EN 300 330
 - EN 300 328
 - EN 301 893
 - EN 300 440
 - EN 302 291
 - Intentional Radiators - FCC Part 15 Subpart C
 - U-NII without DFS Intentional Radiators - FCC Part 15, Subpart E
 - U-NII with DFS Intentional Radiators - FCC Part 15, Subpart E
 - UWB Intentional Radiators - FCC Part 15, Subpart F
 - BPL Intentional Radiators - FCC Part 15, Subpart G
 - White Space Device Intentional Radiators - FCC Part 15, Subpart H
 - ANSI C63.10 2013
- [Electrical safety testing](#) of wireless devices
- [Radio-frequency exposure testing](#)

Benefits



- Applus+ Laboratories can manage the entire testing plan with no need for third-party involvement
- Our multi-disciplinary testing capabilities allow for the validation of the full range of product applications (electrical and electronic, mechanical, environmental, and acoustic testing, among others)
- We have expertise in product- and market-specific testing technologies and standards (connected vehicles, cyber security in wireless communications, etc.)