



Choose certainty.
Add value.

Wireless modules and finished products

Optimising market opportunities



Your challenges

The growing trend for manufacturers to add radio modules into products, beyond the more traditional market of laptops and mobile phones, means that they are now being included in everything from domestic appliances to industrial machinery. This has created a situation where manufacturers, importers and retailers of both radio modules and end-user products are unfamiliar with the regulatory requirements of their target markets. Consequently, they may fall foul of the various market surveillance authorities, as more countries introduce differing national standards.

What are wireless modules and finished products?

Wireless modules provide products with communication technologies to support their specific function(s). Common technologies include Bluetooth, RFID, GPS, NFC, GSM, WCDMA, LTE.

For example, GSM module would provide the platform for cellular communication using the network infrastructure to

connect the device to another product with cellular capability regardless of proximity whereas Bluetooth would support short range communication between devices.

Depending on the intended functions, finished products could be classified as Short Range Devices (SRD). These types of devices typically have a low level of transmitted power, and hence their communication range is restricted. The definition 'Short Communication Range Device' may be applied to many different types of wireless equipment, including various forms of:

- Access control (including door and gate openers)
- Alarms and movement detectors
- Closed-circuit television (CCTV)
- Cordless audio devices, including wireless microphones
- Industrial controls
- Local Area Networks
- Medical equipment and implants
- Mobile phones (Bluetooth, WLAN)

- Radio-controlled systems
- Radio frequency identification (RFID)
- Remote control
- Road Transport Telematics
- Smart home appliances
- Telemetry
- UWB Sensors & Radars (such as ground probing radar)
- Wearable devices

In addition to SRD, there are other finished products that might integrate short range communication with dedicated cellular and/or satellite based communications modules. These include mobile phones, laptops, navigation

equipment, and safety critical communication devices used in autonomous cars or medical applications

Why are wireless modules and finished products important for your business?

With the boom in wireless technologies and the need for real time services, communication (voice, data or location) functions are being utilised by product manufacturers to innovate the product features. As the telecommunications industry is extremely competitive, the pressure is on to develop wireless-enabled technologies that deliver a market advantage. However, a key reason for non-compliance of final host products containing wireless modules is that while

CONTINENT	COUNTRY	MANDATORY CONFORMITY REQUIREMENTS	
		TELECOM	RADIO
EUROPE	 Albania	CE Mark	CE Mark
	 Belarus	Type approval	Type approval
	 Bosnia and Herzegovina	CE Mark	CE Mark
	 EU	CE Mark	CE Mark
	 Iceland	CE Mark	CE Mark
	 Liechtenstein	CE Mark	CE Mark
	 Moldova	SM Mark	SM Mark
	 Monaco	CE Mark	CE Mark
	 Montenegro	SM Mark	SM Mark
	 Norway	CE Mark	CE Mark
	 Russia	FAC approval FSS notification RFC approval	FAC approval
	 Serbia	CE Mark	CE Mark
	 Switzerland	CE Mark	CE Mark
	 Turkey	CE Mark	CE Mark
	 Ukraine	TR DoC UkrSEPRO Mark	TR DoC UkrSEPRO Mark
AMERICAS	 Argentina	ENACOM approval	ENACOM approval
	 Brazil	ANATEL approval	ANATEL approval
	 Canada	ISED approval	ISED approval
	 Mexico	IFETEL certification	IFETEL certification
	 United States of America	ACTA approval	FCC approval
AUSTRALIA	 Australia	RCM (A-tick)	RCM (C-tick)
	 New Zealand	Telepermit	RCM

CONTINENT	COUNTRY	MANDATORY CONFORMITY REQUIREMENTS	
		TELECOM	RADIO
AFRICA	 South Africa	ICASA approval	ICASA approval
ASIA	 Armenia	CE Mark	CE Mark
	 Brunei Darussalam	AITI approval	AITI approval
	 Cambodia	MPTC approval	MPTC approval
	 China	NAL certification	SRRC approval
	 Hong Kong	OFTA certification	OFTA certification
	 India	TEC approval	WPC approval
	 Indonesia	SDPPI approval	SDPPI approval
	 Japan	MIC approval	MIC approval
	 Korea (South)	KC-RRA	KC-RRA
	 Malaysia	SIRIM approval	SIRIM approval
	 Philippines	Philippines NTC certification	Philippines NTC certification
	 Singapore	IDA Equipment registration	IDA Equipment registration
	 Taiwan	NCC approval	NCC approval
	 Thailand	Thai NTC approval	Thai NTC approval
	 Vietnam	ICTQC Mark	ICTQC Mark
MIDDLE EAST	 Israel	MoC approval	MoC approval
	 Kuwait	MoC approval	MoC approval
	 Saudi Arabia	CITC equipment approval	CITC equipment approval
	 United Arab Emirates	TRA approval	TRA approval

these modules are compliant as an independent unit, once they are integrated into another product, this often changes the regulatory requirements.

A wide variety of laws and guidelines from different countries and telecoms providers must therefore be met before your end-user product or radio module can enter new markets.

How can we help you?

TÜV SÜD's experts can certify any of your wireless products, providing you with market entry standard compliance for the EU, USA, Canada, Japan and New Zealand. We are a recognised Notified Body (NB) under the European Union's Radio Equipment Directive, a Telecommunication Certification Body (TCB) for the U.S., an Industry Canada Foreign Certification Body (FCB) and a Conformity Assessment Body (CAB) for Japan. Our global market access experts study target market

access requirements and advise customers on the most efficient and economic certification path, ensuring that your product or radio module complies with the regulatory requirements of its intended market.

Our services

Our services include:

- **Pre-evaluation of modules or end-user products** – identify applicable standards in each target country and the most efficient certification approach.
- **Testing** - to meet the regulatory requirements for market access to Europe, the U.S., Canada, Japan, Australia and other related markets.
- **Certification** – against the requirements of over 100 countries.
- **Research** – our team of highly skilled experts has in-depth knowledge of the latest changes and updates to the global regulations and standards which are relevant to your products and target markets.



- **Quality assurance** - our global network of accredited test laboratories ensure compliance, identifying potential issues early to minimise market access and supply problems.

TÜV SÜD's Global Market Access (GMA) service determines applicable regulations, managing product compliance for the different countries into which you sell. Our GMA services for telecoms and radio equipment include Africa, the Americas, Asia, Australasia, Europe and the Middle East.

Your business benefits

- **Save time and money** – by covering all your testing and certification needs through our one stop solution, as well as using our technical pre-check service to avoid retests and minimise cost.
- **Minimise risk** – of business disruption by ensuring that your products conform to a broad range of global market regulations.
- **Shorten time to market** – through TÜV SÜD's process systems and advanced knowledge of regulations.
- **Enjoy expert partnership** – with our team of highly skilled experts that has in-depth knowledge of the latest changes and updates to global regulations and standards.

Why choose TÜV SÜD?

TÜV SÜD has experience in telecommunication and radio equipment compliance, helping our customers to understand and comply with the wide variety of laws and

guidelines from different countries and telecoms providers, which must be met before products can enter new markets. Our experts have specialist knowledge in key industries such as marine, aviation, defence, electronics consumer products, and communication technology infrastructure and equipment. They ensure you have the competitive edge and certifications to uphold it.

Choose certainty. Add value.

TÜV SÜD is a premium quality, safety and sustainability solutions provider that specialises in testing, inspection, auditing, certification, training and knowledge services. Represented in over 850 locations worldwide, we hold accreditations in Europe, the Americas, the Middle East, Asia and Africa. By delivering objective solutions to our customers, we add tangible value to businesses, consumers and the environment.

Related services

TÜV SÜD provides the following related services:

- EMC testing
- Marine testing and certification
- Quality management system audits
- Radio testing
- Safety testing
- SAR testing