

# IR 2100 - UK Interface Requirement 2100

**Terrestrial systems capable of providing electronic  
communications services in the frequency band  
1899.9-1920.0 MHz**

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## Section 1

# References

- 1.1 CEPT Report 39: Report from CEPT to the European Commission in response to the Mandate to develop least restrictive technical conditions for 2 GHz bands
- 1.2 ETSI EN 301 908: IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the Radio Equipment Directive (Directive 2014/53/EU)
- 1.3 ETSI TS 136 101: LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) radio transmission and reception
- 1.4 ETSI TS 136 104: LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Base Station (BS) radio transmission and reception

## Section 2

# Foreword

- 2.1 The Radio Equipment Directive (Directive 2014/53/EU) was implemented in the United Kingdom (UK) by the Radio Equipment Regulations 2017. In accordance with Articles 8 and 7 of Directive 2014/53/EU, this UK Interface Requirement contains the requirements for the licensing and use of terrestrial systems capable of providing electronic communications services in the specified frequency bands.
- 2.2 Nothing in this UK Radio Interface Requirement shall preclude the need for equipment to comply with Directive 2014/53/EU.
- 2.3 It is required by the Wireless Telegraphy Act 2006 that no radio equipment is installed or used in the UK except under the authority of a licence granted by or otherwise exempted by regulations made by Ofcom. It is a condition of such a licence or exemption regulations as appropriate that, in order to be installed or used in the UK, the equipment must meet the minimum requirements specified in this UK Interface Requirement for the stated equipment types and for the stated frequency bands. Nothing in this UK Interface Requirement shall preclude equipment from being placed on the market in the UK that complies with the 'essential requirements' specified in Directive 2014/53/EU.
- 2.4 The requirements given in the main body of this UK Radio Interface Requirement will apply to the licensing of terrestrial systems capable of providing electronic communications services in the frequency band 1899.9-1920.0 MHz.
- 2.5 This UK Radio Interface Requirement will be revised as necessary, for example to follow:
  - i) current technology developments for reasons related to the effective and appropriate use of the spectrum in particular maximising spectrum utilisation; and
  - ii) changes to the available spectrum allocated for terrestrial systems capable of providing electronic communications services in the frequency band 1899.9-1920.0 MHz.
- 2.6 All UK Radio Interface Requirements notified under Directive 2015/1535/EU will be published and will be made available free of charge from the Ofcom web-site at <http://www.ofcom.org.uk>.
- 2.7 Further information on this UK Radio Interface Requirement can be obtained from the technical enquiry contact given at the back of this document.

## Section 3

# Minimum requirements for operation within the UK

- 3.1 The minimum requirements in this document are made for reasons related to the effective and appropriate use of the radio spectrum, in particular maximising spectrum utilisation.
- 3.2 This UK Radio Interface Requirement gives a high level description of how the spectrum in the UK is used for terrestrial systems capable of providing electronic communications services in the frequency band 1899.9-1920.0 MHz. It does not prescribe technical interpretation of the 'essential requirements' of Directive 2014/53/EU.
- 3.3 This UK Radio Interface Requirement therefore stipulates the necessary equipment parameters for the authorisation of terrestrial systems capable of providing electronic communications services in the frequency band 1899.9-1920.0 MHz in the UK. Tables 3.1 and 3.2 contain the relevant equipment parameters. These taken together with the 'essential requirements' detailed in Article 3.2 of Directive 2014/53/EU constitute the minimum requirements for terrestrial systems capable of providing electronic communications services in the frequency band 1899.9-1920.0 MHz within the UK. Nothing in this UK Interface Requirement shall preclude equipment from being placed on the market in the UK that complies with the 'essential requirements' specified in Directive 2014/53/EU.
- 3.4 The technical parameters specified in the UK Radio Interface Requirement are applied to achieve the desired level of compatibility within the spectrum for terrestrial systems capable of providing electronic communications services in the frequency band 1899.9-1920.0 MHz and with other radiocommunications services, whilst promoting enterprise, innovation and competition.
- 3.5 This UK Radio Interface requirement provides the necessary technical information which facilitates access to the 1899.9-1920.0 MHz spectrum by making clear the assumptions that are made in planning the use of the spectrum for terrestrial systems capable of providing electronic communications services in the frequency band 1899.9-1920.0 MHz in the UK. It is not the intention of this UK Radio Interface Requirement to duplicate or impose any additional 'essential requirements' of the Directive 2014/53/EU on products. Any specified parameters within this document are for the purpose of identifying product options and not as a national de facto product requirement.

**Table 3.1: Minimum requirements for the use of: terrestrial systems (mobile stations) capable of providing electronic communications services operating in the 1899.9-1920.0 MHz band**

Mandatory (1-10)		
1	Frequency band(s)	1899.9-1920.0 MHz
2	Radiocommunication Service	Mobile service or Fixed service
3	Application	TRA-ECS (Terrestrial radio applications capable of providing electronic communications services)
4	Channelling	Not specified
5	Modulation / Occupied bandwidth	Not specified
6	Direction / Separation	Time-division duplex (TDD)
7	Maximum Transmit Power / Power Density	<b>Mobile or nomadic terminal stations:</b> 24dBm Total Radiated Power (TRP)  <b>Fixed or installed terminal stations:</b> 24dBm EIRP
8	Channel access and occupation rules	Not specified
9	Authorisation regime	Network user equipment meeting the minimum requirements outlined in this Interface Requirement is exempt from licensing provided that it meets the requirements of the relevant exemption regulations
10	Additional essential requirements	None
Informative (11-13)		
11	Frequency planning assumptions	CEPT Report 39 ETSI TS 136 101
12	Planned changes	-
13	Reference	EN 301 908
14	Notification	-
15	Remarks	The TRP is defined as the integral of the power transmitted in different directions over the entire radiation sphere.

**Table 3.2: Minimum requirements for the use of: terrestrial systems (base stations) capable of providing electronic communications services operating in the 1899.9-1920.0 MHz band**

Mandatory (1-10)		
1	Frequency band(s)	1899.9 to 1920 MHz
2	Radiocommunication Service	Mobile service or Fixed service
3	Application	TRA-ECS (Terrestrial radio applications capable of providing electronic communications services)
4	Channelling	Not specified
5	Modulation / Occupied bandwidth	Not specified
6	Direction / Separation	Time-division duplex (TDD)
7	Maximum Transmit Power / Power Density	<b>Frequency band (MHz)</b>
		<b>EIRP</b>
		1899.9 – 1904.0
		1904.9 – 1909.9
1909.9 – 1920.0	20 dBm/(5MHz)	
8	Channel access and occupation rules	Not specified
9	Authorisation regime	WT Act licence required for base stations
10	Additional essential requirements	None
Informative (11-13)		
11	Frequency planning assumptions	CEPT Report 39 ETSI TS 136 104
12	Planned changes	-
13	Reference	EN 301 908
14	Notification	-
15	Remarks	-

**Section 4**

# Additional performance parameters

**(informative)**

None specified



## Section 5

# Contact details

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## Section 6

# Document history

Version	Date	Changes
1.0	10/01/17	Document published
1.1	January 2018	Replaced R&TTE Directive 1999/5/EC and Directive 98/34/EC with Radio Equipment Directive and Directive (EU) 2015/1535 respectively. Minor editorials