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## **Draft Interface Requirement 2092**

Terrestrial systems capable of providing electronic communications services in the 2100 MHz band

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# Contents

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## Section

1. References	3
2. Foreword	4
3. Minimum requirements for operation within the UK	5
4. Additional performance parameters	9
5. Contact details	10
6. Document history	11

# 1. References

ECC Decision (06)01: “The harmonised utilisation of the bands 1920-1980 MHz and 2110-2170 MHz for mobile/fixed communications networks (MFCN) including terrestrial IMT systems”, amended 8 March 2019

ECC Report 298: “Analysis of the suitability and update of the regulatory technical conditions for 5G MFCN and AAS operation in the 1920-1980 MHz and 2110-2170 MHz band”, approved 8 March 2019

COMMISSION IMPLEMENTING DECISION (EU) 2020/667 of 6 May 2020 amending Decision 2012/688/EU as regards an update of relevant technical conditions applicable to the frequency bands 1 920-1 980 MHz and 2 110-2 170 MHz

EN 301 908: IMT cellular networks; Harmonised EN covering the essential requirements of article 3.2 of the Radio Equipment Directive (Directive 2014/53/EU).

## 2. Foreword

- 2.1 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 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.
- 2.3 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 Radio Equipment Regulations 2017 (SI 2017/1206).
- 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 2100 MHz (1920 - 1980 MHz / 2110 - 2170 MHz) band.
- 2.5 This UK Radio Interface Requirement will be revised as necessary, for example to follow:
  - a) current technology developments for reasons related to the effective and appropriate use of the spectrum in particular maximising spectrum utilisation; and
  - b) changes to the available spectrum allocated for terrestrial systems capable of providing electronic communications services in the 900 MHz and 1800 MHz bands.
- 2.6 All UK Radio Interface Requirements will be published and will be made available free of charge from the Ofcom website 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.

## 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 electronic communications services in the 2100 MHz band. It does not prescribe technical interpretation of the 'essential requirements' of Radio Equipment Regulations 2017 (SI 2017/1206).
- 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 2100 MHz band in the UK. Tables 3.1 to 3.2 contain the relevant equipment parameters. These taken together with the 'essential requirements' detailed in the Radio Equipment Regulations 2017 (SI 2017/1206) constitute the minimum requirements for terrestrial systems capable of providing electronic communications services in the 2100 MHz band within the UK.
- 3.4 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 Radio Equipment Regulations 2017 (SI 2017/1206).
- 3.5 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 21 MHz band and with other radiocommunications services, whilst promoting enterprise, innovation and competition.
- 3.6 This UK Radio Interface requirement provides the necessary technical information which facilitates access to 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 2100 MHz band in the UK. It is not the intention of this UK Radio Interface Requirement to duplicate or impose any additional 'essential requirements' of the Radio Equipment Regulations 2017 (SI 2017/1206). 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 capable of providing electronic communications services operating in the 1920 to 1980 MHz band**

<b>Mandatory (1 – 10)</b>	
1. Radiocommunication Service	Mobile or Fixed service
2. Application	TRA-ECS (Terrestrial radio applications capable of providing electronic communication services)
3. Frequency band(s)	1920 to 1980 MHz
4. Channelling	N/A
5. Modulation / Occupied bandwidth	N/A
6. Direction / Separation	Mobile transmit Repeater transmit/receive Uplink / downlink separation 190 MHz
7. Maximum Mean Transmit Power	<p><b>Mobile or nomadic terminal stations or repeaters*:</b> 24 dBm TRP per device</p> <p><b>Fixed or installed terminal stations or repeaters*:</b> 25 dBm EIRP per device</p> <p>* The maximum mean power relates to the EIRP or TRP of a specific piece of Radio Equipment irrespective of the number of transmit antennas. It is recognised that a possible tolerance of up to +2 dB is included in this value, to take account of operation under extreme environmental conditions and production spread. This value does not include test tolerance.</p>
8. Channel access and occupation rules	N/A
9. Authorisation regime	<p>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</p> <p>Repeaters meeting the minimum requirements outlined <i>Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2022</i> is exempt from licensing provided that it meets the requirements of the relevant exemption regulations. All other repeaters require a WT Act licence.</p>
10. Additional essential requirements	N/A
<b>Informative (11 – 15)</b>	

11. Frequency planning assumptions	ECC Decision 06(01) ECC Report 298 (EU) 2020/667
12. Planned changes	N/A
13. Reference	ETSI EN 301 908
14. Remarks	N/A
15. Notification Number (in respect of Northern Ireland)	2012/599/UK

**Table 3.2: Minimum requirements for the use of: terrestrial systems capable of providing electronic communications services operating in the 2110 to 2170 MHz band**

<b>Mandatory (1 – 10)</b>	
1. Radiocommunication Service	Mobile or Fixed service
2. Application	TRA-ECS (Terrestrial radio applications capable of providing electronic communication services)
3. Frequency band(s)	2110 to 2170 MHz
4. Channelling	N/A
5. Modulation / Occupied bandwidth	N/A
6. Direction / Separation	Base station transmit Repeater transmit/receive Uplink / downlink separation: 190 MHz
7. Maximum Mean Transmit Power / Power Density	<b>Terrestrial ECS system non-AAS base stations or repeaters:</b> 65 dBm / 5 MHz EIRP per antenna  <b>Terrestrial ECS system AAS base stations or repeaters:</b> 50 dBm / 5 MHz TRP per cell
8. Channel access and occupation rules	N/A
9. Authorisation regime	WT Act licence required.  Repeaters meeting the minimum requirements outlined <i>Wireless Telegraphy (Mobile Repeater) (Exemption) Regulations 2022</i> are exempt from licensing provided that it meets the requirements of the relevant exemption regulations.
10. Additional essential requirements	N/A
<b>Informative (11 – 15)</b>	
11. Frequency planning assumptions	EU Decision 2022/173/EU ECC Decision (06)13 CEPT Report 80
12. Planned changes	N/A
13. Reference	ETSI EN 301 908
14. Remarks	N/A
15. Notification Number (in respect of Northern Ireland)	2012/599/UK



## 4. Additional performance parameters

None specified

## 5. Contact details

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## 6. Document history

Version	Date	Changes
0.1	October 2012	Draft Published
1.0	June 2013	Document published
1.1	April 2014	Updated Section 5: contact details
1.2	January 2018	Replaced R&TTE Directive 1999/5/EC and Directive 98/34/EC with Radio Equipment Directive 2014/53/EU and Directive (EU) 2015/1535 respectively. Minor editorials
2.0		Updated to include technical provisions for AAS radio equipment.