
UK Interface Requirement (IR) 2107

Terrestrial systems capable of providing electronic communications services in the 700 MHz band

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1. References

- 1.1 Decision (EU) 2017/899 of the European Parliament and of the Council of 17 May 2017 on the use of the 470-790 MHz frequency band in the Union.
- 1.2 Commission Implementing Decision (EU) 2016/687 of 28 April 2016 on the harmonisation of the 694-790 MHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services and for flexible national use in the Union.
- 1.3 ECC Decision (15)01 (6 March 2015) which harmonised technical conditions for mobile/fixed communications networks (MFCN) in the band 694-790 MHz including a paired frequency arrangement (Frequency Division Duplex 2x30 MHz) and an optional unpaired frequency arrangement (Supplemental Downlink).
- 1.4 CEPT Report 53 (28 November 2014) Report A from CEPT to the European Commission in response to the Mandate “To develop harmonised technical conditions for the 694 -790 MHz ('700 MHz') frequency band in the EU for the provision of wireless broadband and other uses in support of EU spectrum policy objectives”.
- 1.5 CEPT Report 60 (1 March 2016) Report B from CEPT to the European Commission in response to the Mandate “to develop harmonised technical conditions for the 694 -790 MHz ('700 MHz') frequency band in the EU for the provision of wireless broadband and other uses in support of EU spectrum policy objectives”.
- 1.6 ETSI 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 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 700 MHz band (694 – 790 MHz).
- 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 700 MHz band.
- 2.6 All UK Radio Interface Requirements will be published and will be made available free of charge from the Ofcom website at 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 terrestrial systems capable of providing electronic communications services in the 700 MHz band. 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 700 MHz band in the UK. Tables 3.1, 3.2 and 3.3 contain the relevant equipment parameters. These, taken together with the 'essential requirements' detailed in Article 3(3) of Directive 2014/53/EU, constitute the minimum requirements for terrestrial systems capable of providing electronic communications services in the 700 MHz band 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 700 MHz band 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 700 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 700 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 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.

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Table 3.1: Minimum requirements for the use of: terrestrial systems capable of providing electronic communications services operating in the 758 – 788 MHz band

Mandatory (1-10)		
1	Frequency band(s)	758 – 788 MHz
2	Radiocommunication Service	Mobile or Fixed service
3	Application	TRA-ECS (Terrestrial radio applications capable of providing electronic communication services)
4	Channelling	N/A
5	Modulation / Occupied bandwidth	N/A
6	Direction / Separation	Base station transmit Repeater downlink transmit Uplink / downlink separation: 55 MHz
7	Maximum Mean Transmit Power	Radio equipment must have a maximum mean power no greater than: 64 dBm / (5 MHz) EIRP per antenna
8	Channel access and occupation rules	N/A
9	Authorisation regime	WT Act licence required for base stations, repeaters and fixed installations.
10	Additional essential requirements	None
Informative (11-13)		
11	Frequency planning assumptions	EU Decision 2017/899/EU EU Decision 2016/687/EU ECC DEC (15)01 CEPT Report 53 CEPT Report 60
12	Planned changes	
13	Reference	ETSI EN 301 908
14	Remarks	

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Table 3.2: Minimum requirements for the use of: terrestrial systems capable of providing electronic communications services operating in the 703 – 733 MHz band

Mandatory (1-10)		
1	Frequency band(s)	703 – 733 MHz
2	Radiocommunication Service	Mobile or Fixed service
3	Application	TRA-ECS (Terrestrial radio applications capable of providing electronic communication services)
4	Channelling	N/A
5	Modulation / Occupied bandwidth	N/A
6	Direction / Separation	Terminal station transmit Repeater uplink transmit Uplink / downlink separation: 55 MHz
7	Maximum Mean Transmit Power	Mobile or nomadic terminal stations or repeaters must have a maximum mean power no greater than: 23 dBm TRP per device* Fixed or installed terminal stations or repeaters must have a maximum mean power no greater than: 23 dBm EIRP per device* * The maximum mean power relates to the EIRP or TRP of a specific piece of Radio Equipment irrespective of the number of transmit antennas. This value is subject to a tolerance of up to + 2 dB, to take account of operation under extreme environmental conditions and production spread.
8	Channel access and occupation rules	N/A
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 WT Act licence required for repeaters
10	Additional essential requirements	None
Informative (11-13)		
11	Frequency planning assumptions	EU Decision 2017/899/EU EU Decision 2016/687/EU ECC DEC (15)01 CEPT Report 53 CEPT Report 60

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12	Planned changes	
13	Reference	ETSI EN 301 908
14	Remarks	

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Table 3.3: Minimum requirements for the use of: terrestrial systems capable of providing electronic communications services operating in the 738 – 758 MHz band

Mandatory (1-10)		
1	Frequency band(s)	738 – 758 MHz
2	Radiocommunication Service	Mobile or Fixed service
3	Application	TRA-ECS (Terrestrial radio applications capable of providing electronic communication services)
4	Channelling	N/A
5	Modulation / Occupied bandwidth	N/A
6	Direction / Separation	Base station transmit Repeater downlink transmit
7	Maximum Mean Transmit Power	Radio equipment must have a maximum mean power no greater than: 64 dBm / 5 MHz EIRP per antenna
8	Channel access and occupation rules	N/A
9	Authorisation regime	WT Act licence required for base stations, repeaters and fixed installations.
10	Additional essential requirements	None
Informative (11-13)		
11	Frequency planning assumptions	EU Decision 2017/899/EU EU Decision 2016/687/EU ECC DEC (15)01 CEPT Report 53 CEPT Report 60
12	Planned changes	
13	Reference	ETSI EN 301 908
14	Remarks	

4. Additional performance parameters

(informative)

None specified

5. Contact details

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