



# **UK Radio Licence Interface Requirement 2019 Third Generation Mobile**

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## **References**

Recommendation ITU-R M.1457

Detailed specifications of the radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)

ERC/DEC/(99)25

ERC Decision of 29 November 1999 on the harmonised utilisation of spectrum for terrestrial Universal Mobile Telecommunications System (UMTS) operating within the bands 1900 - 1980 MHz, 2010 - 2025 MHz and 2110 - 2170 MHz

ETSI TS 125 101 V3.5.0 (2000-12) Technical Specification

Universal Mobile Telecommunications System (UMTS);  
UE Radio transmission and Reception (FDD)  
(3G TS 25.101 version 3.4.0 Release 1999)

ETSI TS 125 104 V3.5.0 (2000-12) Technical Specification

Universal Mobile Telecommunications System (UMTS);  
UTRA (BS) FDD; Radio transmission and Reception  
(3G TS 25.104 version 3.4.0 Release 1999)

ETSI TS 125 201 V3.0.1 (2000-06) Technical Specification

Universal Mobile Telecommunications System (UMTS);  
Physical layer - General description  
(3G TS 25.201 version 3.1.0 Release 1999)

ETSI TS 125 102 V3.5.0 (2000-12) Technical Specification

Universal Mobile Telecommunications System (UMTS);  
UTRA (UE) TDD; Radio Transmission and Reception  
(3G TS 25.102 version 3.4.0 Release 1999)

ETSI TS 125 105 V3.5.0 (2000-12) Technical Specification

Universal Mobile Telecommunications System (UMTS);  
UTRA (BS) TDD; Radio transmission and Reception  
(3G TS 25.105 version 3.4.0 Release 1999)

Note: These references are included for information purposes only. Compliance with these referenced standards is not mandatory.

## **1. Foreword**

- 1.1 The Radio Equipment and Telecommunications Terminal Equipment Directive 99/5/EC (R&TTE Directive) was implemented in the United Kingdom (UK) on the 8 April 2000 by The Radio Equipment and Telecommunications Terminal Equipment Regulations 2000, Statutory Instrument (SI) SI730. In accordance with Articles 4.1 and 7.2 of Directive 1999/5/EC, this UK Radio Interface Requirement contains the requirements for the licensing and use of third generation mobile systems in the specified frequency bands.
- 1.2 Nothing in this UK Radio Interface Requirement shall preclude the requirement for equipment to comply with Directive 99/5/EC.
- 1.3 It is required by the Wireless Telegraphy Act 1949 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 the Secretary of State. It is a condition of such a licence or exemption regulations as appropriate that the equipment must meet the minimum requirements specified in this UK Interface Requirement for the stated equipment types and for the stated frequency bands.
- 1.4 The requirements given in the main body of this UK Radio Interface Requirement will apply in the licensing of third generation mobile in the UK.
- 1.5 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 third generation mobile systems.
- 1.6 All UK Radio Interface Requirements notified under Directive 98/34/EC will be published and will be made available free of charge from the RA Information and Library Service and/or the RA web-site. The addresses for both the Library and the web-site are given on the back cover of this document.
- 1.7 Further information on this UK Radio Interface Requirement can be obtained from the technical enquiry contact given on the back of this document.

## 2. **Minimum Equipment Requirements for Operation within the UK**

- 2.1 The minimum radio requirements in this document are made for reasons related to the effective and appropriate use of the radio spectrum, in particular maximising spectrum utilisation.
- 2.2 This UK Radio Interface Requirement gives a high level description of how the spectrum in the UK is used for third generation mobile systems. It does not prescribe a technical interpretation of the ‘essential requirements’ of Directive 1999/5/EC.
- 2.3 This UK Radio Interface Requirement therefore stipulates the necessary equipment parameters for the licensing or licence exemption of third generation mobile equipment in the UK. Table 2 contains the relevant equipment parameters. This together with the ‘essential requirement’ detailed in Article 3.2 of Directive 1999/5/EC constitutes the minimum equipment requirements for third generation mobile equipment within the UK.
- 2.4 It is the intention of the Radiocommunications Agency to make provision for terminal equipment to be exempt from licensing. When this has been completed, network user equipment, meeting the minimum requirements outlined in this interface requirement, will be exempt from licensing provided that it meets the requirements of the relevant exemption regulations. Details of the relevant exemption regulations will be available from the RA on request.
- 2.5 The technical parameters specified in the UK Radio Interface Requirement are applied to achieve the desired level of compatibility within third generation mobile and with other radiocommunications services whilst promoting enterprise, innovation and competition.
- 2.6 This UK Radio Interface Requirement provides the necessary technical information which facilitates access to third generation mobile spectrum by making clear the assumptions that are made in planning the use of third generation mobile spectrum 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 1999/5/EC on products. Any specified parameters within this document are for the purpose of identifying product options and not as a national product requirement.

**Table 2: Minimum Requirements for Third Generation Mobile Equipment**

Frequency Range (MHz)	Utilisation	Licensing Requirement	Channel Raster	Maximum Output Power	Equipment Type (indicative)	Modulation	Access Technique	Additional Technical Requirements
1900 - 1920	Mobile Transmit (Network user equipment)	It is the intention of the Radiocommunications Agency to make provision for terminal equipment to be exempt from licensing. When this has been completed, network user equipment, meeting the minimum requirements outlined in this interface requirement, will be exempt from licensing provided that it meets the requirements of the relevant exemption regulations.	200 kHz	34 dBm	IMT-2000 <sup>1</sup> CDMA TDD	Quaternary Phase Shift Keying (QPSK)	Direct Sequence Code Division Multiple Access (DS-CDMA) with a Time Division Multiple Access (TDMA) component and Time Division Duplex (TDD)	<ol style="list-style-type: none"> <li>Not all frequencies within these ranges are available for licensing.</li> <li>The RA may impose additional restrictions on the maximum power used for specific frequencies and locations.</li> </ol>
	Base Transmit	WT Act Licence, T Act Licence	200 kHz	62 dBm 58 dBm/MHz				
1920 - 1980	Mobile Transmit (Network user equipment)	It is the intention of the Radiocommunications Agency to make provision for terminal equipment to be exempt from licensing. When this has been completed, network user equipment, meeting the minimum requirements outlined in this interface requirement, will be exempt from licensing provided that it meets the requirements of the relevant exemption regulations.	200 kHz	34 dBm	IMT-2000 <sup>1</sup> CDMA Direct Spread	Quaternary Phase Shift Keying (QPSK)	Direct Sequence Code Division Multiple Access (DS-CDMA)	
	Base Transmit	WT Act Licence, T Act Licence	200 kHz	62 dBm 58 dBm/MHz				

<sup>1</sup> IMT-2000 is defined in Recommendation ITU-R M.1457

## Annex A. Additional Performance Parameters (Informative)

The following are included for information only and have no regulatory status

- A.1 Table A.1 details the Reference specifications which contain additional performance parameters and limits that the Radiocommunications Agency assumes are fulfilled by third generation mobile systems when planning and managing the radio spectrum in the UK, compliance with which is not mandatory.

**Table A.1 Reference Specifications for Third Generation Mobile.**

Frequency Ranges	Reference Specification
1900 - 1920 MHz	ETSI TS 125.102 ETSI TS 125.105 ETSI TS 125.201
1920 - 1980 MHz	ETSI TS 125.101 ETSI TS 125.104 ETSI TS 125.201
2110 - 2170 MHz	ETSI TS 125.101 ETSI TS 125.104 ETSI TS 125.201

## **Radiocommunications Agency**

General Enquires to the  
Information and Library Service  
Tel: +44 (0)20 7211 0502 or 0505  
Fax: +44 (0)20 7211 0507  
Email: [library@ra.gsi.gov.uk](mailto:library@ra.gsi.gov.uk)

Technical Enquires to the  
Public Telecommunication Networks Unit  
Tel: +44 (0)20 7211 0321  
Fax: +44 (0)20 7211 0123  
Email: [steve.green@ra.gsi.gov.uk](mailto:steve.green@ra.gsi.gov.uk)

Web site [www.radio.gov.uk](http://www.radio.gov.uk)

### **Postal address:**

Public Telecommunication Networks Unit, Wyndham House, 189 Marsh Wall, LONDON, E14 9SX