DRAFT
UK Interface Requirement 2006
Short Range, Broadband, Data Services (HIPERLAN) operating in the frequency range 5-6 GHz

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References

ERC/DEC/(99)23
ERC Decision of 29 November 1999 on the harmonised frequency bands to be designated for the introduction of High Performance Radio Local Area Networks (HIPERLANs)

ETSI ETS 300 652 Radio Equipment and Systems (RES); HIgh Performance Radio Local Area Network (HIPERLAN) Type 1; Functional Specification

ETSI ETS 300 826 Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for 2.4 GHz wideband transmission systems and HIgh Performance Radio Local Area Network (HIPERLAN) equipment

ETSI ETS 300 836 Broadband Radio Access Networks (BRAN); HIgh Performance Radio Local Area Network (HIPERLAN) type 1; Conformance testing specification

ETSI EN 301 489 Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 17; Specific conditions for Wideband data and HIPERLAN equipment

ETSI EN 301 811 Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the packet based convergence layer

ETSI EN 301 823 Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the Data Link Control (DLC) protocol

ETSI EN 301 893 Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Harmonised EN covering essential requirements of article 3.2 of the R&TTE Directive

ETSI TR 101 031 V1.1 Radio Equipment and Systems (RES); HIgh Performance Radio Local Area Network (HIPERLAN); Requirements and architectures for Wireless ATM Access and Interconnection

ETSI TR 101 031 V2.2.1 Broadband Radio Access Networks (BRAN); HIgh Performance Radio Local Area Network (HIPERLAN) Type 2; Requirements and architectures for wireless broadband access

ETSI TR 101 054 Security Algorithms Group of Experts (SAGE); Rules for the management of the HIPERLAN Standard Encryption Algorithm (HSEA)

ETSI TS 101 475 Broadband Radio Access Networks (BRAN); (HIPERLAN) Type 2; Physical (PHY) layer

ETSI TS 101 493 Broadband Radio Access Networks (BRAN); (HIPERLAN) Type 2; Packet based Convergence Layer

ETSI TR 101 683 Broadband Radio Access Networks (BRAN); (HIPERLAN) Type 2; System Overview

ETSI TS 101 761 Broadband Radio Access Networks (BRAN); (HIPERLAN) Type 2; Data Link Control (DLC) Layer

ETSI TS 101 762 Broadband Radio Access Networks (BRAN); (HIPERLAN) Type 2; Network Management

ETSI TS 101 763 Broadband Radio Access Networks (BRAN); (HIPERLAN) Type 2; Cell Based Convergence Layer

ETSI TS 101 811 Broadband Radio Access Networks (BRAN); (HIPERLAN) Type 2; Conformance testing for the packet based convergence layer

ETSI TS 101 823 Broadband Radio Access Networks (BRAN); (HIPERLAN) Type 2; Conformance testing for the Data Link Control (DLC) protocol

ETSI ETR 069 Radio Equipment and Systems (RES); HIgh PErformance Radio Local Area Network (HIPERLAN); Services and Facilities

ETSI ETR 226 Radio Equipment and Systems (RES); HIgh PErformance Radio Local Area Network (HIPERLAN); Architecture for Time Bound Services (TBS)

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, Statutory Instrument 2000 No. 730. In accordance with Articles 4.1 and 7.2 of Directive 1999/5/EC, this UK Interface Requirement contains the requirements for the use of Short Range, Broadband, Data Services (HIPERLAN) operating in three bands in the frequency range 5-6 GHz.

1.2 Nothing in this UK Radio Interface Requirement shall preclude the need for equipment to comply with Directive 1999/5/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 use of short range, broadband, data equipment (HIPERLAN) operating in the frequency range 5-6 GHz, 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 short range, broadband, data services (HIPERLAN).

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 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 short range, broadband, data services (HIPERLAN) operating in the frequency range 5-6 GHz. 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 use of short range, broadband, data services (HIPERLAN) in the UK. Tables 2.1 and 2.2 contain the relevant equipment parameters. These together with the 'essential requirement' detailed in Article 3.2 of the Directive 1999/5/EC constitute the minimum equipment requirements for the operation of short range, broadband, data services (HIPERLAN) operating in the frequency range 5-6 GHz within the UK.

2.4 It is the intention of the Radiocommunications Agency to make provision for this equipment to be exempt from licensing. When this has been completed, relevant equipment, meeting the minimum requirements outlined in this Interface Requirement, will be exempt from licensing provided that it meets the requirements of the appropriate exemption regulations. Details of the 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 for short range, broadband, data services (HIPERLAN) and with other radiocommunications services while promoting enterprise, innovation and competition.

2.6 This UK Radio Interface Requirement provides the necessary technical information that facilitates access to spectrum allocated to short range, broadband, data services (HIPERLAN) 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 2.1: Minimum Equipment Requirements

Frequency range (MHz)	Service	Licensing Requirement	Maximum EIRP	Modulation Scheme	Additional Technical Requirements	Reference Standard*[*]
5150-5250 (Band A)	Mobile/ Nomadic Indoor only	Licence exempt	50 mW (no TPC) or 200mW (with TPC)	Orthogonal Frequency Division Multiplexing (OFDM)	**TPC** shall be employed in up and down link to ensure a mitigation factor of at least 3 dB on the average output power of the devices under the coverage area of a satellite.	**ETS 300836 – 01 part 1**
5150-5350 (Band A)	Mobile/ Nomadic Indoor only	Licence exempt	200 mW	Orthogonal Frequency Division Multiplexing (OFDM)	**TPC** shall be employed in up and down link to ensure a mitigation factor of at least 3 dB on the average output power of the devices under the coverage area of a satellite. **DFS**. Equipment operating in this band must be capable of operating on all 8 carrier frequencies. In addition it must be capable of operating over at least 7 carrier frequencies out of the 11 channels in the range 5470-5725 MHz. Shall prevent co-channel operation with Radars.	**Draft EN 301 893**
5470-5725 (Band B)	Mobile/ Nomadic	Licence exempt	1 W	Orthogonal Frequency Division Multiplexing (OFDM)	**DFS**. Equipment that is not capable of operating in the range 5150-5350 MHz must be capable of operating at all of the 11 carrier frequencies defined in the range 5470-5725 MHz. Shall prevent co-channel operation with Radars. **TPC** shall be employed in up and down link to ensure a mitigation factor of at least 3 dB on the average output power of the devices under the coverage area of a satellite	**Draft EN 301 893**
5725-5875 (Band C)	Fixed	Licence exempt	2W	Orthogonal Frequency Division Multiplexing (OFDM)	**DFS**. Equipment must be capable of operating at all of the 6 carrier frequencies defined in the range 5725-5875 MHz. Shall prevent co-channel operation with Radars. **TPC** shall be employed in up and down link to ensure a mitigation factor of at least 3 dB on the average output power of the devices under the coverage area of a satellite. In addition RA considers that, for the purpose of aiding planning and promoting efficient use of the radio spectrum this band would be an ideal candidate to implement a database of the locations and other technical parameters of outdoor fixed service stations deployed in this band. It is further proposed that RA would set up this database and that locations and some technical parameters would be information available in the public domain. The identities of operators would not form part of the publicly available material.	**Draft EN 301 893**

Table 2.2 HIPERLAN/2 nominal carrier frequency allocations

Band designation	Carrier centre frequency f_c (MHz)
A	5180
A	5200
A	5220
A	5240
A	5260
A	5280
A	5300
A	5320
B	5500
B	5520
B	5540
B	5560
B	5580
B	5600
B	5620
B	5640
B	5660
B	5680
B	5700
C	5740
C	5760
C	5780
C	5800
C	5820
C	5840

Annex A Additional Performance Parameters (Informative)

A.1 Table A1 details the reference specifications that contain additional performance parameters and limits that the Radiocommunications Agency assumes are fulfilled by Short Range, Broadband, Data Services (HIPERLAN) when using the 3 available frequency bands in the UK.

A.2 Equipment that does not fulfil these additional performance parameters and limits will not be guaranteed protection in the case of interference.

Frequency Ranges	Reference Specification
5150-5350 MHz (Band A)	ETS 300 652 ETS 300 826 ETS 300 836 EN 301 489 EN 301 811 EN 301 893 TS 101 475 TS 101 493 TS 101 761 TS 101 762 TS 101 763 TS 101 811 TS 101 823
5470-5725 MHz (Band B)	EN 301 489 EN 301 811 EN 301 893 TS 101 475 TS 101 493 TS 101 761 TS 101 762 TS 101 763 TS 101 811 TS 101 823
5725-5875 MHz (Band C)	EN 301 489 EN 301 811 EN 301 893 TS 101 475 TS 101 493 TS 101 761 TS 101 762 TS 101 763 TS 101 811 TS 101 823

Document history

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[*] Assumed to be fulfilled in frequency planning and defining the equipment type – compliance with which is not mandatory.