Please note: This document has been notified to the European Commission in draft, as required by Directive 98/34/EC on Standards and Technical Regulations. A standstill period of three months must be observed before it is officially adopted. Therefore, while the UK intends to adopt this measure "as is" on the standstill end date, comments made during this period will have to be taken into account and may result in amendments.

The standstill end date is 24 January 05.
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References

Equipment Standards


[3] EN 302 217-2-2 Fixed Radio Systems; Characteristics and requirements for point-to-point equipment and antennas; Part 2-2: Harmonized EN covering essential requirements of Article 3.2 of R&TTE Directive for digital systems operating in frequency bands where frequency co-ordination is applied

[4] EN 302 217-4-2 Fixed Radio Systems; Characteristics and requirements for point-to-point equipment and antennas; Part 4-2: Harmonised EN covering essential requirements of Article 3.2 of R&TTE Directive for antennas

[5] EN 301 744 Fixed Radio Systems; Point-to-multipoint equipment; Direct Sequence Code Division/Time Division Multiple Access (DS-CD/TDMA); Point-to-multipoint digital packet radio systems in frequency bands in the range 3 GHz to 11 GHz

Conformance Testing


Technical General


Spectrum Regulatory

[12] ERC Recommendation ERC/REC T/R 14-03  Harmonised radio frequency channel arrangements for low and medium capacity systems in the band 3400 MHz to 3600 MHz

[13] ERC Recommendation ERC/REC T/R 12-08  Harmonised radio frequency channel arrangements and block allocations for low, medium and high capacity systems in the band 3600 MHz to 4200 MHz

[14] ERC Recommendation ERC/REC T/R 12-05  Harmonised radio frequency channel arrangements for digital terrestrial fixed systems operating in the band 10.0 - 10.68 GHz

Note: These references are included for information purposes only. Compliance with the equipment standards referenced is not mandatory. However compliance to relevant regulatory reference (spectrum use) would be reflected in the licence product.

Note: Documents listed above are not produced by Ofcom, therefore interested parties should source the documentation by their own means.
For information;
The CEPT website for technical regulatory documentation is located at;
http://www.ero.dk
The ETSI website for technical standard documentation is located at;
http://www.etsi.org

Ofcom is not responsible for the content of external internet sites
1. Foreword


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 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 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 to the licensing of terrestrial Public Fixed Wireless Access radio systems in the 3 – 11 GHz bands.

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 Public Fixed Wireless Access radio systems in the 3 – 11 GHz bands.

1.6 All UK Radio Interface Requirements notified under Directive 1998/34/EC will be published and will be made available free of charge from the Ofcom website at www.ofcom.org.uk.

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 and to facilitate inter-operator and inter-service coexistence.

2.2 This UK Radio Interface Requirement gives a high level description of how the spectrum in the UK is used for terrestrial Public Fixed Wireless Access radio systems operating within the 3 to 11 GHz frequency bands. It does not prescribe 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 terrestrial Public Fixed Wireless Access radio systems operating within the 3 to 11 GHz frequency bands, in the UK. Tables 2.1, 2.2, 2.3 2.4, 2.5 and 2.6 contain the relevant equipment parameters. These together with the ‘essential requirements’ detailed in Article 3.2 of Directive 1999/5/EC constitute the minimum equipment requirements for terrestrial Public Fixed Wireless Access radio systems operating within the 3 to 11 GHz frequency bands within the UK.

2.4 The technical parameters specified in the UK radio Interface Requirement are applied to achieve the desired level of compatibility within the 3 to 11 GHz terrestrial Public Fixed Wireless Access spectrum and with other radiocommunications services, whist promoting enterprise, innovation and competition.

2.5 ‘Non-essential parameters’ are those parameters contained in any Reference Standard, which are not cross-referenced to the generic Harmonised Standards [1] [2] [3] [4]. The assumption that radio systems that comply with the ‘essential requirements’ detailed in Article 3.2 of Directive 1999/5/EC, with this UK Radio Interface Requirement and the ‘non-essential parameters’ will be made for the purposes of facilitating inter-operator and inter-service co-existence in accordance with the relevant co-existence guidelines.

2.6 Radio systems that comply with the ‘essential requirements’ detailed in Article 3.2 of Directive 1999/5/EC and with the UK Interface Requirement but not with the ‘non-essential parameters’, may require re-evaluation of the guidelines to facilitate inter-operator coexistence. Therefore, they will be licensed on the condition that the system shall not cause any harmful interference, increase the inter-operator coordination burden or degrade the co-existence environment over and above that resulting from adherence to the co-existence guidelines detailed in the applicable technical document. These considerations are based on the originally awarded spectrum and not segmented areas and/or spectrum as a result of a trade.

2.7 It is assumed that equipment and antennas are assessed using the test methods contained in EN 301 126-2/3 [6] [7] [8] [9] [10] and EN 301 390 [11]. However, manufacturers are free to choose alternative methods for assessing their equipment providing they can equate their results to the limits stated.

2.8 This UK Radio Interface requirement provides the necessary technical information which facilitates access to the 3 to 11 GHz terrestrial Public Fixed Wireless Access spectrum by making clear the assumptions that are made in planning the use of the 3 to 11 GHz terrestrial Public Fixed Wireless Access 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 de facto product requirement.
## Table 2.1: minimum equipment requirements for 3.4 GHz Band Multipoint Systems

|   | Frequency band (MHz) | 3480 – 3500  
|   |                       | 3580 – 3600  |  
| 2 | Radio service         | FIXED SERVICE |  
| 3 | Application           | P-MP, MP-MP (see Annex A) For access, infrastructure or combination |  
| 4 | Channelling/modulation| In accordance with CEPT Recommendation T/R 14-02 Annex B1 [12], **Note-1** From 0.25 MHz scaleable up to the full licensed allocation. |  
| 5 | Transmit power limit  | +14 dBW/MHz EIRP **Note-2, 3** Boundary PFD threshold at the licensed geographical border **Note-4** |  
| 6 | Channel occupation rules | N/A |  
| 7 | Duplex type/separation| FDD, TDD **Note-1** ERC/REC 14-03 Annex B1 [12] |  
| 8 | Licensing regime      | Spectrum block assignment on a national basis. Tradable licence. Co-ordination and site clearance procedures managed by the National Frequency Assignment Panel (NFAP). |  
| 9 | Additional essential requirements (art. 3.3) | N/A |  
|12 | Remarks               | **Note-1:** Although this plan assumed an FDD system TDD systems will also be allowed. **Note-2:** The carrier power shall be less than +14 dBW/MHz, however powers up to but not exceeding +21 dBW/MHz will be considered on a case by case basis (for example, back haul purposes using narrow beam antennas). **Note-3:** Co-ordination and site clearance considerations may impose additional restrictions on the maximum EIRP allowed on specific frequencies, directions and locations. See the relevant co-ordination and co-existence guidelines for details. **Note-4:** For some deployment situations, the EIRP may need to be reduced in certain directions for the purposes of facilitating coexistence between operators. |  
|13 | Notification number    | 98/34/EC Notification Number: 2002/255/UK |  
|14 | Additional            | Refer to Annex B for cross referenced existing standards. |
### Table 2.2: minimum equipment requirements for 3.4 GHz Band Point to Point Systems

|   | **Frequency band (GHz)** | 3480 – 3500  
<table>
<thead>
<tr>
<th></th>
<th>3580 – 3600</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Radio service</td>
</tr>
</tbody>
</table>
| 3 | Application              | P-P (See Annex A)  
|   | For access, infrastructure or combination |
| 4 | Channelling/modulation   | In accordance with CEPT Recommendation T/R 14-02 Annex B1 [12]. **Note-1**  
|   | From 0.25 MHz scaleable up to the full licensed allocation. |
| 5 | Transmit power limit     | +14 dBW/MHz EIRP **Note-2, 3**  
|   | Boundary PFD threshold at the licensed geographical border **Note-4** |
| 6 | Channel occupation rules | N/A |
| 7 | Duplex type/separation   | FDD, TDD **Note-1**  
|   | ERC/REC 14-03 Annex B1 [12] |
| 8 | Licensing regime         | Spectrum block allocation on a national basis.  
|   | Tradable licence.  
|   | Co-ordination and site clearance procedures managed by the National Frequency Assignment Panel (NFAP). |
| 9 | Additional essential requirements (art. 3.3) | N/A |
| 10| Frequency planning assumptions | Antenna parameters: EN 302 217-4-2 [4]  
| 12| Remarks                  | **Note-1:** Although this plan assumed an FDD system TDD systems will also be allowed.  
|   | **Note-2:** The carrier power shall be less than+14 dBW/MHz, however powers up to but not exceeding +21 dBW/MHz will be considered on a case by case basis (for example, back haul purposes using narrow beam antennas).  
|   | **Note-3:** Co-ordination and site clearance considerations may impose additional restrictions on the maximum EIRP allowed on specific frequencies, directions and locations. See the relevant co-ordination and co-existence guidelines for details.  
|   | **Note-4:** For some deployment situations, the EIRP may need to be reduced in certain directions for the purposes of facilitating coexistence between operators. |
| 13| Notification number       | 98/34/EC Notification Number: 2002/255/UK |
| 14| Additional               | Refer to Annex B for cross referenced existing standards. |
**Table 2.3: minimum equipment requirements for 3.6 GHz Band Multipoint Systems**

<table>
<thead>
<tr>
<th></th>
<th>Core Protected</th>
<th>Extended Unprotected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Frequency band(s) (MHz)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3605 – 3641</td>
<td>3641 – 3689</td>
</tr>
<tr>
<td></td>
<td>3925 – 3961</td>
<td>3961 – 4009</td>
</tr>
<tr>
<td>2</td>
<td>Radio service</td>
<td>FIXED SERVICE</td>
</tr>
<tr>
<td>3</td>
<td>Application</td>
<td>P-MP, MP-MP (See Annex A) For access, infrastructure or combination</td>
</tr>
<tr>
<td>4</td>
<td>Channelling/modulation</td>
<td>In accordance with CEPT Recommendation T/R 12-08 Annex A [13]. <strong>Note-7</strong> From 0.25 MHz scaleable up to the full licensed allocation.</td>
</tr>
<tr>
<td>5</td>
<td>Transmit power limit</td>
<td>+3 dBW/MHz EIRP <strong>Note-5, 8</strong></td>
</tr>
<tr>
<td>6</td>
<td>Channel occupation rules</td>
<td>N/A</td>
</tr>
<tr>
<td>7</td>
<td>Duplex type/separation</td>
<td>FDD, TDD ERC/REC T/R 12-08 Annex A [13].</td>
</tr>
<tr>
<td>8</td>
<td>Licensing regime</td>
<td>Spectrum block allocation on a national basis. Co-ordination and site clearance procedures managed by the National Frequency Assignment Panel (NFAP).</td>
</tr>
<tr>
<td>9</td>
<td>Additional essential requirements</td>
<td>N/A</td>
</tr>
<tr>
<td>12</td>
<td>Remarks</td>
<td><strong>Note-5:</strong> Co-ordination and site clearance considerations may impose additional restrictions on the maximum EIRP allowed on specific frequencies, directions and locations. See the relevant co-ordination and co-existence guidelines for details.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note-6:</strong> Inter service sharing with Fixed Space Services (Satellite Earth Station receivers) and Fixed Services (Point-to-Point transceivers).</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note-7:</strong> Frequencies for the 320 MHz duplex split paired bands are the 2x36 MHz core allocation (protected co-primary with Satellite Earth Station receivers) with 2x48 MHz extended allocation (sharing with Satellite Earth Station receivers and terrestrial Point-to-Point transceivers) which will be considered for use on a case by case basis. See the relevant co-existence guidelines for details.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note-8:</strong> The carrier power shall be less than +3 dBW/MHz, however powers up to but not exceeding +14 dBW/MHz will be considered on a case-by-case basis. See the relevant co-existence guidelines for details.</td>
</tr>
<tr>
<td>13</td>
<td>Notification number</td>
<td>98/34/EC Notification Number: 2002/255/UK</td>
</tr>
<tr>
<td>14</td>
<td>Additional</td>
<td>Refer to Annex B for cross referenced existing standards.</td>
</tr>
</tbody>
</table>
### Table 2.4: minimum equipment requirements for 3.6 GHz Band Point to Point Systems

<table>
<thead>
<tr>
<th></th>
<th>Frequency band(s) (MHz)</th>
<th>Core Protected</th>
<th>Extended Unprotected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Note 6</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Frequency band(s) (MHz)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3605 – 3641</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3641 – 3689</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3925 – 3961</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3961 – 4009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Radio service</td>
<td>FIXED SERVICE</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Application</td>
<td>P-P (See Annex A)</td>
<td>For access, infrastructure or combination</td>
</tr>
<tr>
<td>5</td>
<td>Channelling/modulation</td>
<td>In accordance with CEPT Recommendation T/R 12-08 Annex A [13]. <strong>Note-7</strong> From 0.25 MHz scaleable up to the full licensed allocation.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Transmit power limit</td>
<td>+3 dBW/MHz EIRP <strong>Note-5, 8</strong></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Channel occupation rules</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Duplex type/separation</td>
<td>FDD, TDD ERC/REC T/R 12-08 Annex A [13].</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Licensing regime</td>
<td>Spectrum block allocation on a national basis. Co-ordination and site clearance procedures managed by the National Frequency Assignment Panel (NFAP).</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Additional essential requirements (art. 3.3)</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Remarks</td>
<td><strong>Note-5:</strong> Co-ordination and site clearance considerations may impose additional restrictions on the maximum EIRP allowed on specific frequencies, directions and locations. See the relevant co-ordination and co-existence guidelines for details.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note-6:</strong> Inter service sharing with Fixed Space Services (Satellite Earth Station receivers) and Fixed Services (Point-to-Point transceivers).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note-7:</strong> Frequencies for the 320 MHz duplex split paired bands are the 2x36 MHz core allocation (protected co-primary with Satellite Earth Station receivers) with 2x48 MHz extended allocation (sharing with Satellite Earth Station receivers and terrestrial Point-to-Point transceivers) which will be considered for use on a case by case basis. See the relevant co-existence guidelines for details.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note-8:</strong> The carrier power shall be less than +3 dBW/MHz, however powers up to but not exceeding +14 dBW/MHz will be considered on a case-by-case basis. See the relevant co-existence guidelines for details.</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Notification number</td>
<td>98/34/EC Notification Number: 2002/255/UK</td>
<td>Refer to Annex B for cross referenced existing standards.</td>
</tr>
</tbody>
</table>
### Table 2.5: minimum equipment requirements for 10 GHz Band Multipoint Systems

|   | Frequency band (MHz)                          | 10125 – 10225  
|   |                                               | 10475 – 10575  
| 2 | Radio service                                 | FIXED SERVICE  
| 3 | Application                                   | P-MP, MP-MP (See Annex A)  
|   |                                               | For access, infrastructure or combination  
| 4 | Channelling/modulation                        | In accordance with CEPT Recommendation  
|   |                                               | T/R 12-05 Annex A [14]. **Note-10**  
|   |                                               | From 0.5 MHz scaleable up to the full licensed allocation.  
| 5 | Transmit power limit                          | +10 dBW/MHz EIRP **Note-9, 11**  
| 6 | Channel occupation rules                      | N/A  
| 7 | Duplex type/separation                        | FDD, TDD  
|   |                                               | ERC/REC T/R 12-08 Annex A [14]  
| 8 | Licensing regime                              | Spectrum block assignment on a national basis.  
|   |                                               | Co-ordination and site clearance procedures managed by the National Frequency Assignment Panel (NFAP).  
| 9 | Additional essential requirements (art. 3.3)  | N/A  
| 10| Frequency planning assumptions                | Antenna parameters: EN 302 326-3 [1]  
|   |                                               | Emission spectrum mask:  
|   |                                               | Equipment types in accordance with:  
|   |                                               | EN 302 326-2 [1]: FDMA, TDMA, OFMA, OFDMA,  
|   |                                               | DS-CDMA and FH-CDMA systems  
|   |                                               | EN 301 744 [5]: DS-CD/TDMA systems  
| 12| Remarks                                      | **Note-9:** Co-ordination and site clearance considerations may impose additional restrictions on the maximum EIRP allowed on specific frequencies, directions and locations. See the relevant co-ordination and co-existence guidelines for details.  
|   |                                               | **Note-10:** Frequencies for the paired bands are offset by 25 MHz below the recommendation and the paired bands are 2x100 MHz wide instead of 2x150 MHz.  
|   |                                               | **Note-11:** The carrier power shall be less than+10 dBW/MHz, however powers up to but not exceeding +17 dBW/MHz will be considered on a case by case basis.  
| 13| Notification number                           | 98/34/EC Notification Number: 2002/255/UK  
| 14| Additional                                    | Refer to Annex B for cross referenced existing standards. |
### Table 2.6: minimum equipment requirements for 10 GHz Band Point to Point Systems

<table>
<thead>
<tr>
<th></th>
<th>Frequency band (GHz)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Frequency band (GHz)</td>
<td>10125 – 10225</td>
<td>10475 – 10575</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Radio service</td>
<td>FIXED SERVICE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Application</td>
<td>P-P (See Annex A)</td>
<td>For access, infrastructure or combination</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Channelling/modulation</td>
<td>In accordance with CEPT Recommendation T/R 12-05 Annex A [14]. <strong>Note-10</strong></td>
<td>From 0.5 MHz scaleable up to the full licensed allocation.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Transmit power limit</td>
<td>+10 dBW/MHz EIRP <strong>Note-9, 11</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Channel occupation rules</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Duplex type/separation</td>
<td>FDD, TDD</td>
<td>ERC/REC T/R 12-08 Annex A [14]</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Licensing regime</td>
<td>Spectrum block assignment on a national basis. Co-ordination and site clearance procedures managed by the National Frequency Assignment Panel (NFAP).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Additional essential requirements (art. 3.3)</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Remarks</td>
<td><strong>Note-9:</strong> Co-ordination and site clearance considerations may impose additional restrictions on the maximum EIRP allowed on specific frequencies, directions and locations. See the relevant co-ordination and co-existence guidelines for details.</td>
<td><strong>Note-10:</strong> Frequencies for the paired bands are offset by 25 MHz below the recommendation and the paired bands are 2x100 MHz wide instead of 2x150 MHz.</td>
<td><strong>Note-11:</strong> The carrier power shall be less than +10 dBW/MHz, however powers up to but not exceeding +17 dBW/MHz will be considered on a case by case basis.</td>
</tr>
<tr>
<td>13</td>
<td>Notification number</td>
<td>98/34/EC Notification Number: 2002/255/UK</td>
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</tr>
<tr>
<td>14</td>
<td>Additional</td>
<td>Refer to Annex B for cross referenced existing standards.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Annex A.

Additional performance parameters (informative)

Note:

Nothing within the considerations referenced in Tables 2.1, 2.2, 2.3, 2.4, 2.5 and 2.6 prevents the use of Multi Point or Point to Point equipment that has been compliance tested under either standard reference, from being used in either architecture arrangement (noting the assumptions made during spectrum planning arrangements any applicable co-ordination/co-existence process and the licence requirements).
Annex B
Cross Reference to Historically Relevant ENs

The following standards are presumed to be in conformity with Directive 1999/5/EC and are listed in the forward of the Multi Part standards in shown in Tables 2.1 & 2.2.

### MP equipment ENs

<table>
<thead>
<tr>
<th>Frequency Range</th>
<th>Nominal Access Method</th>
<th>ETSI MP System Equipment Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 3 GHz</td>
<td>TDMA</td>
<td>EN 300 636</td>
</tr>
<tr>
<td>1 - 3 GHz</td>
<td>FDMA</td>
<td>EN 301 373</td>
</tr>
<tr>
<td>1 - 3 GHz</td>
<td>DS-CDMA</td>
<td>EN 301 055</td>
</tr>
<tr>
<td>1 - 3 GHz</td>
<td>FH-CDMA</td>
<td>EN 301 179</td>
</tr>
<tr>
<td>3 - 11 GHz</td>
<td>TDMA</td>
<td>EN 301 021</td>
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<tr>
<td>3 - 11 GHz</td>
<td>FDMA</td>
<td>EN 301 080</td>
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<tr>
<td>3 - 11 GHz</td>
<td>DS-CDMA</td>
<td>EN 301 124</td>
</tr>
<tr>
<td>3 - 11 GHz</td>
<td>FH-CDMA</td>
<td>EN 301 253</td>
</tr>
</tbody>
</table>

### P-P equipment ENs

<table>
<thead>
<tr>
<th>Frequency Range</th>
<th>Nominal Access Method</th>
<th>ETSI P-P Equipment Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 – 55 GHz</td>
<td>Packet Data</td>
<td>EN 301 785</td>
</tr>
<tr>
<td>4 – 15 GHz</td>
<td>[1 x STM-1]</td>
<td>EN 300 234</td>
</tr>
<tr>
<td>4 – 15 GHz</td>
<td>[2 x STM-1 in 30 MHz]</td>
<td>EN 301 127</td>
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<tr>
<td>4 – 15 GHz</td>
<td>[STM-0]</td>
<td>EN 301 216</td>
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<tr>
<td>4 – 15 GHz</td>
<td>[STM-4 or 4 x STM-1]</td>
<td>EN 301 277</td>
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<td>4 – 15 GHz</td>
<td>[2 x STM-1 in 40 MHz]</td>
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### MP antenna ENs

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<thead>
<tr>
<th>Frequency Range</th>
<th>ETSI MP Antenna Standards</th>
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<tr>
<td>3 - 11 GHz</td>
<td>EN 302 085</td>
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<tr>
<td>1 - 11 GHz - circularly polarised</td>
<td>EN 302 078</td>
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### P-P antenna ENs

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<tr>
<th>Frequency Range</th>
<th>ETSI Point to Point Antenna Standard</th>
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<td>3 – 60 GHz</td>
<td>EN 300 833</td>
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### MP harmonised EN

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<tr>
<th>Description</th>
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### P-P harmonised EN

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<tr>
<td>Generic Harmonised Standard</td>
<td>EN 301 751</td>
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Interested parties should refer to the forward of EN 302 326-1 (Multi Point) and EN 302 217-1 (Point to Point) to determine existing standard applicability and note the formal publication date of all parts of these said standards in the European Community - Official Journal.
## Document History

<table>
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<tr>
<th>Draft</th>
<th>Date</th>
<th>Changes</th>
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<tr>
<td>6.0</td>
<td>Aug 2004</td>
<td>2 GHz band – removed&lt;br&gt;Redrafted into common agreed format&lt;br&gt;Updated to include harmonised multipart standards&lt;br&gt;Updated to include point-to-point technology&lt;br&gt;Version 5 available on request</td>
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<td>6.1</td>
<td>Oct 2004</td>
<td>Added cross reference table. Added MP approval for P-P deployment text</td>
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<td>6.2</td>
<td>Jan 2005</td>
<td>Deleted number of &quot;NOTES&quot;, following Commission comments during stand-still process</td>
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<tr>
<td>6.3</td>
<td>Dec 2006</td>
<td>Amend WT references to 2006</td>
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