

STN	Bunkové siete IMT Harmonizovaná norma pre prístup k rádiovému spektru Časť 14: Základňové stanice (BS) zdokonaleného univerzálneho pozemského rádiového prístupu (E-UTRA)	STN EN 301 908-14 V13.1.1 87 1908
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IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 14: Evolved Universal Terrestrial Radio Access (E-UTRA) Base Stations (BS)

Táto norma obsahuje anglickú verziu európskej normy.
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**IMT cellular networks;
Harmonised Standard for access to radio spectrum;
Part 14: Evolved Universal Terrestrial Radio Access (E-UTRA)
Base Stations (BS)**

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ETSI650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
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Foreword

This Harmonised European Standard (EN) has been produced by ETSI Technical Committee Mobile Standards Group (MSG).

For non-EU countries the present document may be used for regulatory (Type Approval) purposes.

The present document has been prepared under Commission's standardisation request C(2015) 5376 [i.1] final to provide one voluntary means of conforming to the essential requirements of Directive 2014/53/EU [i.2] on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC.

Once the present document is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of the present document given in table A-1 confers, within the limits of the scope of the present document, a presumption of conformity with the corresponding essential requirements of that Directive and associated EFTA regulations.

The present document is part 14 of a multi-part deliverable. Full details of the entire series can be found in part 1 [i.7].

National transposition dates	
Date of adoption of this EN:	23 September 2019
Date of latest announcement of this EN (doa):	31 December 2019
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 June 2020
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Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

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Introduction

The present document is part of a set of standards developed by ETSI that are designed to fit in a modular structure to cover radio equipment within the scope of the Radio Equipment Directive [i.2]. The present document is produced following the guidance in ETSI EG 203 336 [i.3] as applicable.

1 Scope

The present document specifies technical characteristics and methods of measurements for the types of equipment:

- 1) Base Station for Evolved Universal Terrestrial Radio Access (E-UTRA).
- 2) Base Station for Evolved Universal Terrestrial Radio Access (E-UTRA) with NB-IoT.
- 3) Base Station for NB-IoT standalone.

This radio equipment type is capable of operating in all or any part of the operating bands given in table 1-1. Unless stated otherwise, requirements specified for the TDD duplex mode apply for downlink and uplink operations in Frame Structure Type 2. NB-IoT is designed to operate in the E-UTRA operating bands 1, 3, 8, 20, 28 which are defined in table 1-1.

Table 1-1: E-UTRA Base Station operating bands

E-UTRA band	Direction of transmission	E-UTRA Base Station operating bands
1	Transmit	2 110 MHz to 2 170 MHz
	Receive	1 920 MHz to 1 980 MHz
3	Transmit	1 805 MHz to 1 880 MHz
	Receive	1 710 MHz to 1 785 MHz
7	Transmit	2 620 MHz to 2 690 MHz
	Receive	2 500 MHz to 2 570 MHz
8	Transmit	925 MHz to 960 MHz
	Receive	880 MHz to 915 MHz
20	Transmit	791 MHz to 821 MHz
	Receive	832 MHz to 862 MHz
22	Transmit	3 510 MHz to 3 590 MHz
	Receive	3 410 MHz to 3 490 MHz
28 (note 5)	Transmit	758 MHz to 803 MHz
	Receive	703 MHz to 748 MHz
31	Transmit	462,5 MHz to 467,5 MHz
	Receive	452,5 MHz to 457,5 MHz
32 (notes 1 and 2)	Transmit	1 452 MHz to 1 496 MHz
	Receive	N/A
33	Transmit and Receive	1 900 MHz to 1 920 MHz
34	Transmit and Receive	2 010 MHz to 2 025 MHz
38	Transmit and Receive	2 570 MHz to 2 620 MHz
40	Transmit and Receive	2 300 MHz to 2 400 MHz
42	Transmit and Receive	3 400 MHz to 3 600 MHz
43	Transmit and Receive	3 600 MHz to 3 800 MHz
46 (notes 3 and 4)	Transmit and Receive	5 150 MHz to 5 925 MHz
65	Transmit	2 110 MHz to 2 200 MHz
	Receive	1 920 MHz to 2 010 MHz
67	Transmit	738 MHz to 758 MHz
	Receive	N/A
68	Transmit	753 MHz to 783 MHz
	Receive	698 MHz to 728 MHz
69 (note 1)	Transmit	2 570 MHz to 2 620 MHz
	Receive	N/A
NOTE 1: Restricted to E-UTRA operation when carrier aggregation is configured. The downlink operating band is paired with the uplink operating band (external) of the carrier aggregation configuration that is supporting the configured Pcell.		
NOTE 2: Radio equipment in band 32 is only allowed to operate between 1 452 MHz and 1 492 MHz.		
NOTE 3: This band is an unlicensed band restricted to licensed-assisted operation using Frame Structure Type 3. Radio equipment in band 46 is only allowed to operate between 5 150 MHz and 5 725 MHz.		
NOTE 4: In this version of the present document, restricted to E-UTRA DL operation when carrier aggregation is configured. Band 46 is divided into three sub-bands as in table 1-2.		
NOTE 5: Radio equipment in band 28 is only allowed to operate between 758 MHz to 791 MHz for the transmitter and between 703 MHz to 736 MHz for the receiver.		

Table 1-2: Sub-bands for band 46

E-UTRA Operating Band	Uplink (UL) operating band BS receive UE transmit	Downlink (DL) operating band BS transmit UE receive
	$F_{UL_low} - F_{UL_high}$	$F_{DL_low} - F_{DL_high}$
46a	5 150 MHz to 5 250 MHz	5 150 MHz to 5 250 MHz
46b	5 250 MHz to 5 350 MHz	5 250 MHz to 5 350 MHz
46c	5 470 MHz to 5 725 MHz	5 470 MHz to 5 725 MHz

The present document covers conducted requirements for E-UTRA Base Stations for 3GPP Release 8, 9, 10, 11, 12 and 13. Additionally, it includes the requirements for E-UTRA Base Station operating bands and E-UTRA CA operating bands from 3GPP Release 14.

NOTE: The relationship between the present document and essential requirements of article 3.2 of Directive 2014/53/EU [i.2] is given in annex A.

2 References

2.1 Normative references

References are specific, identified by date of publication and/or edition number or version number. Only the cited version applies.

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- [1] ETSI TS 136 141 (V13.10.0) (01-2018): "LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Base Station (BS) conformance testing (3GPP TS 36.141 version 13.10.0 Release 13)".
- [2] ETSI TS 125 104 (V13.4.0) (03-2017): "Universal Mobile Telecommunications System (UMTS); Base Station (BS) radio transmission and reception (FDD) (3GPP TS 25.104 version 13.4.0 Release 13)".
- [3] ETSI TS 125 105 (V13.2.0) (07-2017): "Universal Mobile Telecommunications System (UMTS); Base Station (BS) radio transmission and reception (TDD) (3GPP TS 25.105 version 13.2.0 Release 13)".
- [4] ETSI TS 136 104 (V13.10.0) (01-2018): "LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Base Station (BS) radio transmission and reception (3GPP TS 36.104 version 13.10.0 Release 13)".
- [5] ETSI TS 125 141 (V13.4.0) (09-2017): "Universal Mobile Telecommunications System (UMTS); Base Station (BS) conformance testing (FDD) (3GPP TS 25.141 version 13.4.0 Release 13)".
- [6] ETSI TS 136 211 (V13.8.0) (01-2018): "LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Physical channels and modulation (3GPP TS 36.211 version 13.8.0 Release 13)".
- [7] ETSI EN 301 908-18 (V13.1.1) (09-2019): "IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 18: E-UTRA, UTRA and GSM/EDGE Multi-Standard Radio (MSR) Base Station (BS)".
- [8] ETSI EN 301 893 (V2.1.1) (05-2017): "5 GHz RLAN; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU".

- [9] ETSI TS 136 213 (V13.8.0) (01-2018): "LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer procedures (3GPP TS 36.213 version 13.8.0 Release 13)".

2.2 Informative references

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] Commission implementing decision C(2015) 5376 final of 4.8.2015 on a standardisation request to the European Committee for Electrotechnical Standardisation and to the European Telecommunications Standards Institute as regards radio equipment in support of Directive 2014/53/EU of the European Parliament and of the Council.
- [i.2] Directive 2014/53/EU of the European parliament and of the council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC.
- [i.3] ETSI EG 203 336 (V1.1.1) (08-2015): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Guide for the selection of technical parameters for the production of Harmonised Standards covering article 3.1(b) and article 3.2 of Directive 2014/53/EU".
- [i.4] Recommendation ITU-R SM.329-12 (09-2012): "Unwanted emissions in the spurious domain".
- [i.5] ETSI TR 100 028 (all parts) (V1.4.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".
- [i.6] Void.
- [i.7] ETSI EN 301 908-1: "IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 1: Introduction and common requirements".
- [i.8] Void.
- [i.9] ETSI TS 136 214 (V13.5.0) (09-2017): "LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer; Measurements (3GPP TS 36.214 version 13.5.0 Release 13)".
- [i.10] Commission Decision 2005/513/EC of 11 July 2005 on the harmonised use of radio spectrum in the 5 GHz frequency band for the implementation of Wireless Access Systems including Radio Local Area Networks (WAS/RLANs).
- [i.11] Commission Decision 2007/90/EC of 12 February 2007 amending Decision 2005/513/EC on the harmonised use of radio spectrum in the 5 GHz frequency band for the implementation of Wireless Access Systems including Radio Local Area Networks (WAS/RLANs).

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