

ETSI TS 136 461 V19.0.0 (2025-10)



**LTE;
Evolved Universal Terrestrial
Radio Access Network (E-UTRAN) and Wireless LAN (WLAN);
Xw layer 1
(3GPP TS 36.461 version 19.0.0 Release 19)**



Reference

RTS/TSGR-0336461vj00

Keywords

LTE

ETSI

650 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 - APE 7112B
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° w061004871

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Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

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Version x.y.z

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- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

1 Scope

The present document specifies the standards allowed to implement Layer 1 on the Xw interface.

The specification of transmission delay requirements and O&M requirements are not in the scope of the present document.

In the following ‘Layer 1’ and ‘Physical Layer’ are assumed to be synonymous.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
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[1] 3GPP TS 36.411: "Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 layer 1".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the definitions given in TS 36.411 [1] apply.

3.2 Symbols

For the purposes of the present document, the symbols given in TS 36.411 [1] apply.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in TS 36.411 [1] apply.

4 Introduction

The Xw Layer 1 shall comply with the requirements of clauses 4 through 6 in TS 36.411 [1].

Annex A (informative): Change history

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2015-08	RAN3#89	R3-151685				Initial Skeleton	0.0.1
2015-10	RAN3#89bis	R3-152200				Initial Skeleton update	0.0.2
2015-10	RAN3#89bis	R3-152192				Layer 1 aspects of the Xw interface	0.1.0
2015-11	RAN3#90	R3-152416				Clean up	0.2.0
2015-12	RAN#70	RP-151742				Submitted for information	1.0.0
2016-01	RAN3#AH	RP-160003				Cover sheet update	1.1.0
2016-02	RAN3#91	RP-160154				Editorials	1.2.0
2016-03	RAN#71	RP-160224				Submitted for approval	2.0.0
2016-03	RAN#71					Upgraded to Rel-13 and placed under change control	13.0.0
2017-03	SA#75					Promotion to Release 14 without technical change	14.0.0
2018-06	SA#80	-	-	-	-	Promotion to Release 15 without technical change	15.0.0
2020-07	SA#88-e	-	-	-	-	Update to Rel-16 version (MCC)	16.0.0
2022-03	SA#95-e					Promotion to Release 17 without technical change	17.0.0
2024-03	SA#103	-	-	-	-	Update to Rel-18 version (MCC)	18.0.0
2025-09	SA#109	-	-	-	-	Update to Rel-19 version (MCC)	19.0.0

History

Document history		
V19.0.0	October 2025	Publication