

**COMMUNICATIONS
ALLIANCE LTD**



AUSTRALIAN STANDARD

AS/CA S042.4:2022

Requirements for connection to an air interface
of a Telecommunications Network—
Part 4: IMT-2000 and IMT-Advanced Customer
Equipment

Australian Standard – Requirements for connection to an air interface of a Telecommunications Network— Part 4: IMT-2000 and IMT-Advanced Customer Equipment

This Standard was issued in draft form for public comment as DR AS/CA S042.4:2021

First published as AS/CA S042.4:2010

Second edition as AS/CA S042.4:2015, published on 26 February 2015

Third edition as AS/CA S042.4:2018, published on 12 April 2018

Fourth edition as AS/CA S042.4:2022, published on 5 December 2022

ISBN: 1 74000 466 3

Communications Alliance Ltd (formerly Australian Communications Industry Forum Ltd) was formed in 2006 to provide a unified voice for the Australian communications industry and to lead it into the next generation of converging networks, technologies and services.

Disclaimers

1. Notwithstanding anything contained in this Standard:
 - (a) Communications Alliance disclaims responsibility (including where Communications Alliance or any of its officers, employees, agents or contractors has been negligent) for any direct or indirect loss, damage, claim, or liability any person may incur as a result of any:
 - (i) reliance on or compliance with this Standard;
 - (ii) inaccuracy or inappropriateness of this Standard; or
 - (iii) inconsistency of this Standard with any law; and
 - (b) Communications Alliance disclaims responsibility (including where Communications Alliance or any of its officers, employees, agents or contractors has been negligent) for ensuring compliance by any person with this Industry.
2. The above disclaimers will not apply to the extent they are inconsistent with any relevant legislation.

Copyright

© Communications Alliance Ltd 2022

This document is copyright and must not be used except as permitted below or under the Copyright Act 1968. You may reproduce and publish this document in whole or in part for your or your organisation's own personal or internal compliance, educational or non-commercial purposes. You must not alter or amend this document in any way. You must not reproduce or publish this document for commercial gain without the prior written consent of Communications Alliance. Organisations wishing to reproduce or publish this document for commercial gain (i.e. for distribution to subscribers to an information service) should apply to Communications Alliance by contacting the Communications Alliance Commercial Manager at info@commsalliance.com.au.

FOREWORD

General

This Standard was prepared by Communications Alliance and most recently revised by the WC94 : *IMT-2020 Customer Equipment* Working Committee. It is one of a series of Telecommunication Standards developed under the Memorandum of Understanding between the Australian Communications Authority (ACA) and the Australian Communications Industry Forum (ACIF).

Note: On 1 July 2005 the ACA became the Australian Communications and Media Authority (ACMA) and the Memorandum of Understanding continues in effect as if the reference to the ACA were a reference to ACMA.

Communications Alliance was formed in 2006 and continues the functions previously fulfilled by ACIF.

This Standard is a revision of AS/CA S042.4: 2018 *Requirements for connection to an air interface of a Telecommunications Network— Part 4: IMT Customer Equipment*.

This Standard is the result of a consensus among representatives on the Communications Alliance Working Committee to produce it as an Australian Standard.

The requirements in this Standard are consistent with the aims of s376 of the *Telecommunications Act 1997*. Specifically these aims are—

- (a) protecting the integrity of a telecommunications network or facility;
- (b) protecting the health and safety of persons;
- (c) ensuring access to an Emergency Call Service (ECS); and
- (d) ensuring interoperability with a standard telephone service (STS).

It should be noted that some Customer Equipment (CE) may also need to comply with requirements in other Standards or other Parts of this Standard.

The Standard should be read in conjunction with AS/CA S042.1: *General*.

Applicable electrical safety Standards, EMC, Radiocommunications and EMR Standards may apply under Commonwealth or State/Territory laws, or both.

Intellectual property rights

Equipment which is manufactured to comply with this Standard may require the use of technology which is protected by patent rights in Australia. Questions about the availability of such technology, under licence or otherwise, should be directed to the patent holder or Australian licensee (if known) or through enquiry at IP Australia which incorporates the Patent, Designs and Trade Marks and Offices. Further information can be found at www.ipaustralia.gov.au.

Standards revision

Australian Standards (AS/ACIF and AS/CA Standards) developed by Communications Alliance, are updated according to the needs of the industry, by amendments or revision. Users of these Standards should make sure that they

possess the latest amendments or editions. Representations concerning the need for a change to this AS/CA Standard should be addressed to—

The Project Manager
Customer Equipment and Cable Reference Panel
Communications Alliance
PO Box 444
Milsons Point NSW 1565

Regulatory notice

The 2022 version of AS/CA S042.4 is mandated by the ACMA *Telecommunications (Mobile Equipment Air Interface) Technical Standard 2018* (the 2018 ACMA Standard) and comes into force on the date it is published.

In the instance that the 2022 version of AS/CA S042.4 is mandated by the ACMA, the transition period for AS/CA S042.1:2020 will be 12 months commencing on the day the 2018 ACMA Standard is replaced.

Details on current compliance arrangements can be obtained from the ACMA website at <http://www.acma.gov.au> or by contacting the ACMA below at:

Australian Communications and Media Authority
PO Box 13112
Law Courts PO
Melbourne VIC 8010
Australia

Telephone: +61 3 9963 6800
Facsimile: +61 3 9963 6899
TTY: +61 3 9963 6948

INTRODUCTION

This introduction for the AS/CA S042.4 **Requirements for connection to an air interface of a Telecommunications Network— Part 4: IMT-2000 and IMT-Advanced Customer Equipment** Standard is not an authoritative section of this Standard and is only provided as guidance for the user of the Standard to outline its objectives, and the factors that have been taken into account in its development and to list the principle differences between the new and the previous edition.

The reader is directed to the clauses of this Standard for the specific requirements and to the ACMA for the applicable telecommunications labelling and compliance arrangements.

Note: Further information on the telecommunications labelling and compliance arrangements can be found in the *Telecommunications (Labelling Notice for Customer Equipment and Customer Cabling) Instrument 2015* (the TLN) can be obtained from the ACMA website at www.acma.gov.au.

The objective of Part 4 is to provide the basic compliance requirements and associated test methods for IMT-2000 and IMT-Advanced CE in order to comply with the regulatory arrangements for such CE in Australia.

The objective of this revision is to align the IMT terminology with the introduction of the new AS/CA S042.5 Standard.

The principal differences between this edition of AS/CA S042.4 and the previous edition are—

- (a) updating the designation of IMT Customer Equipment to clarify that Part 4 specifies requirements for IMT-2000 and IMT-Advanced Customer Equipment;
- (b) reproducing the IMEI and PKS security requirements to Part 1 of the Standard;
- (c) excluding the Receiver Total Radiated Sensitivity (TRS) and Total Radiated Power (TRP) test cases from the compliance conditions as radiated antenna performance requirements are outside the scope of this Standard;
- (d) updating the requirements for Cat M1 from ETSI TS 136 101 to ETSI EN and FCC Part 22; and
- (e) updating the requirements for NarrowBand IoT from ETSI TS 136 101 to ETSI EN and FCC Part 22.

TABLE OF CONTENTS

1	INTERPRETATIVE GUIDELINES	1
1.1	Categories of requirements	1
1.2	Compliance statements	1
1.3	Definitions, expressions and terms	1
1.4	Notes	1
1.5	References	1
1.6	Units and symbols	2
1.7	Parts of Standards	2
2	SCOPE	3
3	REFERENCES	4
4	ABBREVIATIONS AND DEFINITIONS	8
4.1	Abbreviations	8
4.2	Definitions	8
4.2.1	Carrier Aggregation	8
4.2.2	Cat M1	8
4.2.3	NB-IoT	8
4.2.4	V2X	9
5	REQUIREMENTS	10
5.1	UTRA FDD	10
5.1.1	Applicability	10
5.1.2	Core protocol specifications	10
5.1.3	FCC UTRA Band 5	10
5.1.4	RED UTRA Bands	11
5.2	E-UTRA FDD and E-UTRA TDD	11
5.2.1	Applicability	11
5.2.2	Core Protocol Specifications	12
5.2.3	Single carrier	12
5.2.4	Carrier Aggregation	13
5.2.5	Cellular Internet of Things	15
5.2.6	V2X	17
5.3	OFDMA TDD WMAN	17
5.3.1	Applicability	17
5.3.2	TDD Band Class 3 (2.5 GHz)	17
5.3.3	TDD Band Class 5 (3.5 GHz)	18

6	TESTING	19
	6.1 Verification of compliance with requirements	19
PARTICIPANTS		20

TABLES

1	UTRA Band under FCC Rules	11
2	UTRA Bands under ETSI	11
3	E-UTRA Bands under ETSI	13
4	E-UTRA Band under FCC Rules	13
5	Bands used for Carrier Aggregation	14
6	Cat M1 Bands	15
7	NB-IoT Bands	16
8	V2X Bands	17
9	OFDMA TDD WMAN Band Class 3	18
10	OFDMA TDD WMAN Band Class 5	18

1 INTERPRETATIVE GUIDELINES

1.1 Categories of requirements

This Standard contains mandatory requirements as well as provisions that are recommendatory only. Mandatory requirements are designated by the words '**shall**' or '**shall not**'. All other provisions are voluntary.

1.2 Compliance statements

Compliance statements, in italics, suggest methodologies for demonstrating CE's compliance with the requirements.

1.3 Definitions, expressions and terms

If there is any conflict between the definitions used in this Standard and the definitions used in the *Telecommunications Act 1997*, the definitions in the Act take precedence.

1.4 Notes

Text denoted as 'Note' is for guidance in interpretation and is shown in smaller size type.

1.5 References

- (a) Applicable editions (or versions) of other mandatory documents referred to in this Standard are specified in Section 3: REFERENCES. The bibliography contains information about other publications referred to in this Standard e.g. publications only referred to in notes and informative appendices.
- (b) If a document refers to another document, the other document is a sub-referenced document.
- (c) Where the edition (or version) of the sub-referenced document is uniquely identified in the reference document, then that edition (or version) applies.
- (d) Where the edition (or version) of the sub-referenced document is not uniquely identified in the reference document, then the applicable edition (or version) is that which is current at the date the reference document is legislated under the applicable regulatory framework, or for a non- legislated document, the date upon which the document is published by the relevant standards organisation.
- (e) A number in square brackets '[]' refers to a document listed in Section 3: REFERENCES.