



Technical Specification

for

Cellular Mobile Terminal

**IDA TS CMT
Issue 1, June 2011**

Infocomm Development Authority of Singapore
Resource Management & Standards
10 Pasir Panjang Road
#10-01 Mapletree Business City
Singapore 117438

© Copyright of IDA, 2011

This document may be downloaded from the IDA website at <http://www.ida.gov.sg> and shall not be distributed without written permission from IDA

Contents

Section		Page
1	General Requirements	3
1.1	Scope of Specification	3
1.2	Identification of Equipment	3
1.3	Keypad	3
1.4	Safety and Health	3
2	Technical Requirements	3
2.1	Operating Frequencies	3
2.2	Radio Interfaces Requirements	4
2.3	Radiation Safety (SAR) Requirements	5
Annex A	Addendum/Corrigendum	6

<p style="text-align: center;">NOTICE</p>
--

<p style="text-align: center;">This Specification is subject to review and revision.</p>

1 General Requirements

1.1 Scope of Specification

This specification defines the minimum technical requirements for Mobile Terminals to be used in the Public Mobile Radio Communication System and services which employ:

- i) the Global System for Mobile Communications (GSM) technology; and
- ii) the ITU IMT-2000 (UTRA FDD and E-UTRA FDD) technologies.

Cellular Mobile Terminals may include handheld, portable and vehicle-mounted equipment, and RF interface cards and modems.

1.2 Identification of Equipment

1.2.1 The Cellular Mobile Terminal shall be marked with the manufacturer's brand or identification mark, and the manufacturer's model or type reference. The marking required shall be legible, indelible and readily visible.

1.2.2 Each individual Mobile Terminal shall be allocated a unique 'International Mobile Station Equipment Identity (IMEI)'. Manufacturer shall ensure that adequate security measures have been taken to protect the IMEI against duplication, unauthorised removal or change.

1.3 Keypad

Any keypad used in the Mobile Terminal shall be alphanumeric and the relationships between the letters and digits shall comply with the ITU-T Recommendation E.161 (02/2001), sections 2.2, 3.1.1 and 3.6.

1.4 Safety and Health

1.4.1 Compliance with the radiation safety standards specified in clause 2.3 does not by itself confer immunity from legal obligations and requirements imposed by national health or safety authorities. IDA may invalidate the equipment registration if so requested by the relevant authority for reasons of safety or hazards that would likely be caused to users.

1.4.2 Where applicable, the equipment supplier shall provide the SAR information in printed form or in other appropriate form such as in the user guide or as a leaflet or brochure in the equipment package. Furthermore, the supplier shall provide each unit of approved Mobile Terminal with advisory information pertaining to electrical safety and non-ionising radiation hazards and on the safe operation of the Mobile Terminal at potentially hazardous areas such as in moving vehicles, in aircrafts and at fuel depots, chemical plants and blasting sites.

2 Technical Requirements

2.1 Operating Frequencies

2.1.1 The Cellular Mobile Terminals shall operate within the following frequency bands:

Transmit Frequency	Receive Frequency
880 MHz – 915 MHz	925 MHz – 960 MHz
1710 MHz – 1785 MHz	1805 MHz – 1880 MHz
1920 MHz – 1980 MHz	2110 MHz – 2170 MHz
2500 MHz – 2570 MHz	2620 MHz – 2690 MHz

2.1.2 The precise operating frequency range of a Mobile Terminal shall follow that of the Network Operator from whom the service is obtained.

2.2 Radio Interfaces Requirements

2.2.1 Suppliers shall demonstrate that the Cellular Mobile Terminals have been tested and certified for operating in the frequency bands stated in clause 2.1.1 and conformity to any or a combination of the following standards and all applicable standards referenced within:

ETSI EN 301 511 Global System for Mobile Communications (GSM); Harmonised EN for mobile stations in the GSM900 and GSM1800 bands covering essential requirements under article 3.2 of the R&TTE Directive (1999/5/EC)

ETSI EN 301 908-01 IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive;
Part 1: Introduction and common requirements.

ETSI EN 301 908-02 IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive;
Part 2: CDMA Direct Spread (UTRA FDD) User Equipment (UE).

ETSI EN 301 908-13 IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive;
Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE).

ITU-R M.1457-9 Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)

2.2.2 If the Cellular Mobile Terminal also supports other wireless modes of operation such as WLAN, Bluetooth, suppliers shall demonstrate that the Mobile terminal has been tested and certified for conformity to the relevant requirements as given in IDA Technical Specification for Short Range Devices (IDA TS SRD).

2.3 Radiation Safety (SAR) Requirements

In addition to the requirements as stated in clauses 2.1 and 2.2, suppliers shall demonstrate that the Cellular Mobile Terminal has been tested and certified for conformity with the following International Commission on Non-Ionizing Radiation Protection (ICNIRP) recommendations:

- | | |
|----------------------|---|
| EN 50360:2001 | Product standard to demonstrate the compliance of mobile phones with the basic restrictions related to human exposure to electromagnetic fields (300 MHz – 3 GHz) |
| EN 50361:2001 | Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones (300 MHz – 3 GHz) |

Annex A: Corrigendum / Addendum

Page	TS Ref.	Items Changed	Effective Date
Changes to IDA TS GSM-MT and 3G-MT Issue 1 Rev 2, May 11			
		<p>Title of Specification has been renamed as “Technical Specification for Cellular Mobile Terminal)” (IDA TS CMT Issue 1).</p> <p>The Technical Specification has superseded the following two IDA Technical Specifications:</p> <p>(a) IDA TS GSM-MT Issue 1 Rev 2 (b) IDA TS 3G-MT Issue 1 Rev 2</p> <p>Changes are mainly editorial in nature, in which the essential technical requirements for compliance formerly defined under the two Specifications (TS GSM-MT and 3G-MT) are now incorporated as one.</p> <p>It also includes the requirements for the Radio Access Technology, E-UTRA.</p>	Jun 11