



DRAFT GUIDELINES ON FEATURES  
AND TECHNICAL  
SPECIFICATIONS  
FOR  
MOBILE CELLULAR DEVICES  
IMPORTED INTO AND DISTRIBUTED  
IN KENYA

March 2021

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### 1. Scope

- 1.1. The Communications Authority of Kenya (hereinafter referred to as the Authority) is established under the Kenya Information and Communications Act, CAP 411A (Act) to license and regulate communications system and services in Kenya.
- 1.2. Pursuant to Regulation 3. (4) of the Kenya Information and Communications (Importation Type Approval and Distribution of Communication Equipment) Regulations, 2010, the Authority makes this Specification with regard to the Type Approval of Mobile Devices.
- 1.3. This specification defines the minimum features and technical requirements that mobile cellular devices sold in Kenya must meet. The requirements for Type Approval of mobile devices are summarized at Annex 1: Mobile Devices Type Approval Requirements.
- 1.4. The mobile cellular devices covered in this Specification include, but are not limited to, handheld (both smartphone and feature phones), portable, vehicle-mounted, RF interface cards and modems capable of connecting to the public mobile communications networks which employ:
  - 1.4.1. the Global System for Mobile Communications (GSM) technology;
  - 1.4.2. ITU IMT-2000 radio interface technologies (UTRA FDD and E-UTRA FDD) identified in ITU-R M.1457-12, and transposed from 3GPP Release 8 and 9;
  - 1.4.3. ITU IMT-Advanced radio interface technologies (LTE-Advanced) identified in ITU-R M.2012-2, and transposed from 3GPP Release 10 and beyond;
  - 1.4.4. LTE-Advanced technology series from 3GPP Release 13 onwards, marked with LTE-Advanced Pro.

### 2. References

- 2.1. The features and technical requirements captured in this Specification make reference to international standards including but not limited to:
  - 2.1.1. ETSI EN 301 908-1: IMT cellular networks; Harmonised EN covering essential requirements of Directive 2014/53/EU; Part 1: Introduction and common requirements;
  - 2.1.2. ETSI EN 301 908-2: IMT cellular networks; Harmonised EN covering essential requirements of Directive 2014/53/EU; Part 2: CDMA Direct Spread (UTRA FDD) User Equipment (UE);
  - 2.1.3. ETSI EN 301 908-13: IMT cellular networks; Harmonised EN covering essential requirements of Directive 2014/53/EU; Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE);
  - 2.1.4. ETSI EN 301 489-1: EMC standard for radio equipment and services; Harmonised Standard covering essential requirements of article 3.1(b) of the Directive 2014/53/EU and the essential requirements of article 6 of Directive 2014/30/EU; Part 1: Common technical requirements;
  - 2.1.5. ETSI EN 301 489-24: EMC standard for radio equipment and services; Part 24: Specific conditions for IMT-2000 CDMA Direct Spread (UTRA and E-UTRA) for Mobile and portable (UE) radio and ancillary equipment;
- 2.2. ITU-R M.1457-12: Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-2000 (IMT-2000);
  - 2.2.1. ITU-R M.2012-2: Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-Advanced (IMT-Advanced);
  - 2.2.2. ITU-T K.116: EMC requirements and test methods for radio telecommunication terminal equipment;
  - 2.2.3. IEC CISPR 32: Electromagnetic compatibility of multimedia equipment – Emission requirements;

- 2.2.4. IEC CISPR 24: Information technology equipment – Immunity characteristics – Limits and methods of measurement;
  - 2.2.5. ISO 7637-2: Road vehicles - Electrical disturbances from conduction and coupling - Part 2: Electrical transient conduction along supply lines only;
  - 2.2.6. CENELEC EN 50360: Product standard to demonstrate the compliance of mobile phones with the basic restrictions related to human exposure to electromagnetic fields (300 MHz – 3GHz);
  - 2.2.7. IEC 62209-1: Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Part 1: Devices used next to the ear (Frequency range of 300 MHz to 6 GHz), and
  - 2.2.8. IEC 62368-1:2020 Audio/video, information and communication technology equipment – Part 1: Safety requirements.
- 2.3. On the list above, where the version of a standard has not been indicated, the specification shall be based on the current and valid version of the standard as published by the specific standards development organisation.

### 3. Abbreviations and Acronyms

The following abbreviations and acronyms are used in this Specification:

3GPP	3rd Generation Partnership Project
Authority or CA	Communications Authority of Kenya
CDMA	Code Division Multiple Access
CENELEC	European Committee for Electrotechnical Standardization
CISPR	International Special Committee on Radio Interference of the IEC
CMT	Cellular Mobile Terminal
E-UTRA	Evolved Universal Terrestrial Radio Access (also known as LTE)

EMC	Electromagnetic Compatibility
EN	European Standard
ETSI	European Telecommunications Standards Institute
FDD	Frequency Division Duplex
GSMA	Global System Mobile Association
GSM	Global System for Mobile communications
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IEC	International Electrotechnical Commission
IMEI	International Mobile Station Equipment Identity
IMT	International Mobile Telecommunications
ISO	International Organization for Standardization
ITU	International Telecommunication Union
ITU-T	ITU Telecommunication Standardization Sector
LTE	Long Term Evolution (also known as E-UTRA)
RIT	Radio Interface Technology
SAR	Specific Absorption Rate
SDO	Standards Development Organisation
SELV	Safety Extra-Low Voltage
UTRA	Universal Terrestrial Radio Access
WCDMA	Wideband Code Division Multiple Access
Vendor	An entity licensed by the Authority as a Telecommunications Vendor
WHO	World Health Organisation
WLAN	Wireless Local Area Network

## 4. General Requirements

### 4.1. General

- 4.1.1. A physical or electronic user manual shall accompany every mobile cellular device sold in Kenya.
- 4.1.2. Vendors shall provide at least one (1) year warranty and ensure the availability of aftersales support for a further two (2) years period for each mobile cellular device they sell.
- 4.1.3. The test reports submitted in the Type Approval process as evidence of conformance to this Specification shall be from a test laboratory accredited under the International Laboratory Accreditation Cooperation (ILAC) in accordance with ISO/IEC 17011.

### 4.2. Identification of Mobile Cellular Device

- 4.2.1. The manufacturer's brand/identification mark and model/type shall be printed on the mobile cellular device in indelible ink, readily visible and legible.
- 4.2.2. Unless otherwise advised by the Authority, when seeking for Type approval, a Vendor shall submit a sample of the mobile cellular device. The Authority shall not be under obligation to return the sample to the Vendor.
- 4.2.3. Each mobile cellular device shall have a unique International Mobile Station Equipment Identity (IMEI) assigned by GSMA. The IMEI shall be printed on the device, legible and indelible. In addition, the IMEI shall be retrievable electronically by dialling \*#06#.
- 4.2.4. Further, the mobile cellular device shall comply with IMEI security requirements of digital cellular telecommunications system (Phase 2+); mobile station (MS) conformance specification; Part 1: conformance specification (3GPP TS 51.010-1).

### 4.3. External Features Mobile Cellular Device

4.3.1. A mobile cellular device shall be equipped with a wired or wireless earpiece facility. A wire type earpiece interface shall be in compliance with ITU-T Recommendation ITU-T P.381 while a wireless earpiece interface shall be in compliance with the Guidelines on the use of Short Range Devices issued by the Authority.

4.3.2. The keypad for a mobile cellular device shall be alphanumeric preferably a Qwerty keypad (Figure 2) and shall comply with the ITU-T Recommendation E.161 (02/2001), sections 2.2, 3.1.1 and 3.6.



**Tactile Keypad**

Less user-friendly for composing sms



**Qwerty Keypad**

More user-friendly for composing sms

4.3.3. A mobile cellular device shall have the capability of setting the ringing tone volume to Loud, Vibrate and Silent.

4.3.4. A mobile cellular device shall have the capability to lock to a service provider and also to auto-select a service provider.

4.3.5. A mobile cellular device shall allow for installation of additional software and updates.



#### **4.4. Battery and Power Requirements**

- 4.4.1. The battery for a mobile cellular device should offer at least eight (8) hours talk-time and 24 hours standby time.
- 4.4.2. A mobile cellular device shall be fitted with a suitable and appropriate power supply cord and mains plug that meets the standards established by the regulatory body in charge of electricity in Kenya.
- 4.4.3. The AC Adaptor for the mobile cellular device shall be in compliance with ITU-T Recommendation ITU-T Rec. L.1000 and meet the standards established by the regulatory body in charge of electricity in Kenya and in particular the operating voltage shall be  $240V \pm 10\%$  at a frequency of  $50Hz \pm 1\%$ .

#### **5. Radiation Safety, SAR and Health**

- 5.1. All Mobile cellular device shall comply with the following Radiation Safety Standards and any other standard adopted internationally on radiation safety as follows:
  - 5.1.1. The general public exposure Specific Absorption Rate (SAR) limit of 2 Watts per kilogram (W/kg) averaged over ten grams of human tissue as specified in the International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines.
  - 5.1.2. ICNIRP Guidelines for limiting exposure to time varying electric, magnetic and electromagnetic fields (up to 300 GHz).
  - 5.1.3. BS EN 50360: Product standard to demonstrate the compliance of mobile phones with the basic restrictions related to human exposure to electromagnetic fields (300 MHz – 3 GHz).
  - 5.1.4. BS EN 50361: Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones (300 MHz– 3 GHz).

- 5.1.5. 1999/519/EC: Council recommendation on the limitation of exposure of the general public to electromagnetic fields (0 to 300 GHz).
- 5.1.6. BS ES 59005: Evaluation of Human Exposure, Specific Absorption Rate.
- 5.1.7. EN IEC 62368-1:2020 Audio/video, information and communication technology equipment – Part 1: Safety requirements
- 5.2. Compliance with the radiation safety standards specified in clause 5.1 does not by itself confer immunity from legal obligations and requirements imposed by national health or safety authorities. The Authority may invalidate the equipment type approval on its own motion or if so requested by the relevant authority for reasons of safety or hazards that would likely be caused to users.
- 5.3. Where applicable, the Vendor shall provide the SAR and other relevant safety information in printed form or in other appropriate form such as in the user guide/manual or as a leaflet or brochure included in the equipment package.

## 6. Technical Requirements

### 6.1. Operating Frequencies

- 6.1.1. Mobile cellular devices shall operate within the following 2G and 3G frequency bands:

Band	Uplink (MHz)	Downlink (MHz)	Alias
1	1920 – 1980	2110 – 2170	UMTS, IMT 2100
2	1710 – 1785	1805 – 1880	GSM 1800
3	880 – 915	925 – 960	GSM 900

- 6.1.2. Preferably, a mobile cellular device should also operate within the following 4G frequency bands:

Band	Uplink (MHz)	Downlink (MHz)	Alias
4	703 – 733	758 – 788	LTE 700
5	791 – 821	832 – 862	LTE 800

## 6.2. Radio Interfaces Requirements

- 6.2.1. In addition to operating in the frequency bands stated in clause 6.1, Vendors shall demonstrate that the mobile cellular device have been tested and certified for conformity to the following standards:
- 6.2.1.1. **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)
  - 6.2.1.2. **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.
  - 6.2.1.3. **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).
  - 6.2.1.4. **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).
  - 6.2.1.5. **ITU-R M.1457-9** Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)
- 6.2.2. Where the mobile cellular device also supports other wireless modes of operation such as WLAN, Bluetooth, etc, Vendors shall demonstrate that the mobile cellular device has been tested and certified for conformity to the relevant requirements as outlined in the [Guidelines on the Use of Short Range Devices](#) issued by the Authority.

## **7. Review of Specification**

This Specification is subject to review by the Authority from time to time. Mobile cellular device submitted for type approval shall conform to the latest version of the Specification.

## **8. Coming into Force**

This Specification shall come into force on the date it is published in the Kenya Gazette.

**Director General  
Communications Authority of Kenya**

## ANNEX 1: MOBILE DEVICES TYPE APPROVAL REQUIREMENTS

In addition to submitting the Type Approval Applicant Form, CA/F/LCS/TA 1.3 of July 2014 or its successor, applicants for Type approval for Mobile Devices shall meet the following criteria:

<b>ADDITIONAL REQUIREMENTS FOR TYPE APPROVAL OF A MOBILE CELLULAR DEVICE</b>		<i>For official use only</i>
<b>Criteria</b>	<b>Mandatory /Preferred</b>	<i>C/NC</i>
1. Submission of a sample of the device	M*	
2. Submission of User Manuals	M	
3. Submission of Technical Manuals	M	
4. Submission of Laboratory Test Reports	M	
5. Is the Laboratory Test Reports from accredited laboratory under ILAC?	M	
6. Is the device IMEI valid as per GSMA TAC Database?	M	
7. Is an earpiece facility provided?	M	
8. Is the Keypad in accordance with ITU-T Recommendation E.161?	M	
9. Is volume control provided; Loud, Vibrate and Silent?	M	
10. Is service provider Lock provided?	M	
11. Is battery talk-time $\geq 8$ hours?	M	
12. Is battery standby time $\geq 24$ hours?	M	
13. Does the device operate on all 2G & 3G frequencies assigned in Kenya?	M	
14. Does the device operate on 4G frequencies assigned in Kenya?	P	
15. Does the device allow for installation of additional software and updates?	M	
16. Is SAR $\leq 2$ W/kg?	M	
* <i>The Authority is not obliged to return the mobile devices that has been submitted for type approval purposes.</i>		
<i>For official use only</i>		
<b>Checked by Type approval Receiving Officer</b>		
Name	Signature	Date
<b>Confirmed by Type approval Assessing Officer</b>		
Name	Signature	Date