



Technical Specification

for

Cellular Base Station and Repeater System

**IDA TS CBS
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<p style="text-align: center;">NOTICE</p>
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<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 base stations and repeater equipment 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.

1.2 Identification of Equipment

Base stations and repeater equipment 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.

1.3 Safety and Health

1.3.1 Use of base station or repeater equipment shall comply with International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz).

1.3.2 Compliance with the above radiation safety standards 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.

2 Technical Requirements

2.1 Operating Frequencies

2.1.1 The cellular base station and repeater equipment shall operate within the following frequency bands:

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

2.1.2 The precise operating frequency range of a base station and repeater shall follow that of the Network Operator from whom the service is obtained.

2.2 Radio Interfaces Requirements

Suppliers shall demonstrate that the cellular base stations and repeater equipment have been tested and certified for operating in the frequency bands stated in clause 2.1 and conformity to any or a combination the following standards and all applicable standards referenced within:

ETSI EN 301 502	Global System for Mobile communications (GSM); Harmonized EN for Base Station Equipment covering the essential requirements of article 3.2 of the R&TTE Directive.
ETSI EN 300 609-4	Global System for Mobile communications (GSM); Part 4: Harmonized EN for GSM Repeaters covering the essential requirements of article 3.2 of the R&TTE Directive
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 301 908-03	IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 3: CDMA Direct Spread (UTRA FDD) Base Station (BS).
ETSI EN 301 908-11	IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 11: CDMA Direct Spread (UTRA FDD) (Repeaters).
ETSI EN 301 908-14	IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 14: Evolved Universal Terrestrial Radio Access (E-UTRA) Base Stations (BS).
ETSI EN 301 908-15	IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 15: Evolved Universal Terrestrial Radio Access (E-UTRA FDD) (Repeaters).
ETSI EN 301 908-18	IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 18: E-UTRA, UTRA and GSM/EDGE Multi-Standard Radio (MSR) Base Station (BS).
ITU-R M.1457-9	Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)

2.3 Electromagnetic Compatibility Requirements

Suppliers shall demonstrate that the base stations and repeater equipment have been tested and certified to meet the EMC limits and methods of measurement as specified in the following IMT-2000 Third-Generation Cellular System specifications published by the ETSI:

ETSI EN 301 489-1 Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

ETSI EN 301 489-23 Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 23: Specific conditions for IMT-2000 CDMA, Direct Spread (UTRA and E-UTRA) Base Station (BS) radio, repeater and ancillary equipment

2.4 Electrical Safety Requirements

Suppliers shall demonstrate that the base stations and repeater equipment have been tested and certified to meet the following safety standards:

IEC 60950/EN 60950 Safety of Information Technology equipment including electrical business equipment

IEC 60215/ EN 60215 Safety requirements for radio transmitting equipment

Annex A: Corrigendum / Addendum

Page	TS Ref.	Items Changed	Effective Date
Changes to IDA TS GSM-BS Issue 1 Rev 2 and 3G BS Issue 1 Rev 1			
—	—	<p>Title of Specification has been renamed as “Technical Specification for Cellular Base Station and Repeater System” (IDA TS CBS Issue 1).</p> <p>The Technical Specification has superseded the following two IDA Technical Specifications:</p> <ul style="list-style-type: none">(a) IDA TS GSM-BS Issue 1 Rev 2(b) IDA TS 3G-BS Issue 1 Rev 1 <p>Changes are mainly editorial in nature, in which the essential technical requirements for compliance formerly defined under the two Specifications (TS GSM-BS and 3G-BS) are now incorporated as one.</p> <p>It also includes the requirements for the Radio Access Technology, E-UTRA.</p>	Jun 11