

CST Technical Specification

Specification for TETRA Base Stations and Ancillary Equipment

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This technical specification is issued by The Communications, Space and Technology Commission in the Kingdom of Saudi Arabia in accordance with the provisions of the Communications and Information Technology Act issued by Royal Decree No. (M/106) dated 02/11/1443 AH and its bylaw, and the Commission's regulation.

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Document History Table

Version	Issue Date	Description
Issue 1	March 2006	
Issue 2	January 2010	
Issue 3	July 2021	
Issue 4	October 2023	

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1- Scope

This specification applies to TETRA base stations and ancillary equipment.

2- Enforcement

- 2-1 This specification shall enter into force from issue date.
- 2-2 Any previous version of this technical specification is withdrawn.

3- General Requirements

- 3-1 All equipment must comply with the requirement of CST specification GEN001, be safe and must not adversely affect other electrical equipment.
- 3-2 All telecommunications and radio terminal equipment must comply with the relevant technical specifications established by CST. In addition, such equipment may be subject to regulations for Declaration of Conformity or registration. Please visit CST website for details.
- 3-3 If more than one interface type is offered by a piece of equipment, each interface must meet the applicable technical specifications.
- 3-4 Further information on the characteristics and presentation of network interfaces can be obtained by coordinating with the mobile network operators.
- 3-5 It is mandatory that test reports are obtained from a laboratory that has been accredited by a body that is a member of the ILAC Mutual Recognition Arrangement.

4- Limits and conditions

Testing should be carried out to ensure compliance with the listed specifications.

Frequency band	Max Output Power or Magnetic Field	Usage	Standard	Comments
350 – 370 MHz	Subject to licensing	TETRA	EN 300 086 EN 303 035-1 EN 303 035-2 EN 300 394-1 EN 301 489-1 EN 301 489-5 EN 301 489-18	Up- and downlink
380 – 390 MHz	Subject to licensing	TETRA	EN 300 086 EN 303 035-1 EN 303 035-2 EN 300 394-1 EN 301 489-1 EN 301 489-5 EN 301 489-18	uplink
410 – 420 MHz	40 W	TETRA	EN 300 086 EN 303 035-1 EN 303 035-2 EN 300 394-1 EN 301 489-1 EN 301 489-5 EN 301 489-18	Uplink
450 – 460 MHz	25 W	TETRA	EN 300 086 EN 303 035-1 EN 303 035-2 EN 300 394-1 EN 301 489-1 EN 301 489-5 EN 301 489-18	Uplink

870 – 876 MHz	15 W	TETRA	EN 300 086 EN 303 035-1 EN 303 035-2 EN 300 394-1 EN 301 489-1 EN 301 489-5 EN 301 489-18	uplink
390 – 395MHz	10 W	TETRA	EN 300 086 EN 303 035-1 EN 303 035-2 EN 300 394-1 EN 301 489-1 EN 301 489-5 EN 301 489-18	downlink
395 – 399.99 MHz	6.3 W	TETRA	EN 300 086 EN 303 035-1 EN 303 035-2 EN 300 394-1 EN 301 489-1 EN 301 489-5 EN 301 489-18	downlink
420 – 430 MHz	4 W	TETRA	EN 300 086 EN 303 035-1 EN 303 035-2 EN 300 394-1 EN 301 489-1 EN 301 489-5 EN 301 489-18	downlink
460 – 470 MHz	2.5 W	TETRA	EN 300 086 EN 303 035-1 EN 303 035-2 EN 300 394-1 EN 301 489-1 EN 301 489-5 EN 301 489-18	downlink

5- Licensing Requirements

A spectrum license is required.

6- Additional Requirements

There is no additional requirements for this technical specification.

7- References

The following referenced documents are indispensable for the application of this document. If no issue or revision number is quoted along with the title of a technical specification or standard, the latest published version should be used.

EN 300 086

Land Mobile Service; Radio equipment with an internal or external RF connector intended primarily for analogue speech; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU

EN 303 035-1

Harmonized EN for TETRA equipment covering essential requirements under Article 3(2) of the R&TTE Directive – Part 1: Voice plus Data (V+D).

EN 303 035-2

Terrestrial Trunked Radio (TETRA); Harmonised EN for TETRA equipment covering essential requirements under article 3.2 of the R&TTE Directive; Part 2: Direct Mode Operation.

ETSI EN 300 394-1

Terrestrial Trunked Radio (TETRA); Conformance testing specification: Part 1: Radio

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.

EN 301 489-5

Electromagnetic compatibility and Radio spectrum Matters (ERM);
Electromagnetic Compatibility (EMC) standard for radio equipment and
services; Part 5: Specific conditions for Private land Mobile Radio (PMR)
and ancillary equipment (speech and non-speech).

EN 301 489-18

Electromagnetic compatibility and Radio spectrum Matters (ERM);
Electromagnetic Comp ability (EMC) standard for radio equipment and
services; Part 18: Specific conditions for Terrestrial Trunked Radio (TETRA)
equipment.