

CST Technical Specification

Specification for Road Transport, Traffic Telematics and Intelligent Transport Systems

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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	September 2008	
Issue 3	December 2018	
Issue 4	July 2021	
Issue 5	October 2023	

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1- Scope

- 1-1 This specification applies to Road Transport, Traffic Telematics and Intelligent Transport Systems.

- 1-2 RTTT and ITS equipment are used to optimize the different modes of transport and traffic management in providing information to the user or an intelligent system. The technology is including but is not limited to traffic surveillance and distance control radar in cars.

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- 2-2 Any previous version of this technical specification is withdrawn.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
5.795 – 5.805 GHz	2 W EIRP	RTTT	EN 300 674-1 EN 300 674-2 EN 301 489-3	
5.795 – 5.805 GHz	8 W EIRP	RTTT	EN 300 674-1 EN 300 674-2 EN 301 489-3	Subject to individual licensing
5.795 – 5.815 GHz	2 W EIRP	RTTT	EN 300 674-1 EN 300 674-2 ES 200 674-1 ES 200 674-2 EN 301 489-3	
5.795 – 5.815 GHz	8 W EIRP	RTTT	EN 300 674-1 EN 300 674-2 ES 200 674-1 ES 200 674-2 EN 301 489-3	Subject to individual licensing
24.05 – 24.25 GHz	<= 20dBm EIRP	RTTT	EN 302 858 EN 301 489-51	
63 – 64 GHz	40 dBm EIRP	RTTT	EN 302 686 EN 301 489-3	
76 – 77 GHz	55 dBm peak EIRP	RTTT	EN 301 091-1 EN 301 091-2 EN 301 091-3 EN 301 489-51	Fixed transportation infrastructure radars have to be of a scanning nature in order to limit the illumination time and ensure a minimum silent time to achieve coexistence with automotive radar systems.
77 – 81 GHz	55 dBm peak EIRP	RTTT	EN 302 264 TS 103 568 EN 301 489-51	

5- Licensing Requirements

No licensing requirements apply.

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 200 674-1

Intelligent Transport Systems (ITS); Road Transport and Traffic Telematics (RTTT); Dedicated Short Range Communications (DSRC); Part 1: Technical characteristics and test methods for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz Industrial, Scientific and Medical (ISM) band

EN 200 674-2

Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Road Transport and Traffic Telematics (RTTT); Part 2: Technical characteristics and test methods for Low Data Rate (LDR) data transmission equipment operating in the 5,8 GHz Industrial, Scientific and Medical (ISM) band

EN 300 674-2-1

Transport and Traffic Telematics (TTT); Dedicated Short Range Communication (DSRC) transmission equipment (500 kbit/s / 250 kbit/s) operating in the 5 795 MHz to 5 815 MHz frequency band; Part 2: Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Sub-part 1: Road Side Units (RSU)

EN 300 674-2-2

Transport and Traffic Telematics (TTT); Dedicated Short Range Communication (DSRC) transmission equipment (500 kbit/s / 250 kbit/s) operating in the 5 795 MHz to 5 815 MHz frequency band; Part 2:

Harmonised Standard for access to radio spectrum; Sub-part 2: On-Board Units (OBU)

EN 301 091-1

Short Range Devices; Transport and Traffic Telematics (TTT); Radar equipment operating in the 76 GHz to 77 GHz range; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Part 1: Ground based vehicular radar

EN 301 091-2

Short Range Devices; Transport and Traffic Telematics (TTT); Radar equipment operating in the 76 GHz to 77 GHz range; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Part 2: Fixed infrastructure radar equipment

EN 301 091-3

Short Range Devices; Transport and Traffic Telematics (TTT); Radar equipment operating in the 76 GHz to 77 GHz range; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Part 3: Railway/Road Crossings obstacle detection system applications

EN 302 858

Electromagnetic compatibility and Radio spectrum Matters (ERM); Road Transport and Traffic Telematics (RTTT); Automotive radar equipment operating in the 24,05 GHz up to 24,25 GHz or 24,50 GHz frequency range; Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive

EN 302 686

Intelligent Transport Systems (ITS); Radiocommunications equipment operating in the 63 GHz to 64 GHz frequency band; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive

EN 302 264

Short Range Devices; Transport and Traffic Telematics (TTT); Short Range Radar equipment operating in the 77 GHz to 81 GHz band; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

ETSI TS 103 568

Short Range Devices (SRD); Receiver technical requirements, parameters and measurement procedures for Automotive and Surveillance Radar Equipment to fulfil the requirements of the Directive 2014/53/EU; RX-requirements for Automotive and Surveillance Radar Equipment

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 301 489-3

Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz.

EN 301 489-51

Electro Magnetic Compatibility (EMC) standard for radio equipment and services; Part 51: Specific conditions for Automotive, Ground based Vehicles and Surveillance Radar Devices using 24,05 GHz to 24,25 GHz, 24,05 GHz to 24,5 GHz, 76 GHz to 77 GHz and 77 GHz to 81 GHz; Harmonised Standard covering the essential requirements.