

## CST Technical Specification

# Specification for Short Range Railway 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**

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## 1- Scope

This specification applies to short range railway applications.

Short range applications used in the railway sector are covered in this technical specification.

## 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2-2 Any previous version of this technical specification is withdrawn.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
984 – 7484 kHz	9 dB $\mu$ A/m @10m	Railway SRD	EN 302 608 EN 301 489-3	$\leq$ 1% duty cycle
7.3 -23 MHz	-7 dB $\mu$ A/m @10m	Railway SRD	EN 302 609 EN 301 489-3	
27.09 – 27.1 MHz	42 dB $\mu$ A/m @10m	Railway SRD	EN 302 608 EN 301 489-3	
76 – 77 GHz	55 dBm peak EIRP	Railway SRD	EN 301 091 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 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 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 301 091-1**

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

### **ETSI EN 301 511**

Global System for Mobile communications (GSM); Mobile Stations (MS) equipment; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

### **ETSI EN 301 502**

Global System for Mobile communications (GSM); Base Station (BS) equipment; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

### **EN 302 608**

Short Range Devices (SRD); Radio equipment for Eurobalise railway systems; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

### **EN 302 609**

Short Range Devices (SRD); Radio equipment for Euroloop railway systems; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU

### **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**

ElectroMagnetic 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.