



Bundesnetzagentur

Federal Network Agency for Electricity,  
Gas, Telecommunications, Post and  
Railways

---

Draft

# SSB FS 023

## Interface specification for GNSS repeaters

**Edition: March 2025**

Notification number under Directive (EU) 2015/1535: xxxx/xxxx/  
DE

Notified in accordance with Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services (OJ L 241, 17/9/2015, p. 1).

This interface specification has 4 pages.

Contact information:  
Post and Railways

Federal Network Agency for Electricity, Gas, Telecommunications

Referat 421, Seidelstr. 49, D-13405 Berlin

## 1 General

Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 (OJ L 153/62) on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC was transposed in the Federal Republic of Germany by the Act on the making available of radio equipment on the market (Radio Equipment Act (Funkanlagengesetz – FuAG) of 27 June 2017 (Federal Law Gazette (BGBl.) I No 42, p. 1947), last amended by Article 1 of the Act of 14 May 2024 (BGBl. I No 148).

Pursuant to § 33(1) FuAG, the Federal Network Agency shall provide specific and appropriate specifications of the radio interfaces as regards radio equipment operated in frequency bands for which the conditions of use are not harmonised throughout the Community.

This interface specification (SSB) contains information necessary to enable the manufacturer to carry out the relevant tests in relation to the essential requirements applicable to the relevant radio equipment in accordance with the provisions of FuAG § 4(2) and, where applicable, § 4(3).

Furthermore, radio equipment must be designed in such a way that other basic requirements under § 4(1)(1) and (2) FuAG are observed.

For the commissioning and operation of radio equipment, the provisions concerning frequency allocation, in particular those contained in Part 6 of the Telecommunications Act (TKG) of 23 June 2021 (BGBl. I No 35, p. 1858), last amended on 14 May 2024 by Article 35 of the Act of 6 May 2024 (BGBl. I No 149), remain unaffected.

The Federal Network Agency shall order the enactment of the interface specification in its Official Gazette and publish its reference therein; only the German edition is binding.

## 2 Single Market clause

Goods lawfully marketed in another Member State of the European Union or in Türkiye, or originating and lawfully marketed in an EFTA State that is a contracting party to the Agreement on the European Economic Area, are deemed to be compatible with this measure. The application of [this measure] is subject to Regulation (EU) 2019/515 of 19 March 2019 on the mutual recognition of goods lawfully marketed in another Member State from 19 April 2020.

## 3 Scope of application

This interface specification describes the basic requirements for repeaters for the Global Navigation Satellite System (GNSS repeater) within buildings.

Radio equipment within the meaning of this interface specification is to be used for its intended purpose and operated in accordance with the manufacturer's instructions. Directive 2014/53/EU requires manufacturers to provide radio equipment users with appropriate information to enable them to operate the radio equipment as intended and in accordance with the provisions of said Directive. This information shall also include appropriate instructions on cabling and antenna types to be used in conjunction with the radio equipment.

This interface specification replaces SSB FS 010, March 2015 edition, notified under No 2015/0264/D.

## 4 Documents

The following cited documents are necessary for the application of this document. For dated references, only the referenced edition of the document shall apply. For undated references, the most recent edition of the referenced document (including any amendments) shall apply.

Presumption of conformity may only be based on versions of harmonised European standards that are included in the current list of harmonised standards within the framework of Directive 2014/53/EU and have been published by the European Commission in the Official Journal of the EU.

- Frequency plan in accordance with the TKG (Telecommunications Act) on the distribution of the frequency band from 0 kHz to 3000 GHz among spectrum usages and on the definitions for such use published by the Federal Network Agency
- Administrative provision for the allocation of frequencies for GNSS repeaters (VVGNSSRp) published by the Federal Network Agency
- Radio Regulations<sup>1</sup> (VO Funk), International Telecommunication Union (ITU), Geneva (Règlement des radiocommunications, Union internationale des télécommunications (UIT), Geneva)

The following standard is no longer published in the current list of harmonised standards and therefore cannot be used for the declaration of conformity:

- EN 302 645  
Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices; Global Navigation Satellite Systems (GNSS) Repeaters; **Harmonised EN** covering the essential requirements of article 3.2 of the R&TTE Directive
- ECC/REC/(10)02  
A framework for authorisation regime of Global Navigation Satellite System (GNSS) repeaters
- ECC Report 129  
Technical and operational provisions required for the use of GNSS repeaters
- ECC Report 145  
Regulatory Framework for Global Navigation satellite system (GNSS) repeaters

---

<sup>1</sup> The Radio Regulations are available in Arabic, Chinese, English, French, Russian and Spanish. In all cases of dispute or doubt, the French text shall prevail.

## 5 Technical interface requirements

This SSB includes the technical interface requirements for GNSS repeaters.

Table 1: GNSS repeaters				
	No.	Parameter <i>(Parameter)</i>	Beschreibung <i>(Description)</i>	Bemerkung <i>(Comments)</i>
Normative part	1	Funkdienst <i>(Radiocommunication Service)</i>	SATELLITE-BASED RADIONAVIGATION SERVICE	
	2	Verwendungszweck/Anwendung <i>(Application)</i>	Fixed radio transmission systems for the unaltered transmission of GNSS signals within buildings	GNSS repeaters
	3	Frequenzbereich <i>(Frequency band)</i>	1 164 MHz – 1 215 MHz 1 215 MHz – 1 300 MHz 1 559 MHz – 1 610 MHz	
	4	Kanalbelegung <i>(Channelling)</i>		
	5	Modulation/belegte Bandbreite <i>(Modulation/Occupied bandwidth)</i>		
	6	Richtung/Abstand <i>(Direction/Separation)</i>		
	7	Sendeleistung/Leistungsdichte <i>(Transmit power/Power density)</i>	Maximum allowed radiated power (EIRP): 20pW (-77 dBm)	The specific value is stipulated with the frequency allocation.
	8	Kanalzugangs- und Belegungsregeln <i>(Channel access and occupation rules)</i>		
	9	Genehmigungsverfahren <i>(Authorisation regime)</i>	Individual allocation	VVGNSSRp, Part B, paragraph 2.1
	10	Wesentliche Zusatzanforderungen <i>(Additional essential requirements)</i>	Special conditions for the use of GNSS repeaters within defined protection zones in accordance with VVGNSSRp, Part B, paragraph 2.3.1	
	11	Frequenzplanungsannahmen <i>(Frequency planning assumptions)</i>		
Informative part	12	Vorgesehene Änderungen <i>(Planning changes)</i>		
	13	Referenzen <i>(References)</i>	EN 302 645, ECC/REC/(10)02, ECC Report 129, ECC Report 145	
	14	Notifizierungsnummer <i>(Notification number)</i>		
	15	Anmerkungen <i>(Remarks)</i>	GNSS repeaters are not considered radio stations of the satellite-based radionavigation service within the meaning of the Radio Regulations and the German frequency plan.	VVGNSSRp, Part A, paragraph 2