



Bundesnetzagentur

Federal Network Agency for Electricity,
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SSB FE OE 047

Interface specification for Radio relay systems in the frequency range 64 - 66 GHz (point-to-point)

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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).

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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 into German law by the Act on the Making Available on the Market of Radio Equipment (Radio Equipment Act – FuAG) of 27 June 2017 (Federal Law Gazette I No. 42, p. 1947), as last amended by Article 1 of the Act of 14 May 2024 (Federal Law Gazette I No. 148).

Pursuant to Section 33(1) of the Radio Equipment Act, the Federal Network Agency provides specific and appropriate descriptions of radio interfaces for radio equipment operated in frequency bands whose terms of use are not harmonized across the European Community.

This Interface Specification (ISS) contains the information necessary for the manufacturer to perform the respective tests with regard to the fundamental requirements applicable to the respective radio equipment pursuant to Section 4, paragraph 2 and, where applicable, paragraph 3 of the Radio Equipment Act (FuAG), at their own discretion.

Radio equipment must also be designed to comply with further fundamental requirements pursuant to Section 4, paragraph 1, numbers 1 and 2 of the Radio Equipment Act (FuAG).

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 16 January 2026 by Article 12 of the Act of 09 January 2026 (BGBl. 2026 I No 7), remains unaffected.

The Ordinance on the means of providing proof as regards limiting exposure to electromagnetic fields (BEMFV) of 20 August 2002 (BGBl. I No 60, p. 3366), last amended on 4 July 2017 by Article 3(3) of the Act of 27 June 2017 (BGBl. I No 42, p. 1947), must be complied with.

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 Internal Market Clause

Goods lawfully placed on the market in another Member State of the European Union or in Turkey, or originating in an EFTA State that is a party to the Agreement on the European Economic Area and lawfully placed on the market there, are deemed to comply 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 placed on the market in another Member State from 19 April 2020.

3 Scope of application

This interface specification describes the essential requirements in relation to FuAG § 4(2) for radio relay systems for point-to-point (P-P) radio in the frequency range 64-66 GHz.

Radio equipment within the meaning of this SSB should be used for its intended purpose and operated in accordance with the manufacturer's instructions. Directive 2014/53/EU requires manufacturers to provide users of radio equipment with adequate information so that they can operate the radio equipment as intended and in compliance with the provisions of the Directive. This information shall also include suitable instructions on cabling and antenna types to be used in conjunction with the radio equipment.

4 Documents

The following referenced documents are necessary for the application of this document. For dated references, only the referenced edition applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Presumption of conformity may be based solely 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 Telecommunications Act (TKG) 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 Frequency Allocations in the Fixed Radio Service for Radio Relay Applications (VV RiFu)
Published by the Federal Network Agency
- General allocation of frequencies for public use for radio relay equipment in the frequency range of 57-71 GHz; Official Journal No 04/2025; Order No 14/2025
- General allocation of frequencies for use by short-range devices (SRD); Official Journal 24/2019 Order No 133/2019; Official Journal 02/2020 Order No 12/2020
- Radio Regulations¹ (VO Funk),
International Telecommunication Union (ITU), Geneva
(Règlement des radiocommunications, Union internationale des télécommunications (UIT), Geneva)
- ITU-R F.1497
Radio-frequency channel arrangements for fixed wireless systems operating in the range 55.78-66 GHz
- (EU Decision 2019/1345
COMMISSION IMPLEMENTING DECISION (EU) 2019/1345 of 2 August 2019, amending Decision 2006/771/EC updating harmonised technical conditions in the area of radio spectrum use for short-range devices
- CEPT/ERC/REC 70-03
Relating to the use of short-range devices (SRD)
- CEPT ECC Report 114
Compatibility studies between multiple GIGABIT wireless systems in frequency range 57-66 GHz and other services and systems (except ITS in 63-64 GHz)

¹ 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.

- CEPT ERC Report 045
Sharing between the Fixed and Earth Exploration Satellite (passive) Services in the range 50.2-66 GHz
- EN 302 217-1
Fixed radio systems; Characteristics and requirements for point-to-point equipment and antennas; Part 1: Overview, common characteristics and requirements not related to access to radio spectrum
- EN 302 217-2
Fixed radio systems; Characteristics and requirements for point-to-point equipment and antennas; Part 2: Digital systems operating in frequency bands from 1 GHz to 86 GHz; Harmonised standard for access to radio spectrum
- EN 302 217-4
Fixed radio systems; Characteristics and requirements for point-to-point equipment and antennas; Part 4: Antennas

5 Technical interface requirements

This SSB includes the technical interface requirements for radio equipment for point-to-point (P-P) radio relay applications in the frequency range of 64-66 GHz.

Table 1: Radio relay systems in the frequency range 64-66 GHz

	No.	Parameter	Beschreibung (Description)	Bemerkung (Comments)
Normative Part	1	Funkdienst (Radiocommunication Service)	FIXED RADIO SERVICES	
	2	Verwendungszweck/Anwendung (Application)	Radio relay/digital radio relay systems	Point-to-point
	3	Frequenzbereich (Frequency band)	64 000 – 66 000 GHz	
	4	Kanalbelegung (Channelling)	Multiples from 50 MHz to n =39 or Multiples from 30 MHz to n =66	CEPT/ERC/REC 70-03 ITU-R F.1497-2
	5	Modulation/belegte Bandbreite (Modulation/Occupied bandwidth)	TDD and FDD	
	6	Richtung/Abstand (Direction/Separation)		
	7	Sendeleistung/Leistungsdichte (Transmit power/Power density)	max. 316 W (+ 55dBm) EIRP	
	8	Kanalzugangs- und Belegungs- vorschriften (Channel access and occupation rules)		
	9	Genehmigungsverfahren (Authorisation regime)	General allocation	Order No 14/2025 Order No 12/2020 Order No 133/2019
	10	Wesentliche Zusatzanforderungen (Additional essential requirements)	Minimum antenna gain: 30 dBi	
	11	Frequenzplanungsannahmen (Frequency planning assumptions)	ATPC is recommended	
Informative part	12	Vorgesehene Änderungen (Planned changes)		
	13	Referenzen (References)	EN 302 217-1, EN 302 217-2, EN 302 217-4, ERC/REC 70-03, CEPT ECC Report 114, CEPT ERC Report 045, ITU-R F.1497	
	14	Notifizierungsnummer (Notification number)		
	15	Anmerkungen (Remarks)		