

Recommendation ITU-R F.1763-2

(02/2026)

F Series: Fixed service

**Radio interface standards for
broadband wireless access systems in
the fixed service operating below
66 GHz**



Foreword

The role of the Radiocommunication Sector is to ensure the rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services, including satellite services, and carry out studies without limit of frequency range on the basis of which Recommendations are adopted.

The regulatory and policy functions of the Radiocommunication Sector are performed by World and Regional Radiocommunication Conferences and Radiocommunication Assemblies supported by Study Groups.

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Series of ITU-R Recommendations

(Also available online at <https://www.itu.int/publ/R-REC/en>)

Series	Title
BO	Satellite delivery
BR	Recording for production, archival and play-out; film for television
BS	Broadcasting service (sound)
BT	Broadcasting service (television)
F	Fixed service
M	Mobile, radiodetermination, amateur and related satellite services
P	Radio-wave propagation
RA	Radio astronomy
RS	Remote sensing systems
S	Fixed-satellite service
SA	Space applications and meteorology
SF	Frequency sharing and coordination between fixed-satellite and fixed service systems
SM	Spectrum management
SNG	Satellite news gathering
TF	Time signals and frequency standards emissions
V	Vocabulary and related subjects

Note: This ITU-R Recommendation was approved in English under the procedure detailed in Resolution ITU-R 1.

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RECOMMENDATION ITU-R F.1763-2

Radio interface standards for broadband wireless access systems in the fixed service operating below 66 GHz

Question ITU-R 215-4/5

(2006-2014-2026)

Scope

This Recommendation identifies specific radio interface standards that may be utilized for broadband wireless access (BWA)¹ systems in the fixed service, addressing profiles for the recommended interoperability standards. It provides references to the standards for interoperability between BWA systems.

The interoperability standards referenced in this Recommendation include the following specifications:

- system profiles;
- physical layer parameters, i.e. channelization, modulation scheme, data rates;
- medium access control (MAC) layer messages and header fields.

This Recommendation is not intended to deal with the identification of suitable frequency bands for BWA systems, nor any regulatory issues.

Keywords

Fixed broadband wireless access, broadband wireless access, BWA, radio interface standards

The ITU Radiocommunication Assembly,

considering

- a)* that it is useful to identify standards for broadband wireless access (BWA) systems in the fixed service for international use;
- b)* that the standards for BWA systems in the fixed services are developed by standardization development bodies with broad international participation;
- c)* that standards for systems operating in the mobile service can be utilized to provide fixed BWA;
- d)* that standards for BWA support a wide range of fixed and nomadic broadband applications, such as voice and videoconferencing, in urban, suburban, and rural areas,

recognizing

- a)* that Recommendation ITU-R F.1401 provides considerations for the identification of possible frequency bands for fixed wireless access and related sharing studies;
- b)* that the Handbook on Fixed Wireless Access (Volume 1 of the Land Mobile (including Wireless Access)), also includes a number of proprietary solutions for fixed BWA;
- c)* that Recommendation ITU-R F.1499 specifies radio transmission systems for fixed broadband wireless access (BWA) based on cable modem standards;

¹ “Wireless access” and “BWA” are defined in Recommendation ITU-R F.1399, which also provides definitions of the terms “fixed”, “mobile” and “nomadic” wireless access.

- d)* that Recommendation ITU-R M.1450 recommends broadband radio local area networks standards;
- e)* that Recommendation ITU-R M.1457 recommends IMT-2000 terrestrial radio interface standards in the frequency bands identified for IMT in the RR;
- f)* that Recommendation ITU-R M.1801 recommends radio interface standards for BWA systems, including mobile and nomadic applications, in the mobile service, some of which may also be used to provide fixed BWA;
- g)* that Recommendation ITU-R M.2003 recommends multiple gigabit wireless systems in frequencies around 60 GHz, some of which may also be used to provide fixed BWA;
- h)* that Recommendation ITU-R M.2012 recommends detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-Advanced (IMT-Advanced) in the frequency bands identified for IMT in the RR;
- i)* that Recommendation ITU-R M.2150 recommends detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-2020 (IMT-2020) in the frequency bands identified for IMT in the RR;
- j)* that Resolution ITU-R 73 *resolves to invite the ITU-R* to conduct studies on the use of IMT technologies for fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis,

recommends

that the radio interface standards in *recognizing d), e), f), g), h) and i)* that are able to support fixed BWA should be considered for use.

References

Recommendation ITU-R F.1399 – Vocabulary of terms for wireless access.
