

- Unofficial translation -

Notification of the National Telecommunications Commission

On Technical Standards for Telecommunication Equipment

Re: Broadband Wireless Access (Radio Local Area Network - RLAN)

Radiocommunication Equipment

B.E. 2551 (2008)

Whereas the National Telecommunications Commission has the policy of setting technical standards for telecommunication equipment which is widely used, in order to keep pace with the current technological circumstances and comply with international standards, and since the National Telecommunications Commission has issued the Notification regarding the Use of 5 GHz Frequency Band for Short Range Devices, it is deemed expedient to revise the technical standards for broadband wireless access (RLAN) radiocommunication equipment in the 5 GHz frequency band to be in compliance with the said Notification;

Pursuant to Section 51 (6) (21) and Section 78 Paragraph One of the Act on the Organization to Assign Radio Frequency and to Regulate the Broadcasting and Telecommunication Services B.E. 2543 (2000), which contains certain provisions regarding the restriction of the rights and freedom of an individual as permitted to be done under the law by Article 29, together with Articles 35, 36, 43, 45, 46, 47, 61 and 64 of the Constitution of the Kingdom of Thailand; and Section 32 of the Telecommunications Business Act B.E. 2544 (2001), which contains certain provisions regarding the restriction of the rights and freedom of an individual as permitted to be done under the law by Article 29, together with Articles 35, 36, 41, 43, and 45 of the Constitution of the Kingdom of Thailand, as well as Section 29(4) of the Radiocommunications Act B.E. 2498 (1955), which contains certain provisions regarding the restriction of the rights and freedom of an individual as permitted to be done under the law by Article 29, together with Articles 35, 36, 41, 43, 45, 47, and 61 of the Constitution of the Kingdom of Thailand; the National Telecommunications Commission hereby repeals the Notification on Technical Standards for Telecommunication Equipment regarding Broadband Wireless Access (Radio Local Area Network - RLAN) Radiocommunication Equipment dated 28 December B.E. 2549 (2006) and issues the new Notification on Technical Standards for Telecommunication Equipment regarding Broadband Wireless

Access (Radio Local Area Network - RLAN) Radiocommunication Equipment, as detailed in the NTC TS 1012-2551 appended hereto.

This Notification shall come into force as from the day following the date of its publication in the Government Gazette.

Announced on the 31st day of January B.E. 2551 (2008)

General Choochart Promphrasid

Chairman of the National Telecommunications Commission

This English version is prepared by International Organizations Bureau with the sole purpose of facilitating the comprehension of foreign participants in the telecommunication rules and regulations and shall not in any event be construed or interpreted as having effect in substitution for or supplementary to the Thai version thereof.

Please note that the translation has not been subjected to an official review by the Office of the National Telecommunications Commission. The Office of NTC, accordingly, cannot undertake any responsibility for its accuracy, nor be held liable for any loss or damages arising out of or in connection with its use.



Technical Standards for Telecommunication Equipment

NTC TS 1012 — 2551

Broadband Wireless Access (Radio Local Area Network - RLAN)
Radiocommunication Equipment

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Technical Standards for Telecommunication Equipment
NTC TS 1012-2551
Re: Broadband Wireless Access (Radio Local Area Network - RLAN)
Radiocommunication Equipment

Table of Contents

1. Scope	1
2. Technical Requirements	1
2.1 Radio frequency requirements	1
2.1.1 Output power	1
2.1.2 Requirements for radiocommunication equipment operating in the 2.400-2.500 GHz frequency band	2
2.1.3 Requirements for radiocommunication equipment operating in the 5.150-5.350 GHz frequency band	3
2.1.4 Requirements for radiocommunication equipment operating in the 5.470-5.725 GHz frequency band	4
2.1.5 Requirements for radiocommunication equipment operating in the 5.725-5.850 GHz frequency band	5
2.2 Electrical safety requirements	5

Technical Standards for Telecommunication Equipment

NTC TS 1012-2551

Re: Broadband Wireless Access (Radio Local Area Network - RLAN)

Radiocommunication Equipment

1. Scope

This technical standard specifies the minimum technical characteristics for broadband wireless access (radio local area network - RLAN) radiocommunication equipment, including base unit/access point and mobile/portable unit, using direct sequence/frequency hopping spread spectrum modulation or other digital modulation techniques and operating within the following frequency bands:

Frequency bands
2.400-2.500 GHz
5.150-5.350 GHz
5.470-5.725 GHz
5.725-5.850 GHz

To demonstrate the conformity with this technical standard, the equipment shall apply the procedures of supplier's declaration of conformity as prescribed in Chapter 4 of the Notification of the National Telecommunications Commission regarding Conformity Assessment of Telecommunication Equipment.

2. Technical Requirements

2.1 Radio frequency requirements

The radio frequency requirements for broadband wireless access (RLAN) radiocommunication equipment shall be as follows:

2.1.1 Output power

The output power of such equipment shall not exceed the values given in the table below:

Frequency band (GHz)	e.i.r.p. (watts)	e.i.r.p. density
2.400-2.500	0.1	-
5.150-5.350	0.2	10 mW/MHz (0.25 mW/25 kHz)
5.470-5.725	1.0	50 mW/MHz
5.725-5.850	1.0	-

Note Output power means the e.i.r.p. during the transmission burst, which corresponds to the highest power, if power control is implemented.

Technical Standards for Telecommunication Equipment

NTC TS 1012-2551

Re: Broadband Wireless Access (Radio Local Area Network - RLAN)

Radiocommunication Equipment

2.1.2 Requirements for radiocommunication equipment operating in the 2.400 - 2.500 GHz frequency band

The radiocommunication equipment operating in the 2.400 - 2.500 GHz frequency band shall conform to any of the following standards:

- | | |
|--------------------------|--|
| 2.1.2.1 EN 300 328-2 : | Electromagnetic compatibility and Radio Spectrum Matters (ERM);
Wideband Transmission systems; Data transmission equipment operating
in the 2.4 GHz ISM band and using spread spectrum modulation
techniques; Part 2: Harmonized EN covering essential requirements under
article 3.2 of R&TTE Directive |
| 2.1.2.2 FCC Part 15.247: | Code of Federal Regulations (USA); Title 47 Telecommunication; Chapter 1
Federal Communications Commission; Part 15 Radio Frequency Devices;
Subpart C - Intentional Radiators; §15.247 Operation within the bands 902-
928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz |

Conditions for use of radiocommunication equipment

Users shall comply with the conditions specified in the Notification of the National Telecommunications Commission regarding Unlicensed Radiocommunication Equipment and Stations, and any other additional conditions as may be prescribed by the National Telecommunications Commission.

Technical Standards for Telecommunication Equipment

NTC TS 1012-2551

Re: Broadband Wireless Access (Radio Local Area Network - RLAN)

Radiocommunication Equipment

2.1.3 Requirements for radiocommunication equipment operating in the 5.150-5.350 GHz frequency band

The radiocommunication equipment operating in the 5.150 - 5.350 GHz frequency band shall conform to any of the following standards:

- 2.1.3.1 ETSI EN 301 893: Broadband Radio Access Network (BRAN); 5 GHz high performance RLAN; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive
- 2.1.3.2 FCC Part 15.407: Code of Federal Regulations (USA); Title 47
Telecommunication; Chapter 1 Federal Communications Commission;
Part 15 Radio Frequency Devices; Subpart E - Unlicensed National
Information Infrastructure Devices; §15.407 General technical requirements

Conditions for use of radiocommunication equipment

- (1) Use of equipment in the 5.150-5.350 GHz frequency bands shall be restricted for indoor applications only.
- (2) Users shall strictly comply with the conditions specified in Resolution 229 (WRC-03) of the Radio Regulations
 - Use of the bands 5.150-5.250 MHz, 5.250-5.350 MHz, and 5.470-5.725 MHz by the mobile service for the implementation of wireless access systems including radio local area networks, and the Recommendation ITU-R M. 1652 (Annex 1): Dynamic frequency selection (DFS) in wireless access systems including radio local area networks for the purpose of protecting the radiocommunication service in the 5 GHz band.
- (3) Users shall comply with the conditions specified in the Notification of the National Telecommunications Commission regarding the Use of 5 GHz Frequency Band for Short Range Devices, and any other additional conditions as may be prescribed by the National Telecommunications Commission.

Technical Standards for Telecommunication Equipment
NTC TS 1012-2551
Re: Broadband Wireless Access (Radio Local Area Network - RLAN)
Radiocommunication Equipment

2.1.4 Requirements for radiocommunication equipment operating in the 5.470-5.725 GHz frequency band

The radiocommunication equipment operating in the 5.470 - 5.725 GHz frequency band shall conform to any of the following standards:

- 2.1.4.1 ETSI EN 301 893: Broadband Radio Access Network (BRAN); 5 GHz high performance RLAN; Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive
- 2.1.4.2 FCC Part 15.407: Code of Federal Regulations (USA); Title 47
Telecommunication; Chapter 1 Federal Communications Commission;
Part 15 Radio Frequency Devices; Subpart E - Unlicensed National
Information Infrastructure Devices; §15.407 General technical requirements

Conditions for use of radiocommunication equipment

- (1) Users shall strictly comply with the conditions specified in Resolution 229 (WRC-03) of the Radio Regulations
 - Use of the bands 5.150-5.250 MHz, 5.250-5.350 MHz, and 5.470-5.725 MHz by the mobile service for the implementation of wireless access systems including radio local area networks, and the Recommendation ITU-R M. 1652 (Annex 1): Dynamic frequency selection (DFS) in wireless access systems including radio local area networks for the purpose of protecting the radiocommunication service in the 5 GHz band.
- (2) Users shall comply with the conditions specified in the Notification of the National Telecommunications Commission regarding the Use of 5 GHz Frequency Band for Short Range Devices, and any other additional conditions as may be prescribed by the National Telecommunications Commission.

Technical Standards for Telecommunication Equipment

NTC TS 1012-2551

Re: Broadband Wireless Access (Radio Local Area Network - RLAN)

Radiocommunication Equipment

2.1.5 Requirements for radiocommunication equipment operating in the 5.725-5.850 GHz frequency band

The radiocommunication equipment operating in the 5.725 - 5.850 GHz frequency band shall conform to any of the following standards:

- 2.1.5.1 FCC Part 15.247: Code of Federal Regulations (USA); Title 47
Telecommunication; Chapter 1 Federal Communications Commission;
Part 15 Radio Frequency Devices; Subpart C - Intentional Radiators;
§15.247 Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and
5725-5850 MHz
- 2.1.5.2 FCC Part 15.407: Code of Federal Regulations (USA); Title 47
Telecommunication; Chapter 1 Federal Communications Commission;
Part 15 Radio Frequency Devices; Subpart E - Unlicensed National
Information Infrastructure Devices; §15.407 General technical requirements

Conditions for use of radiocommunication equipment

Users shall comply with the conditions provided in the Notification of the National Telecommunications Commission regarding the Use of 5 GHz Frequency Band for Short Range Devices, and any other additional conditions as may be prescribed by the National Telecommunications Commission.

2.2 Electrical safety requirements

The electrical safety requirements for radiocommunication equipment in the broadband wireless access system using the radio local area network (RLAN) shall conform to any of the following standards:

- 2.2.1 IEC 60950 - 1 : Information Technology Equipment – Safety - Part 1: General Requirements
 - 2.2.2 TISI 1561 - 2548 : Information Technology Equipment – Safety: General Requirements
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