



National Information & Communications Technology Authority

TYPE APPROVAL STANDARDS FOR WIRELESS LOCAL AREA NETWORK (WLAN) EQUIPMENT

For use in the Frequency Bands 2.4 GHz and 5.8 GHz

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1 INTRODUCTION

- 1.1 National Information and Communications Technology Authority (NICTA) has developed this mandatory Type Approval technical instrument for Wireless Local Area Network (WLAN) Equipment under Section 30 of the NICT Radio Spectrum Regulation, 2010. This standards/specification shall be referred to as Document Ref: XXX.X

2 SCOPE

- 2.1 The purpose of this standard is to define the minimum technical parameters of Wireless Local Area Network (WLAN) equipment for indoor and outdoor use in the frequency bands of 2.4 GHz and 5.8 GHz.
- 2.2 It is intended for all those who import for sale and or use WLAN equipment in PNG to comply with the technical requirements outlined in this instrument.

3 LICENSING

- 3.1 WLAN equipment are Low Interference Potential Devices (LIPD) and are classified under Radiocommunication Class Licence and therefore exempted from any licensing fees.

4 EXAMINATION AND ACCEPTANCE

- 4.1 It is mandatory for the supplier or dealer of WLAN equipment to declare conformity of the equipment to NICTA by submitting a completed Type Approval Application Form (TA100) together with a Declaration of Conformity (DoC) Form for registration prior to the equipment being sold and or used. Please contact NICTA Type Approvals section (email: typeapprovals@nicta.gov.pg).
- 4.2 For the purpose of examination NICTA will require test reports and proof of certification, for example authentic labels or stickers of WLAN equipment from internationally recognized standards bodies and/ or test houses.
- 4.3 NICTA reserves the right to request the supplier and/ or dealer to submit sample WLAN equipment for testing, together with copies of the user manual and technical specifications.
- 4.4 A compulsory testing fee of K150.00/ apparatus/hour is applicable.
- 4.5 Acceptance will be granted to equipment that NICTA determines to be compliant with national and international technical standards.

4.6 For detailed Type Approval procedures please consult Type Approval Guidelines for ICT equipment, Document No. xxxxx

5 FREQUENCY BAND AND EIRP

5.1 In harmonizing with international technical standards NICTA allows the use of WLAN equipment in one or both of the following frequency bands with the accompanying output powers:-

Table 1: WLAN equipment usage at 2,4 and 5.8 GHz

Frequency Band	Maximum Output Power E.I.R.P
2.400 – 2.4835 GHz	Bluetooth: ≤100 mW WiFi indoor: ≤200 mW WiFi outdoor: ≤4000 mW Generally, WLAN: 10mW to 4W
5.725 – 5.850 GHz	WiFi outdoor : ≤4000 mW Generally, WLAN: 10mW to 4W

5.2 Use of the allowable frequencies is strictly on a secondary basis and as such primary services will be given priority when addressing matters of interference.

6 COMPLIANCE WITH TECHNICAL REQUIREMENTS

6.1 The WLAN equipment shall comply with the requirements as outlined in one or more of the following Test References:

Table 1 - Test References

ETSI EN 300 328	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; Harmonised EN covering essential requirements under article 3.2 of the R&TTE Directives
ETSI EN 301 893	Broadband Radio Access Network (BRAN); 5 GHz high performance RLAN; Harmonised EN covering essential requirements of article 3.2 of the R&TTE Directive

FCC Part 15	<u>Radio Frequency Devices</u>
Subpart C -	<u>Intentional Radiators</u>
15.209	Radiated emission limits, general requirements
15.247	Operation within the bands 902 – 928 MHz, 2400 – 2483.5 MHz, 5725 – 5850 MHz
Subpart E -	<u>Unlicensed National Information Infrastructure Devices</u>
15.407	General technical requirements

6.2 The test report shall show compliance with the aforementioned standards and not be limited to the following minimum requirements:

- (a) A list of test and measurement equipment and accessories used in the test configuration of each test should be attached.
- (b) Information and credentials of the test laboratory where the tests were conducted should be attached also.

6.3 NICTA shall prescribe from time to time any additional requirements it deems necessary for compliance.

7 EQUIPMENT LABELING AND IDENTIFICATION

The WLAN equipment shall be mark with the following:

- (a) WiFi CERTIFIED logo from any recognized international body on the product packaging; and
- (b) the supplier/manufacturer’s name or identification mark; and
- (c) the supplier/manufacturer’s model or type reference and serial number; and
- (d) should bear international recognized labels acceptable to NICTA such as RCM, CE, FCC, IC,

The markings shall be legible, indelible and readily visible.

For more information on Equipment Labeling and Identification Requirements, you should acquire the regulatory instrument “*Type Approval Guidelines for ICT Apparatus in Papua New Guinea (PNG)*” which has a subsection on Labeling and Identification.

8 CONNECTIVITY AND INTEROPERABILITY

The WLAN equipment shall strictly comply with the minimum requirement specified by IEEE 802.11, WiFi Alliance or any certified WiFi body, ITU, ETSI and other international recognized standard bodies.

8.1 Connectivity

The WLAN equipment shall have the ability to link with multiple devices from different WLAN vendors, dial-up connections, wired networks and other emerging technology.

8.2 Interoperability

The WLAN equipment shall have the ability to successfully operate with products from different equipment vendors in a wide variety of configurations. The WLAN equipment shall have satisfactory performance level in typical network configurations and have to support both established and emerging applications

9 COMPLAINTS

Use of unlicensed WLAN equipment may cause harmful interference to ISM applications and licensed radiocommunication services. Should this situation arise an individual or group who deploy an ISM application or operate a licensed radiocommunication service, when convinced they are receiving harmful interference from WLAN equipment; may in writing complain to NICTA.

10 INVESTIGATION AND DETERMINATIONS

10.1 NICTA shall investigate the matter in the complaint and make a determination based on its findings and consistent with existing regulations.

10.2 NICTA may request information relating to equipment setup and configurations deemed necessary for its investigations from the complainant.

10.3 Communications equipment operating in ISM bands is not immune to any interference generated by ISM equipment, and users have no regulatory protection from ISM device operation.

11 REVISIONS

11.1 NICTA shall review this instrument from time to time in keeping with government policies and with the trends in the telecommunications industry.

11.2 NICTA shall inform its licensees and other concerned parties of the revisions in a reasonable manner.

12 CONTACT DETAILS

Where individuals or groups have comments regarding the contents of this document and or complaints regarding the use of this technology may forward the same in writing to the following address;

The Executive Director
Engineering and Resource Planning Department
P.O. Box 8227
BOROKO, NCD, Papua New Guinea.
Tel: (675) 325 8633
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