

RLAN REGULATORY FRAMEWORK-2024

v-1.0

Strategy & Development Division
PAKISTAN TELECOMMUNICATION AUTHORITY
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[Consultation Paper – RLAN Regulatory Framework-2024](#)

This Consultation paper (the “Paper”) is to seek comments/ input. The stakeholders are requested to provide requisite comments, preferably through email, latest by **July 21, 2024**.

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1. Introduction

- 1.1. The Pakistan Telecommunication Authority (the “**Authority**”) under the Pakistan Telecommunication (Re-organization) Act, 1996 (the “**Act**”) is mandated to regulate the establishment, operations and maintenance of telecommunications systems and the provision of telecommunication services in Pakistan.
- 1.2. Furthermore, clause 3.2 of Rolling Spectrum Strategy 2020-2023 (**RSS**) duly approved by Federal Government provides that the Authority / Frequency Allocation Board (**FAB**) will devise framework for unlicensed spectrum including Ultra-Wide Band (UWB), **Wi-Fi**, Short Range Devices (SRD) and Internet of Things (IoTs). For ready reference, clause 3.2 of the said framework is reproduced below:

3.2. **Recommended Action:** “PTA/FAB to devise Framework for unlicensed spectrum including Ultra Wide Band (UWB), Wi-Fi, Short Range Devices (SRD) and IoTs.”

- 1.3. Having mandate assigned under the RSS, the Authority in consultation with FAB has devised a framework for Radio Local Area Network (**RLAN**) / Wireless Local Area Network (**WLAN**)/ Wireless Area Services (**WAS**), with the following objectives:
 - a. Support the introduction of new services and spectrum utilization for the benefit of the country, including promotion of emerging radio technologies;
 - b. Provide regulatory guidelines to the industry, for the general use of frequency bands for RLAN including Wi-Fi technologies etc.;
 - c. To ensure that RLAN equipment will operate in these bands on secondary basis and shall not cause harmful interference to primary services and applications running in the said bands;
 - d. Enhancing spectrum utilization, including the support of shared spectrum bands under appropriate technical conditions of use to ensure coexistence of services.
- 1.4. For the applicability of this framework, the terms RLAN, WLAN and WAS can be used interchangeably.
- 1.5. Where, RLAN are communication networks that are used to provide wireless communications in a limited area, denoted Wireless/ Radio Local Area Networks. Such networks are built based on international standards, including but not limited to IEEE 802.11x, HiperLAN etc., and provide users the ability to remain connected whilst moving within a limited area. RLAN technologies are capable of operating in RLAN bands on a license-exempt basis and are also designed to enable sharing and coexistence with other services. RLAN technologies can also be used to establish communications between fixed locations (i.e. fixed links), or to control or monitor devices remotely. However, the scope of this document does not cover fixed links and is not for backhaul purposes (P2P, P2MP).

2. Definitions

The words and expressions defined in the Telecommunications Act and the by law to the Act shall have the same meaning when used in this regulatory document. The following words and expressions shall have the meaning assigned to them below:

- a. **Indoor:** Indoor means a single set of premises in single occupation within a single unbroken boundary or a vehicle, vessel, aircraft or hovercraft.
- b. **Indoor Access Point:** An access point that can only be deployed indoors, is supplied power from a wired connection, has an integrated antenna, is not battery powered, and does not have a weatherized enclosure.
- c. **Non-Interference Basis (NIB)** means a condition of use relative to other specified uses that affords no protection from harmful interference from the other specified users, and prohibits causing harmful interference to the other specified users
- d. **Wi-Fi:** Wireless Fidelity. Technology corresponding to the IEEE802.11x standards for low power, indoor wireless data communication

3. Unlicensed Frequency Band for use of RLAN

- 3.1. RLAN Frequency Bands include 2.4 GHz, 5 GHz, 6 GHz frequency bands with ranges as specified in the Table 1 below. The use of the said frequency bands is only for RLAN Access Services and not allowed for the purpose of backhaul use.
- 3.2. Equipment operating on a license-exempt basis shall operate on non-interference and non-protection basis. The use should be compatible with the co-existence requirements with other spectrum users.

4. Eligible Applicant

- 4.1. The use of the RLAN equipment/terminal in the RLAN Frequency Bands, is permitted to any person, as long as the equipment/terminal adheres to the conditions set out in Table 1 of this document.
- 4.2. The use of RLAN equipment for commercial services (where applicable), is allowed only for telecommunications service providers who holds an appropriate service provisioning license from the Authority.

5. RLAN Frequency Bands and Applied Technical Conditions

Table 1: Applied Technical Conditions for RLAN Frequency Bands

S.No	Frequency Band	Allowed Power	Usage	Power Spectral Density
1	2.40-2.50 GHz	≤ 30 dBm EIRP	-	-
2	5.725-5.875 GHz	≤ 30 dBm EIRP	-	-

3	5.925- 6.425 GHz	23 dBm EIRP	Indoor use Only	Power Spectral Density of RLAN operating under this provision shall not exceed 10 dBm/ MHz.
		14 dBm EIRP	Outdoor use	Power Spectral Density of RLAN operating under this provision shall: i. Shall not exceed 1 dBm/ MHz. ii. Shall not exceed 10 dBm/ MHz for narrowband operations on BWs below 20 MHz

6. Type Approval of Terminal Equipment:

- 6.1. All terminal equipment having technical capability / feature for using unlicensed radio frequency data services through RLAN shall require approval in accordance with the Type Approval Technical Standard Regulations, 2021 and any amendments made from time to time.

7. Spectrum Fees / charges

- 7.1. There will be no fee / charges for the use of unlicensed spectrum, used for the purpose of RLAN on commercial or non-commercial basis, within the scope of this framework.

8. Miscellaneous

- 8.1. The Authority shall review and update this framework as deemed appropriate, in order to respond to emerging trends, technologies, uses and future needs, etc.
- 8.2. The use of the RLAN/ RLAN Frequency Bands in Pakistan shall be on sharing basis, with other non-RLAN services and applications.
- 8.3. In case any interference is detected, affecting the existing primary user(s), the secondary user shall be obligated to immediately comply with the interference mitigation measures.

9. Acronyms

- dBm: decibel milliwatt
- EIRP: Effective Isotropic Radiated Power
- IAP: Indoor Access Point
- NIB: Non-Interference Basis
- WLAN: Wireless Local Area Network (or RLAN: Radio Local Area Network)
- Wi-Fi: Wireless Fidelity (technology for WLAN)
- WAS: Wireless Access Services