**PAKISTAN TELECOMMUNICATION AUTHORITY**

PTA Headquarters Building, F-5/1 Islamabad, Pakistan

 *(www.pta.gov.pk)*License No. **LPWAN** -XXX/<Year> (**Company name**) Dated:

In exercise of the powers conferred by section 5 of Pakistan Telecommunication (Reorganization) Act, 1996 (hereinafter called the “Act”), the Pakistan Telecommunication Authority (hereinafter called Authority), hereby, grants non-exclusive License to **<Name of Licensee>, <Address>, Pakistan.** (Hereinafter called the “Licensee”) to establish, maintain and operate IoT LPWAN network for provision of LPWAN Services in Pakistan on terms and conditions contained herein, the provisions of Act, PTA Regulatory Framework for Short Range Devices (SRD) & Terrestrial Internet of Things (IoT) Services & its future modifications, and the relevant Regulations which may be issued by PTA in the interest of proliferation of IoT based applications/services in Pakistan.

 For and on behalf the Authority,

For and on behalf of Authority,

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**< Name>**

**Director General (Licensing)**

For and on behalf of Licensee,

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 **<**Name of Licensee’s Representative**>**

**<Designation>**

 **<Name>**

 **Director General (Licensing)**

# Scope of License:

1. To establish LPWAN setup in Pakistan, through the frequency bands and power levels as specified in table 1 below. The Licensee shall use radio frequency on Secondary Basis i.e. the devices operating in these bands shall not cause interference to other authorized primary radio communication services in these frequency bands.

|  |  |  |
| --- | --- | --- |
| **Frequency Band** | **Maximum Output Power (EIRP)** | **Remarks** |
| 433.05-434.79 MHz | 1 Watt | **Protection of primary services operational in adjacent frequency bands shall be ensured.**  |
| 920-925 MHz | 1 Watt |

**Table1**

1. Licensee shall transport the backend traffic generated through LPWAN network, to the cloud/ internet, or to servers geographically separated from LPWAN Gateways, through a PTA licensed Local Access Provider.

# EFFECTIVE DATE AND TERM OF THE LICENSE

1. This License shall come into force on the Effective Date, “the effective date is the date of the signing of the License”, and shall be valid for Five (05) years.
2. If the Licensee wishes to renew the License at the expiry of the initial term, it shall submit to the Authority a written request to renew the License at least 6 months prior to the expiry of the initial term.
3. Within 6 months after the receipt of the Licensee's request, pursuant to section 2.2, the Authority may renew the License on such terms and conditions as are consistent with the policy of the Federal Government at that time, to come into effect at the conclusion of the initial term.

# Obligations of Licensee

1. Licensee must comply with obligations with regard to clearance of base station site(s) if installed by the Licensee. Moreover, the Licensee shall follow “Protection from Health-Related Effects of Radio Base Station Antennas Regulation 2008” and its amendment thereto, while installing and operating radio base station antennas.
2. Licensee shall not ask any protection from interference caused by the current or future primary/secondary users and be able to tolerate any interference caused by other radio-communication services, electrical or electronic equipment.
3. In case of interference to primary services in the overlapping or adjacent bands, the Licensee shall stop the use of frequency with immediate effect, on the direction of Authority.
4. Licensee shall cooperate with PTA and FAB in determining the cause of interference and resolution of same for protecting the primary user(s) through all technical means in order to ensure interference free co-existence.
5. Licensee shall comply with the PTA Directives on future changes in utilization of existing frequency bands for LPWAN services and the related technical specifications.
6. Licensee, upon demand of the Authority, must provide any required information.

3.7. The devices (Sensors, actuators, aggregators, appliances, etc.), used in the deployment of a network, shall comply with the International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields.

3.8 Licensee must adhere and comply with all PTA relevant Regulations, Decisions, Guidelines and the Directives issued from time to time.

3.9 In case of addition in the Gateways installed, the Licensee is under an obligation to seek approval from PTA before installation of new Gateways and pay the annual charges accordingly.

3.10 the Licensee will ensure provision of services to all the consumers without any discrimination to maintain healthy competition in the sector.

# COMPLIANCE WITH LAW

4.1 This License is subject to the terms and conditions contained herein, the Act, PTA Regulatory Framework for Short Range Devices (SRD) & Terrestrial Internet of Things (IoT) Services & its future modifications and the relevant Regulations which may be issued by PTA in the interest of proliferation of IoT based applications/services in Pakistan.

4.2 The Licensee shall at all times co-operate with the Authority and its authorized representatives in the exercise of the powers, functions and responsibilities assigned to the Authority under the Act.

# 5. FEES AND OTHER CHARGES

#### INITIAL LICENSE FEE

1. The applicant shall pay initial License fee of 100,000/- PKR to the Authority.
2. The first time payment to the PTA shall include the above mentioned initial License fee and the 5000/- PKR per Gateway planned to be installed initially by the applicant.

#### ANNUAL FEES

* + 1. The Licensee shall pay annual fee of 5,000/- PKR, per Gateway registered with the Authority.
		2. In case of expansion in the network of existing License, additional charges of Gateways as mentioned in 5.2.1 shall be applicable. In this case, it is obligatory on the Licensee to seek PTA approval as mentioned in Clause 3.9 above.

#### GENERAL CONDITIONS CONCERNING FEES

1. The Licensee shall pay annual License fee to the Authority within 30 days of the end of its fiscal year to which such fee relates.
2. In addition to any other remedies available to the Authority, late payment of fees shall incur an additional fee calculated at the rate of 2% per month on the outstanding amount, for each month or part thereof from the due date until paid.
3. All fees shall be paid by the Licensee by depositing in the designated accounts of the Authority or by any other mode prescribed by the Authority from time to time.

#### NATIONAL SECURITY

6.1. The Licensee shall comply with the national security and the requirements of Section 54 of the Act and any other national security requirements under any other Law/Regulation.

#### 7. TYPE APPROVAL OF TERMINAL EQUIPMENT

7.1. The Licensee shall not install or connect, or permit the installation or connection of any Terminal Equipment and the Gateways unless these devices are type approved by the Authority.

7.2. The Licensee shall not install or connect, or permit the installation or connection of, any Terminal Equipment and the Gateways or type of Terminal Equipment prohibited by the Authority.

# 8. TERMINATION AND AMENDMENT

8.1. The License shall remain in force until it is terminated by one of the following events:

1. Licensee's grave or continuous violations of the terms and conditions of this License, the provisions of the Act, PTA Regulatory Framework for Short Range Devices (SRD) & Terrestrial Internet of Things (IoT) Services & its future modifications and the relevant Regulations which may be issued by PTA.
2. PTA reserves the right to cancel/suspend the license in case if LPWAN network is reported to cause interference to primary users (in same or adjacent frequency bands) or exceeding allowed spectrum band/EIRP limits without any prior notice.
3. The term of the License expires without renewal,
4. The Licensee surrenders the License before the expiry.

8.2. The Authority may modify the operating conditions of IoT LPWAN devices in the interest of proliferation of IoT based services in Pakistan.

## COMMUNICATION WITH THE LICENSEE

9.1. The Licensee shall keep the Authority updated on current address of the Licensee, including telephone number, fax number, email address and the name and title of the contact person for the purposes of receiving communications from the Authority.

## ASSIGNMENT OF RIGHTS

10.1. This License granted shall be personal to the Licensee and shall not be assigned, sub-authorized to, transferred, directly or indirectly or held on trust any person, without the prior written approval of the Authority.

## DEFINITIONS

The words and expressions shall have the meaning as assigned to them hereunder. However, unless the context or subject otherwise requires the words and expressions used but not defined herein, shall have the same meaning as given in the Act and Regulations issued by Authority from time to time.

“**Act**” means the Pakistan Telecommunication (Re-organization) Act,1996;

“**Authority”** means the Pakistan Telecommunication Authority established under Section 3 of the Act;

 “**Terminal Equipment**” means any apparatus directly or indirectly connected to any network termination point and used for sending, processing receiving intelligence,

“**Applicant**” means company/entity applying for IoT LPWAN License to the Authority

**“Devices”** Means terminal equipment as defined in Act and for purpose of this License also includes a piece of equipment with the mandatory capabilities of communication and the optional capabilities of sensing, actuation, data capture, data storage, and data processing.

**"Effective Date"** means the date on which this License is issued by the Authority.

**"Federal Government"** means the Federal Government of Pakistan.

**“Gateway”** IoT network device (a Radio Module) that serves as communication device between the end devices and the LPWAN network server.

**“Low Power Wide Area Networks (LPWAN)”** Wireless wide area network technologies that interconnect low bandwidth, low powered battery-operated devices having low bit rates, over a long range**.**

**“Local Access Provider (LAP)”** A Local Access Provider can only be a PTA licensed Local Loop Licensee, Cellular or Integrated Licensee, authorized by virtue of its license to provide access to and switching.