1. Purpose of this Document

The WiMAX system specification is standardized under the WiMAX Forum. UQ Communication Inc. (hereafter, UQ) complies with this network specification standard.

This document describes the application process and related precautions for manufacturers developing WiMAX-capable products targeted for connecting to the UQ WiMAX network. For WiMAX Forum standard specification details, please refer to following URL.

WiMAX Forum : [http://www.wimaxforum.org/home](http://www.wimaxforum.org/home)

*Please be aware that content in this document is updated accordingly.

*For any questions or inquiries with regards to this document, please email to following address.
Guideline Contact Email Address : wix-device@uqc.jp
2. UQ WiMAX Certification Program

1. Purpose of the Program

(1) The UQ WiMAX Certification Program is to verify acquisition of prerequisite certificates and interoperability testing with UQ network (UQ-IOT) to assure network quality assurance and to ensure legal compliance.

(2) Acquiring UQ WiMAX Certification attests to the completion of interoperability testing with UQ network.

(3) Conducting network interoperability testing is to assure UQ network stability, to improve WiMAX-capable product quality developed by respective manufacturers, and to assure service level to end customers.

2. Target products

Pattern.1 : The WiMAX products which embedded the UQ certified modules.
Pattern.2 : The WiMAX products other than defined on pattern 1

※ The WiMAX communication module is defined as the product which packaged WiMAX chipset, WiMAX protocol, and the interface to confirm the connectivity to network. It also need to have capability to be embedded to the final products.

※ The WiMAX modules which certified UQ Certification is confirmed connectivity, therefore certified module embedded products are able to reduce the test items of UQ-IOT.

※ Products without network connection interface such as software, carrier equipment such as base stations and servers or test equipment are not eligible. For any question on product requirements for UQ certification, please contact the UQ WiMAX Certification Program Office. (wix-device@uqc.jp)
3. UQ WiMAX Certified Modules

Sumitomo Electric Networks, Inc.  WS2000  (UQ WiMAX IOT Certified)  ★ Module for mounting on industrial equipment

Murata Manufacturing Co., Ltd.  LBFA1ZRSTZ  (UQ WiMAX IOT Certified)  ★ Small substrate mounting type module

Intel Corporation
Intel® Centrino® Advanced-N + WiMAX 6150
Intel® Centrino® Advanced-N + WiMAX 6250  (UQ WiMAX IOT Certified)

Sumitomo Electric Networks, Inc.  WS2010  (UQ WiMAX IOT Certified)  ★ Module for the product with Android OS

Japan Radio Co., Ltd.  CMN-9000  (UQ WiMAX IOT Certified)  ★ Module which don not need to develop the driver software
4. UQ WiMAX Certification Program Application Process (1)

General process for manufacturers considering development of NOT WiMAX module embedded product

<table>
<thead>
<tr>
<th>Step1: Product Development</th>
<th>Related Activity</th>
<th>Reference Page</th>
<th>Reference Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Gathering</td>
<td>WiMAX Forum Member Registration</td>
<td></td>
<td>● Guideline for WiMAX Compliant Product Development (This Document)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step2: Acquire Certification</th>
<th>Related Activity</th>
<th>Reference Page</th>
<th>Reference Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquire Forum Cert.</td>
<td>● Acquisition of Technical Regulations Conformity Certification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apply to UQ WiMAX Certification</td>
<td>● Acquisition of Technical Conditions Compliance Certifications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conclude NDA Disclose Documents</td>
<td>● Acquisition of X509 Certification</td>
<td>Page 13-17</td>
<td>● UQ WiMAX Certification application</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step3: Conduct Testing</th>
<th>Related Activity</th>
<th>Reference Page</th>
<th>Reference Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apply to UQ IOT Lab</td>
<td>● UQ-IOT lab application</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UQ IOT testing</td>
<td>● Test result submission format - R1/R2/Performance - OMA-DM</td>
<td>Page 8-9</td>
<td></td>
</tr>
<tr>
<td>UQ-IOT Field testing</td>
<td>● UQ CERTIFIED logo usage guideline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquisition of UQ WiMAX Certification</td>
<td>● UQ CERTIFIED logo application</td>
<td>Page 11-12</td>
<td>● UQ supported activity</td>
</tr>
</tbody>
</table>

● Other activity
5. UQ WiMAX Certification Program Application Process (2)

General process for manufacturers considering development of WiMAX module embedded product

<table>
<thead>
<tr>
<th>Step1: Product Development</th>
<th>Related Activity</th>
<th>Reference Page</th>
<th>Reference Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Gathering</td>
<td>WiMAX Forum-</td>
<td></td>
<td>● Guideline for WiMAX Compliant Product Development (This Document)</td>
</tr>
<tr>
<td>Product development</td>
<td>Member Registration</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step2: Acquire Certification</th>
<th>Related Activity</th>
<th>Reference Page</th>
<th>Reference Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquire Forum Cert.</td>
<td>Acquisition of Technical Regulations Conformity Certification</td>
<td>Page 13-17</td>
<td>OUQ WiMAX Certification application sheet (For module Embedded model)</td>
</tr>
<tr>
<td>Apply to UQ WiMAX Certification</td>
<td>Acquisition of Technical Conditions Compliance Certifications</td>
<td></td>
<td>● Certification of UQ WiMAX Certified module (Issued by WiMAX module maker)</td>
</tr>
<tr>
<td>Conclude NDA Disclose Documents</td>
<td>Acquisition of X509-Certification</td>
<td></td>
<td>● WiMAX technical reference document</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step3: Conduct Testing</th>
<th>Related Activity</th>
<th>Reference Page</th>
<th>Reference Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apply to UQ IOT-Lab</td>
<td>UQ-IOT Field testing</td>
<td></td>
<td>● Throughput and connectivity testing form.</td>
</tr>
<tr>
<td>UQ-IOT testing</td>
<td>Acquisition of UQ WiMAX Certification</td>
<td>Page 11-12</td>
<td>● Module embedded condition confirmation sheet</td>
</tr>
<tr>
<td>Product Testing (at field)</td>
<td>Application of UQ CERTIFIED Logo Usage</td>
<td></td>
<td>● UQ CERTIFIED logo usage guideline</td>
</tr>
<tr>
<td>Product Release</td>
<td></td>
<td></td>
<td>● UQ CERTIFIED logo application</td>
</tr>
</tbody>
</table>

UQ Communications Confidential Proprietary
1. Conditions for Application to the Program

Mandatory conditions for participation in UQ WiMAX Certification Program:

(1) Acquisition of WiMAX Forum Certification or WiMAX Forum Open Retail Certification
(2) Acquisition of X.509 certification issued by WiMAX Forum Certification Authority (CA)
(3) Acquisition of Technical Regulations Conformity Certification based on Radio Act, and Technical Conditions Compliance Certifications based on Telecommunications Business Act

Notice: For end products embedded with UQ WiMAX Certified modules, by submitting the certification of no changes on Hardware/Software of UQ Certified modules issued by the module manufacturer, we accept the application of UQ WiMAX Certification without the conditions of (1), and (2) mentioned above. In case of adopting the combination of antenna and WiMAX module which acquire TELEC and JATE to your products, [Certification of UQ WiMAX certified module] issued by WiMAX module manufacturer can be replaced instead of condition (3).

2. Application to UQ WiMAX Certification Program

Application to this program is required for each product, identified by model number. A product that gets a software change requires a spec modification application or is treated as a different product. The application form is available on the UQ web site. The completed application form should be submitted to the UQ WiMAX Certification Program Office email address (wix-device@uqc.jp) along with proof of the prerequisite certifications. Application forms can be found at product development information page on the UQ web site.

3. Application Fee

Application to UQ WiMAX Certification program is free of charge. IOT activity is subject to fees.

4. Non disclosure agreement

Application of UQ WiMAX Certification program include the condition of non disclosure agreement.
1. Disclosure of Technical Documents
   Technical documents such as guideline, test items and processes will be disclosed after application.
   Please refer to program rules for scope of usage.

2. UQ-IOT
   (1) UQ-IOT lab reservation and rule of use
   - UQ WiMAX Certification Program application is required prior to UQ-IOT lab application. You will be able to submit
   preferred testing date, however, we are unable to guarantee the schedule at time of submission. We appreciate your
   understanding
   - UQ will inform UQ-IOT lab location after application
   - Please follow device IOT guidelines
   (2) UQ-IOT Overview
   - Tests that are the same as those required for WiMAX Forum certification will be conducted over UQ network environment
   for connectivity validation : Reference Document: Reference

   (2) UQ-IOT Overview
   - UQ-IOT test components will be reviewed periodically to stay aligned with CRSL of WiMAX Forum Certification and
     updates on UQ network equipment
   - For end products embedding UQ WiMAX Certified modules, we accept omitting test items, already confirmed in module
     testing, after mutual consultation with the module maker. Details are available upon application for UQ WiMAX
     Certification. For end products embedding Open Retail Certified modules, we reduce some of the test items from our
     IOT, based on the consultation, also depend on the issued lab of Open Retail Certification.
7. Interoperability test of UQ WiMAX Network (UQ-IOT)

(3) Test Environment
Lab test equipment configuration is as follows:

Location    : Minato-ku, Tokyo (as of June, 2010) *Location subject to change without notice
Open Hours  : 9:00-17:00 (Weekdays)

(4) Test Fees
Fees        : Charges applicable for five days of tester and equipment use
Payment Method: Defined separately
8. List of the Condition and Items for UQ WiMAX Certification

Below list is the summary of the UQ Certified condition for both embedded product and not embedded product.

- ○: Unnecessary or no need to apply
- ×: Necessary or need to apply and certified

<table>
<thead>
<tr>
<th>Condition for Apply</th>
<th>UQ Certified Embedded Product</th>
<th>WiMAX Product Not Using modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>WiMAX Forum Certification</td>
<td>○</td>
<td>×</td>
</tr>
<tr>
<td>JATE</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>TELEC</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>X509 Certification</td>
<td>○</td>
<td>×</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Application</th>
<th>UQ Certified Embedded Product</th>
<th>WiMAX Product Not Using modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>UQ Certification Application</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>Certification form Module maker</td>
<td>×</td>
<td>○</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IOT</th>
<th>UQ Certified Embedded Product</th>
<th>WiMAX Product Not Using modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>UQ Lab Test (UQ IOT)</td>
<td>○</td>
<td>×</td>
</tr>
<tr>
<td>Full Field test (UQ IOT)</td>
<td>○</td>
<td>×</td>
</tr>
<tr>
<td>Product test (at Field)</td>
<td>×</td>
<td>○</td>
</tr>
<tr>
<td>Estimated time for UQ Certified</td>
<td>1~3 weeks</td>
<td>2~3 months</td>
</tr>
</tbody>
</table>

UQ WiMAX Certification will be issued for the product which finished all the items mentioned above.
9. Acquisition of UQ WiMAX Certification

1. UQ WiMAX Certification

UQ WiMAX Certification will be issued for products that complete UQ-IOT. Certified products will be registered with a UQ CERTIFIED number as UQ network verified products.

2. Display of UQ WiMAX Certified Product

2-1. UQ CERTIFIED Logo

(1) Purpose

UQ WiMAX Certified products may use UQ CERTIFIED logo to identify connection verified product of choice at point of purchase for verified connectivity.

(2) Standard of Usage

Basic use of the certified logo is for display on the product itself to indicate UQ WiMAX network connectivity verified. Limited use may be allowed on user manual, outer boxes, printed material such as brochure or leaflet of the certified products. Details are defined in the “UQ CERTIFIED Logo Guideline”.

(3) Application of Usage

Please fill in application form available on the UQ web site. Apply by sending filled out form to logo application email address (wix-logo@uqc.jp). Related information is available at Product Development Information page on the UQ web site.

(4) Fee

Use of UQ CERTIFIED logo is free of charge. Display of logo on the product is arranged by product manufacturer based on “UQ CERTIFIED Logo Usage Guideline”.

2-2. Release of Product Information

The list of UQ WiMAX Certified products is available on UQ web site for MVNOs or companies considering development of WiMAX products.
3. Certification Period of Validity

Certification is valid for three years from receipt of UQ WiMAX Certification. Re-application to UQ WiMAX Certification program is required at the expiration of the validity period. For re-application of products at expiration of the certified period, we will review the product specification differences, and may exempt test items that do not require re-examination.

4. Re-certification

Re-certification is required for UQ WiMAX Certification in the following circumstances:
- Modification of hardware or software after acquisition of UQ WiMAX Certification
- Three years have passed since acquisition of UQ WiMAX Certification (expiration of certified period)
- Modification of product model number after acquisition of UQ WiMAX Certification
- Other changes to standard spec, as required by UQ
1. Certification of Compliance to WiMAX Specification

(1) WiMAX Forum Certification is:

- a program to certify compliance to the specification standardized in WiMAX Forum
- hosted by WiMAX Forum for mutual system interoperability, including between wireless devices and network equipment
- required for WiMAX devices to certify compliance to Release 1.0 Wave2 (CRSL *Ver.4 or above, i.e. latest version of WiMAX Forum Certification) to be compliant with WiMAX Forum -set standard

*Certification Requirements Status List - The list of test preparation status for each certification test. The list is updated every three months to allow phased approach to Wave2 certification. Applicant must apply to latest version of CRSL at any point in time.

Reference Document:

Ref 1: Interfaces and Test Terms from Device Viewpoint
Ref 2: Overview of WiMAX Certification Program
(2) Open Retail Certification

- The Open Retail Certification is designed to test WiMAX devices in an end-to-end network IOT environment with common test requirements accepted by WiMAX operators around the globe.

- the current WiMAX Forum Certification focuses on air interface conformance testing. Open Retail Certification testing adds three layers of testing on top of the current WiMAX Forum Certification program.

- For the final product which embedded Open Retail Certified module, some of the UQ-IOT test items can be omitted.

10. Acquisition of Related Certifications

[Diagram: Conformance Testing vs. Open Retail Certification End-to-End IOTT Testing]

http://www.wimaxforum.org/certification/open-retail
10. Acquisition of Related Certifications

2. Certification for Compliance to Related Laws in Japan (Telecommunications Business Act, Radio Act)

(1) Technical Regulations Conformity Certification for telecommunication devices by designated accreditation organization is:
   - to certify conformity to technical regulation for devices that connect to a telecommunications carrier network
   - a designated accreditation organization to certify technical conformity to telecommunications device and device design regulations
   - required for WiMAX devices in order to certify conformity to technical standards set by the Telecommunications Business Act

Reference Document:
Ref 4: Technical Regulations Conformity Certification based on Telecommunications Business Act

(2) Technical Regulations Conformity Certification for specific radio equipment at the Certification Registry Organization is:
   - to certify conformity to technical standards for base stations established by telecommunication carrier
   - to perform certification for technical conformity to specific radio equipment and specific radio equipment design regulations
   - required for WiMAX devices (base stations) in order to certify conformity to technical standards set by the Radio Act
   - required for re-certification of radio equipment when there is any change to antenna of WiMAX devices (base stations)

Reference Document:
Ref 5: Technical Regulation Conformity Certification based on Radio Act
11. Compliance Standard

The compliance standard is as follows:

1. Radio Standard
   - IEEE Std 802.16e-2005
   - ARIB STD-T94 : OFDMA Broadband Mobile Wireless Access System (WiMAX™ applied in Japan)
   - WiMAX Forum Mobile System Profile : Release 1.0 Approved Specification
     (http://www.wimaxforum.org/resources)

2. Network Standard
   - WiMAX Forum Network Architecture Stage2-3 Rel1 Ver.1.2

3. OMA-DM Standard
   - WiMAX Forum Network Architecture (Stage 2 and Stage 3 : Detailed Protocols and Procedures )
     [WiMAX Over-The Air General Provisioning System Specification] NWG Release 1.5 Version 1.0.0
   - WiMAX Forum Network Architecture (Stage 2 and Stage 3 : Detailed Protocols and Procedures )
     [WiMAX Over-The Air Provisioning & Activation Protocol based on OMA DM Specification]
     Release 1.5 Version 1.0.0

* WiMAX Forum member registration is required to view documents above.
## 12. UQ WiMAX Specification

<table>
<thead>
<tr>
<th>Item</th>
<th>Spec</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>2595MHz～2625MHz</td>
<td></td>
</tr>
<tr>
<td>Band</td>
<td>10MHz</td>
<td></td>
</tr>
<tr>
<td>Radio Type</td>
<td>X1C, X1D, X1F</td>
<td>Radio type of UQ acquired comprehensive license (No limitation on other radio types)</td>
</tr>
<tr>
<td>Max. Transmit Power</td>
<td>23dBm</td>
<td>For details, please refer to technical standard for radio equipment regulation, radio act related review standard, TELEC specific radio equipment (TD-OFDM wide band mobile radio access land mobile station)</td>
</tr>
<tr>
<td>Authentication Method</td>
<td>Single-EAP (EAP-TTLS, support of WiMAX Forum compliant X.509 certification)</td>
<td>For authentication method required by MVNOs, please follow authentication standard provided by each MVNOs.</td>
</tr>
<tr>
<td>MIP</td>
<td>Mandatory support of simple IPv4</td>
<td>Implementation recommended for Simple IPv6, Client MIPv4, Client MIPv6 based on consideration of MVNO specific services or international roaming.</td>
</tr>
</tbody>
</table>
13. Miscellaneous

Reference information when developing WiMAX compatible products

1. Specification

(1) Device Category
WiMAX Forum defines controlled devices and retail devices. Generally speaking, devices contracted with specific MVNO operators at distribution are called controlled devices, and devices that enable end users to select an MVNO are called retail devices. For controlled devices, manufacturers are requested to confirm device specs with targeted MVNO carriers.

(2) OMA-DM Client
OMA-DM client support is mandatory for retail devices. Please refer to OMA-DM related specifications in WiMAX Forum. UQ is going to release implementation result of OMA-DM for UQ network*.
*Reference information only; does not guarantee network connectivity

(3) WiMAX Connection Management Tool
The following reference information on utility software for WiMAX connection management (hereafter, connection utility) will be released upon application to the UQ WiMAX Certification Program.
- Connection Utility Production Guideline (Basic function, parameter setting, antenna bar display, etc)

(4) WiMAX Portal web site
This site is for end user to chose the MVNO and service provider and contract the WiMAX services. Using the OMA-DM function, user can activate the retail devices.
Please consider the activation method on your product. (Browser, input device etc.)
13. Miscellaneous

2. Operation
   (1) MAC Address Display
       - The network specifies devices with MAC address
       - For device identification purposes, MAC address display is recommended on the rear surface of devices, for operation and maintenance support
       - For device identification purposes, bar-code display is recommended on the box, visible for user management by MVNO operators

   (2) Pre-registration of Device Information (Manufacture ID)
       Pre-registration may be required for devices without OMA-DM support for activation purposes. Please confirm details with MVNO operators as it depends upon the subscription method of each MVNO (Limitation may apply for manufacturing ID system and digits)

   (3) Maintenance support
       Regard to after support, we prepare the maintenance guide line. Please confirm the procedure of product guarantee and report line in advance.
[Reference 1] Interfaces and Test Terms from Device Viewpoint

- **ASN**
- **GW**
- **HA**
- **AAA**
- **OMA-DM**
- **OMA-DM**
- **R1 PHY&MAC (MIOT)**
- **R1 MAC (PCT)**
- **R1 PHY (RCT)**
- **BS**
- **ASN-GW**
- **Provisioning**
- **CSN**
- **HA**
- **AAA**

**Connections:**
- R2 (NCT)
- R3
- R6
- R4

**Areas:**
- **MS**
- **OMA-DM IOT**
The WiMAX Certification Program is the test program to confirm mutual interoperability with the system profile. Certification can be completed by passing 5 elements of the program below, including R1-IF, R2-IF.

**WiMAX Certification Program (WCP)**

<table>
<thead>
<tr>
<th>Test Terms</th>
<th>Test Definition</th>
<th>Connectivity Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCT (Radio Conformance Testing)</td>
<td>Radio conformance testing for device and BS</td>
<td>Simulator</td>
</tr>
<tr>
<td>PCT (Protocol Conformance Testing)</td>
<td>Conformance test for call processing between device and BS (L2)</td>
<td>Simulator</td>
</tr>
<tr>
<td>RPT (Radiated Performance Testing)</td>
<td>Radiated performance testing between device and BS</td>
<td>Simulator</td>
</tr>
<tr>
<td>NCT (Network Conformance Testing)</td>
<td>L2/L3 function testing for device</td>
<td>Simulator</td>
</tr>
<tr>
<td>MIOT (Mobile Inter Operability Testing)</td>
<td>Function testing at PHY/MAC between device and BS (R1 IF)</td>
<td>Actual device and BS (Test with 2 BSs x 3MSs)</td>
</tr>
</tbody>
</table>

**Pass**

WiMAX Forum Certified
**WiMAX Certification Program (WCP)**

WiMAX Forum Certified

---

### UQ WiMAX Certification Program

#### UQ-IOT

<table>
<thead>
<tr>
<th>Test Scope</th>
<th>Test Definition</th>
<th>Connectivity Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIOT (Mobile Inter Operability Testing)</td>
<td>PHY/MAC function testing between device and BS (R1 IF)+delta items</td>
<td>UQ-NW environment (Lab)</td>
</tr>
<tr>
<td>RPT equivalent (Radiated Performance Testing)</td>
<td>Radiated performance testing between device and BS</td>
<td>UQ-NW environment (Lab)</td>
</tr>
<tr>
<td>NCT equivalent (Network Conformance Testing)</td>
<td>Call flow check (R2 IF)</td>
<td>UQ-NW environment (Lab)</td>
</tr>
<tr>
<td>OMA-DM Test</td>
<td>OMA-DM I/F check</td>
<td>UQ-NW environment (Lab)</td>
</tr>
</tbody>
</table>

*Estimated days for whole test cases with bug free scenario. Reference days will be adjusted based on the actual test status.*

---

Pass

**UQ CERTIFIED**
Testing for technical regulations conformity is required to access telecommunication operator network, per the Telecommunications Business Act.

Testing above is conducted by concerned telecommunication operator individually, or can be conducted by registered accreditation organization by utilizing Technical Regulations Conformity Certification system.

Acquisition of Technical Regulations Conformity Certification is mandatory as a proof of technical standard of the device.
License (and test to obtain license) is required for setting up radio base stations based on Technical Regulation Conformity Certification to comply with Radio Act in Japan.

Specific radio base stations such as WiMAX equipment can omit a part of the test below and be applicable to comprehensive license by obtaining Technical Regulation Conformity Certification based on Radio Act.

Acquisition of Technical Regulations Conformity Certification is mandatory to set up base stations.

- **Common License Procedure (Act 6th to 12th)**
  - License Application (6)
  - License Review (7)
  - Preliminary License (8)
  - Completion of Examination (10)
  - License Grant (12)

- **Simplified License Procedure (Act 15th)**
  - License Application (6)
  - License Review (7)
  - Omit Preliminary License
  - Omit Completion Examination
  - License Grant (12)

- **<Technical Regulation Conformity Certification>**
  - Specific radio base station manufacturer to apply to registered accreditation organization (Act 38-2, 38-24)

- **PHS devices**
  - Comprehensive License (Act 27-2)
  - No License Required (Act 4)

- **WIMAX devices**
  - Omit Preliminary License

Opening of Radio Base Stations