

Guidelines to Operate
Public Wireless Local Area Network Services under Class Licence
29 April 2022

General

In February 2003, the Class Licence for the Provision of Public Wireless Local Area Network (LAN) Services (the “Class Licence”) was created. The Class Licence allows the provision of public wireless LAN services, using wireless technologies such as Wi-Fi, on private premises. Any person who operates public wireless LAN services under the Class Licence must operate within the terms and conditions of the Class Licence. These guidelines aim at providing guidance on the operation of public wireless LAN services under the Class Licence, and supersede the previous version issued on 30 June 2021. These guidelines may be revised by the Office of the Communication Authority (“OFCA”) when necessary.

Nature of Class Licence

2. In general, a class licence gives a person the right to operate a telecommunications system or service without applying for an individual licence, subject to compliance with the terms and conditions of the class licence which may include requirement to register relevant information with the Communications Authority (“CA”). A person licensed under the class licence in respect of the telecommunications systems or services concerned acquires the status as a licensee under the Telecommunications Ordinance (Cap. 106) (“TO”).

Who are Licensed?

3. Subject to the terms and conditions of the Class Licence, a person who uses radiocommunications apparatus that falls within the technical criteria set out in the Class Licence to provide public wireless LAN services becomes a Class Licensee, and is required to register with the CA in accordance with the Class Licence (see paragraphs 11 - 18 below for more details about registration). The “person” can be a natural person or any body of person(s), corporate or unincorporate.

4. The Class Licensee may provide public wireless LAN services under the Class Licence in premises and locations which are not unleased Government land or public streets. For provision of public wireless LAN services on or across unleased Government lands or public streets, a unified carrier licence (“UCL”) issued by the CA authorising the provision of public wireless LAN services¹ is required.

5. The radiocommunications apparatuses being established, maintained, used or possessed under the Class Licence for the provision of the public wireless LAN services shall comply with the following technical criteria:

Frequency Band	Output Level	Spurious Emission Level
2400 – 2483.5 MHz	(a) peak e.i.r.p. not to exceed 4W for frequency hopping spread spectrum modulation or digital modulation systems; or (b) aggregate e.i.r.p. not to exceed 100 mW for any modulation	e.i.r.p. not to exceed 10 µW outside the frequency band in which the fundamental frequencies are located
5150 – 5350 MHz ²	e.i.r.p. not to exceed 200 mW using only digital modulation	e.i.r.p. not to exceed 10 µW
5470 – 5725 MHz ³	e.i.r.p. not to exceed 1 W	e.i.r.p. not to exceed 10 µW
5725 – 5850 MHz	(a) peak e.i.r.p. not to exceed 4W for frequency hopping spread spectrum modulation or digital modulation systems; or (b) aggregate e.i.r.p. not to exceed 100 mW for any modulation	e.i.r.p. not to exceed 10 µW outside the frequency band in which the fundamental frequencies are located
5925 – 6425 MHz ⁴	(a) e.i.r.p. not to exceed 250 mW for indoor operations (b) e.i.r.p. not to exceed 25 mW for outdoor operations	in compliance with the specification HKCA 1081

For the avoidance of doubt, the Class Licensee is not authorised to establish and maintain

¹ The Guidelines for Submission of Applications for Unified Carrier Licence is available at <https://www.coms-auth.hk/filemanager/en/share/guidelines/UCLguidelines.pdf>.

² Use of the band 5150 – 5350 MHz is restricted to indoor operations.

³ Use of the band 5470 – 5725 MHz shall comply with the technical requirements in Recommendation ITU-R M.1652 “Dynamic frequency selection (DFS) in wireless access systems including radio local area networks for the purpose of protecting the radiodetermination service in the 5 GHz band” approved by the International Telecommunication Union as revised from time to time.

⁴ Radiocommunications apparatus operating in the 5925 – 6425 MHz band shall comply with the specification HKCA 1081 entitled “Performance Specification for Radiocommunications Apparatus Operating in the 6 GHz Band for Wireless Local Area Network” issued by the CA and shall also be of a type approved by the CA.

any backhaul facilities⁵ (or any part thereof) for the provision of public wireless LAN services. The Class Licensee is required to make separate applications to the CA for appropriate licences to be issued under the TO, such as the UCL, Services-Based Operator Licence (“SBO Licence”) for Class 3 Services of International Value-Added Network Services, etc. as the case may be, depending on the types of backhaul facilities to be established and maintained. Alternatively, the Class Licensee may lease the backhaul facilities from other licensed operators.

6. The Class Licence does not impose restrictions on the type or technical standard of the radiocommunications apparatus used as long as the concerned technical criteria are complied with. One popular type of apparatus operating in these frequency bands is wireless LAN equipment. Indeed, the Class Licence is created with the intention of providing a business-friendly environment to enable operators to offer public wireless LAN services. The Class Licensees are free to use any technical standards (e.g. IEEE 802.11a/b/g/n/ac or HiperLAN) to operate wireless LAN equipment to provide services so long as the technical criteria set out in the table above are complied with.

What Services are Licensed?

7. A Class Licensee may provide the following public wireless LAN services under the Class Licence:

- (a) Communications between two or more points within the radio coverage area of the same wireless LAN

It should be noted that the connection or linkage of two or more wireless LANs, whether separated by unleased Government land or public street, or just next to each other (even though they may not be separated by unleased Government land or public street), is not authorised under the Class Licence. For connection or linkage of two or more wireless LANs separated by unleased Government land or public street, a UCL authorising the provision of public wireless LAN services is required (see paragraph 4 and footnote 1 for more details). For connections or linkages of two or more wireless LANs which are not separated by unleased Government land

⁵ For the purpose of this document, backhaul facilities means any wireline or wireless links that may or may not cross public street or unleased Government land for the purpose of providing Internet connectivity to the radiocommunications apparatus used by the Class Licensee.

or public street, a SBO Licence for Class 3 Services of International Value-Added Network Services is required.

(b) Access to or resale of a public telecommunication service via the wireless LAN

Access service means that the wireless LANs are used as the channel to access public telecommunications services operated by the other licensed public telecommunications services operators, such as Internet services providers (“ISPs”) or external telecommunications services (“ETS”) operators. Such access by end users via a public wireless LAN may be provided through the establishment and maintenance of telecommunications means which are authorised under the Class Licence. For example, an ISP may provide Internet access services directly to its customers via the wireless LAN operated by a Class Licensee. In this scenario, the customers using Internet access services are expected to be charged directly by the ISP. The charges imposed by the Class Licensee, if any, may simply be for the service of providing the wireless LAN access.

Resale service means that public telecommunications services such as Internet access services and ETS operated under other licences (e.g. UCL or SBO Licences) are *offered* directly by the Class Licensees to end users on a resale basis. That is to say, the Internet access services or ETS are *not operated* by the Class Licensees under the Class Licence, but the Class Licensees may agree a commercial arrangement with another licensed operator to “purchase” the Internet access service or ETS and “resell” them to the wireless LAN end users as part of their services. The end users will be directly charged by the Class Licensees for the Internet access service or ETS, and if applicable, the cost of wireless LAN access. For the avoidance of doubt, the Class Licensees are not permitted to “operate” these services under the Class Licence. The resale of telecommunications services that do not involve the establishment or maintenance of any telecommunications means is in general regulated under the “Class Licence for Offer of Telecommunications Services”⁶.

⁶ The Class Licence for the Offer of Telecommunications Services was created in February 2007 under section 8(1)(aa) of the TO. Under this class licence, a person is licensed to offer in the course of business a telecommunications service, but is not allowed to establish or maintain any means of telecommunications for the purpose of offering telecommunications services.

8. The scope of wireless LAN services under the Class Licence is subject to the condition that the services must not be provided on or across unleased Government land or public streets. For example, a Class Licensee offering public wireless LAN services inside a café fronting a public street is not allowed to provide the services to persons located on or across the public street. However, the CA does not consider an unavoidable spillover of radio signals across the public street as a breach of this condition provided that the installation conforms fully to the emission characteristics specified in the Class Licence and the Class Licensee does not offer to provide the services to persons located on or across the public street.

9. Where the café owners or property owners/tenants of the shopping malls are providing wireless LAN services themselves, they are required to be registered as Class Licensees under the Class Licence. However, there may be cases where they simply have rental agreements with wireless LAN operators to allow the operators to establish and offer wireless LAN services in their premises. If the café owners or property owners/tenants are simply making their premises available for wireless LAN operators to provide services, they will not be regarded as providing public wireless LAN services and are not required to register with the CA under the Class Licence.

10. It should be noted that the Class Licence only regulates the provision of “public” wireless LAN services. No telecommunications licence is required if a person establishes a wireless LAN for private use at home, in the office or in a school campus.

Registration

11. Any person who intends to provide public wireless LAN services under the Class Licence is required to register with the CA before provision of such services. For the time being, the CA does not propose to levy any registration or licence fee but will review the situation from time to time.

12. The following information is required to be registered with the CA, through the links below –

<https://eform.one.gov.hk/form/oca016/en/> in English; or

<https://eform.one.gov.hk/form/oca016/tc/> in Chinese.

(a) name of the Class Licensee (should be the same as appearing in the

Business Registration Certificate (“BRC”) or equivalent);

- (b) BRC number or equivalent of the Class Licensee;
 - (c) contact details of the Class Licensee;
 - (d) location of the public wireless LAN; and
 - (e) all frequency band(s) permitted to be used under the Class Licence and within which the radiocommunications apparatus(es) operate for providing the service.
13. Failure to provide true, accurate and complete information for the purpose of registration may lead to rejection of the registration.
14. The person making registration may be required to provide further information to complete the registration as necessary. Upon receipt of all the required information, OFCA will issue the results of registration to the applicant by email within 14 working days.
15. To enable the CA to have accurate and up-to-date information, the Class Licensees are required to update the CA of any changes to the registered information through the links below before the changes take effect –
- https://apps.ofca.gov.hk/apps/clr/content/lic_login.asp?language=english in English; or
- https://apps.ofca.gov.hk/apps/CLR/content/lic_login.asp?language=chinese in Chinese.
16. The Class Licensees are required to notify the CA by sending email to register-wlan@ofca.gov.hk within one month of its ceasing to provide the public wireless LAN services under the Class Licence.
17. The CA will publish a register of the Class Licensees on OFCA’s website. The register will include the name of the Class Licensee, the location(s) of the radiocommunications apparatus, and the frequency band(s) used by the radiocommunications apparatus. All other information provided to the CA is to be kept for regulatory purposes.
18. Enquiries concerning the registration may be sent to the email address: register-wlan@ofca.gov.hk.

Licence Conditions to Note

19. It should be noted that the frequency bands allowed for setting up wireless LAN under the Class Licence are used on a shared basis in an uncoordinated manner. As the bands are opened for use by the public, no person should have a priority right of use over another. Whilst the wireless LAN equipment should not cause any harmful interference to any lawful telecommunications apparatus or systems, it is also not protected from harmful interference caused by other authorised telecommunications apparatus or systems.

20. Where more than one wireless LAN is set up in one area (e.g. in a shopping arcade), the management of the channels and measures to avoid mutual interference generated by wireless LAN equipment is more efficiently and effectively performed on-site by the persons who intend to provide public wireless LAN services.

21. The market of public wireless LAN services is fully open. The CA considers that the service level should best be determined by the market and does not plan to impose any minimum requirement on service level at this stage. However, Class Licensees are required to publish their tariffs, either by electronic means or by providing a copy to any person who may request it, and charge no more than the published tariffs.

Further Information

22. For further information, interested parties may make reference to the Class Licence⁷ effective from 29 April 2022.

Office of the Communications Authority

29 April 2022

⁷ A sample Class Licence is available at:
[https://www.coms-auth.hk/filemanager/common/licensing/Wireless Local Area Network Services \(Eng\).pdf](https://www.coms-auth.hk/filemanager/common/licensing/Wireless%20Local%20Area%20Network%20Services%20(Eng).pdf).