

Radiofrequency Radiation Measurements for Public Wi-Fi Installations in Hong Kong

**Office of the Communications Authority
15 October 2019**

Introduction

The Office of the Communications Authority (formerly Office of the Telecommunications Authority, hereinafter collectively referred to as “OFCA”) has since 2007 regularly conducted territory-wide survey of the non-ionizing radiation (“NIR”) levels in the public areas due to public Wi-Fi access points (“APs”). The survey aims to gauge the abovementioned NIR levels and ensure that the NIR generated from public Wi-Fi APs does not cause exposure to the public in excess of the exposure limit recommended by the International Commission on Non-Ionizing Radiation Protection (“ICNIRP”) which is adopted by the Communications Authority (“CA”), in consultation with the Department of Health, for the protection of the public against the NIR hazards from radio transmitting equipment.

2. This report¹ presents the results of the survey conducted between August 2018 and May 2019. It is the fifth report in the series (previous ones were published in 2007, 2011, 2014 and 2017 respectively). As with the previous surveys, the latest survey results indicated that the NIR levels at the measurement locations with public Wi-Fi APs installed were well below the exposure limit recommended by the ICNIRP (the “ICNIRP limit”), ranging from less than 0.1% to 0.806% of the limit. The results tally with the finding of the World Health Organization (“WHO”) that exposure levels due to Wi-Fi are generally very low. According to the WHO, there is no convincing scientific evidence that the weak radiofrequency signals from wireless networks (including Wi-Fi) would cause adverse health effects.

¹ This report contains information compiled by OFCA for reference only. Whilst OFCA endeavours to ensure that the information in this report is correct, no warranty or guarantee, express or implied, is given as to its accuracy. This report is not a substitute for medical advice. Anyone who wishes to use this report should seek expert and legal advice. The Government of the Hong Kong Special Administrative Region, the CA and OFCA accept no liability for any use reliance upon or otherwise citing this report and any part thereof.

Wi-Fi and AP

Wi-Fi

3. In this report, Wi-Fi² refers to the IEEE 802.11 group of standards operating in the 2.4 GHz and 5 GHz bands. It is a wireless broadband access technology which uses radio frequencies for linking up user terminal equipment (e.g. notebook computers, smart phones, tablets, etc.) and the broadband network for Internet access. The network device providing the Wi-Fi air interface between the broadband network and the user terminal equipment is called AP, which is a radio transceiver. The user terminal equipment has installed/built-in Wi-Fi functionality for communication with the APs.

4. Wi-Fi devices share the same frequency spectrum with many other radio apparatus, such as Bluetooth wireless devices, cordless phones and video transmitters, operating in the 2.4 GHz and 5 GHz bands. Use of these devices for private purpose is covered by an exemption order³ and no licence under the Telecommunications Ordinance (Cap. 106) is required. Provision of public Wi-Fi services in premises and locations not situated at unleased Government lands or public streets is permissible under a class licence. For provision of public Wi-Fi services on or across unleased Government land or public streets, a unified carrier licence issued by the CA authorising the provision of public wireless local area network services is required.

5. According to the exemption order, the permissible peak equivalent isotropically radiated power⁴ (“e.i.r.p.”) in the 2.4 GHz and 5 GHz bands is 4 W. However, the transmitting power of Wi-Fi devices, including those equipment used for provision of public Wi-Fi services in the market, is generally equal to or below 0.1 W effective radiated power (“e.r.p.”). Such low transmitting power of Wi-Fi devices is commensurate with the intended usage of Wi-Fi for short range communications (within 50 meters).

² Wi-Fi devices can operate in the frequency spectrum 2.4 – 2.4825 GHz (“2.4 GHz band”) as well as the frequency spectrum 5.15 – 5.35 GHz, 5.47 – 5.725 GHz and 5.725 – 5.85 GHz (collectively referred to as “5 GHz band”).

³ The exemption order refers to the Telecommunications (Telecommunications Apparatus) (Exemption from Licensing) Amendment Order 2005 (the “Exemption Order”) which exempts a number of frequency bands from the licensing requirement. Full document of the Order is available at http://tel_archives.ofca.gov.hk/en/ta-regulations/es22005090922.pdf.

⁴ Equivalent isotropically radiated power (“e.i.r.p.”) refers to the power radiated from an isotropic antenna while effective radiated power (“e.r.p.”) refers to the power radiated from a half-wave dipole which has a gain of 1.64 over the isotropic antenna.

APs for Public Wireless Internet Access

6. APs are radiocommunications transceivers for the provision of wireless access to Internet service and they are scattered throughout the entire territory of Hong Kong, mainly in the densely populated and built-up areas.

7. In Hong Kong, there are many APs installed in publicly accessible areas, such as shopping malls, coffee shops, restaurants, MTR stations, airport, universities, convenience stores, supermarkets, public libraries, public hospitals and public payphone kiosks. According to OFCA's record, as of 31 August 2019, there were already over 57,267 public Wi-Fi APs installed. The information on the locations of these APs is available at: http://apps.ofca.gov.hk/apps/clr/content/public_search.asp.

NIR Limits

8. As a safety precaution to protect public health, the CA issued the "*Code of Practice for the Protection of Workers and Members of Public Against Non-Ionizing Radiation Hazards from Radio Transmitting Equipment*" ("CoP")⁵ in 2000. Radiocommunications service providers are required to follow the CoP and ensure that the NIR generated from their radio transmitting equipment does not cause exposure to occupational personnel and the public in excess of the ICNIRP limits laid down in the "*Guidelines for Limiting Exposure to Time-varying Electric, Magnetic and Electromagnetic Fields (up to 300 GHz)*" published in 1998 (the "ICNIRP guidelines"). The relevant NIR limits are extracted in **Annex 1** for ease of reference.

9. According to the WHO, the levels of RF exposure from base stations and wireless networks (including Wi-Fi equipment) are so low that the body temperature increases due to such RF exposure are insignificant and do not affect human health. Please refer to the WHO's webpage at <http://www.who.int/peh-emf/publications/facts/fs304/en/> for the relevant information.

The Survey

⁵ The CoP is available at <http://tel.archives.ofca.gov.hk/en/code/practice/cop-radiation-hazards.pdf>.

10. The survey was conducted between August 2018 and May 2019 at 75 selected locations with public Wi-Fi APs installed including the following types of places:

- (a) cafe, fast food shop, restaurant, convenience store, supermarket, public library, public hospital, market, public park, theme park, leisure place, promenade, sightseeing spot, betting branch, bank, theatre, etc.;
- (b) public place with a large number of co-located Wi-Fi installations such as immigration control point, MTR station, ferry pier, airport, etc.;
- (c) public payphone kiosk with APs where the APs are close to users due to physical constraint of the kiosk;
- (d) public housing estate and government premises provided with public Wi-Fi services;
- (e) busy district where signals of public Wi-Fi services and those of domestic and commercial Wi-Fi installations co-exist;
- (f) educational institution; and
- (g) bus, airport express train and ferry between Hong Kong and Macao.

Measurement Equipment and Method

Measurement Equipment

11. The levels of NIR from public Wi-Fi APs were measured with a professional radiation meter which is designed for measurement of aggregated NIR levels contributed from different radio transmitters in the vicinity and provides direct readout of the required 6-minute average NIR levels⁶ as required by the ICNIRP guidelines.

Measurement Method

12. The methodology of measurements on public Wi-Fi APs generally followed the widely adopted approach for NIR measurements. The measurements were carried out in areas accessible by the general public with measurement probe mounted on a tripod at a height of approximately 1.7 m above ground corresponding to the head position of an average adult. The measurement results were obtained on the basis of a continued sampling of the radio frequency signals for 6 minutes in duration. Details of the measurement procedures and methodology are set out in **Annex 2**.

⁶ The meter reads out E-field in V/m where the unit is converted into power density in W/m² for ease of reference

The Survey Results

13. The survey results are given in **Annex 3** which showed that the NIR levels measured at the selected locations with public Wi-Fi APs installed were well below the ICNIRP limit, ranging from less than 0.1% to 0.806% of the ICNIRP limit of 10 W/m².

Conclusion

14. Based on the survey results, it is concluded that the **NIR levels in various public areas of Hong Kong, including government premises with public Wi-Fi APs installed, are well below the international exposure limit adopted by the CoP. The survey results tally with the WHO's finding that exposure levels due to Wi-Fi are generally very low.** According to the WHO, there is no convincing scientific evidence that the weak RF signals from wireless networks (including Wi-Fi) would cause adverse health effects.

15. OFCA will continue to conduct regular territory-wide survey of public Wi-Fi APs to ensure that the general public exposure to NIR due to those Wi-Fi APs does not exceed the ICNIRP limit for the protection of public safety.

**Office of the Communications Authority
15 October 2019**

NIR Limits

The health protection standards specified in the CoP are those laid down in the ICNIRP guidelines. According to the ICNIRP guidelines, the limits of NIR levels applicable to Wi-Fi devices are as follows:

**Reference levels for general public exposure
in the frequency range of 2 – 300 GHz to
time-varying electric and magnetic fields (unperturbed rms values)**

Class of personnel	E-field strength (V/m)	H-field strength (A/m)	Equivalent plane wave power density (W/m²)
General public	61	0.16	10

Note:

According to the ICNIRP guidelines, the E^2 , H^2 and the power density are to be averaged over any 6-minute period during measurement for frequencies between 100 kHz and 10 GHz.

Measurements of NIR from Public Wi-Fi APs


Measurement Procedures

- Measurement of NIR levels is done in accordance with the following procedures:
 - (a) At each Wi-Fi hotspot location, the NIR meter is moved around in the local area to locate the maximum receivable signal strength. The first measurement will be taken at that position.
 - (b) At the measurement position, the NIR meter is fixed on a tripod at a height of 1.7 m (corresponds to the head position of an average adult) and continuous measurement is conducted for at least 6 minutes.
 - (c) The NIR level averaged in the 6-minute interval as read out from the meter is recorded.
 - (d) After conducting the measurement at the position identified in Step (a) which is usually close to the AP, further readings are taken sparsely within the local area where people normally stay. Steps (b) and (c) are repeated at other four sampling positions as far as the situation allows.
 - (e) The minimum and the maximum recorded NIR levels obtained in Step (c) at the measurement positions are presented in the summary table in **Annex 3**.


Results of NIR Measurements for Public Wi-Fi APs

Remarks



The NIR levels shown in the table below have nothing to do with the coverage performance of the respective APs as measurements were conducted in close proximity to the APs only. Some photos of the measurement locations are shown in the table.



Locations of APs		NIR Level ⁷	
		Measured Minimum / Maximum Power Density (W/m ²)	Measured Minimum / Maximum Power Density in term of Percentage of Exposure Limit (i.e. 10 W/m ²)
Hong Kong Island (21 locations)			
Fusion (by PARKnSHOP)	Kornhill Plaza (North), 1 Kornhill Road, Quarry Bay 	<0.003 / 0.0259	<0.03% / 0.259%


⁷ The specified measurement range of the E-field probe is 1.3 mW/m² to 420 W/m².

<p>Wildfire</p>	<p>Shop C & D, G/F., Riviera Mansion, 59-65 Paterson Street, Causeway Bay, Hong Kong.</p> 	<p><0.003</p>	<p><0.03%</p>
<p>Cityplaza</p>	<p>Near Lift Lobby, 6/F, City Plaza One, 1111 King's Road, Taikoo Shing</p> 	<p><0.003</p>	<p><0.03%</p>

PCCW payphone kiosk	<p>Kiosk ID1302, Junction of Johnston Road / Fleming Road</p> 	0.0097 / 0.0102	0.097% / 0.102%
PCCW payphone kiosk	<p>Kiosk ID1494, Outside Century HK Hotel, 253 Lock Hart Road, Wan Chai</p> 	0.0637 / 0.0806	0.637% / 0.806%

<p>Délifrance</p>	<p>Shop G04, Shui On Centre, 6-8 Harbour Road, Wan Chai</p> 	<p><0.003</p>	<p><0.03%</p>
<p>China Construction Bank</p>	<p>G/F, China Construction Bank, CCB Tower, 3 Connaught Road Central</p>	<p>0.0058 / 0.0082</p>	<p>0.058% / 0.082%</p>
<p>The HK Jockey Club - Betting Branch</p>	<p>Shop A-D, G/F, New Spring Garden Mansion, No.59-65 Spring Garden Lane, Wan Chai</p> 	<p>0.0072 / 0.0195</p>	<p>0.072% / 0.195%</p>

<p>Java Road Market Cooked Food Centre</p>	<p>2/F, Java Road Market Cooked Food Centre, 99 Java Road, North Point, HK</p> 	<p>0.0062 / 0.0087</p>	<p>0.062% / 0.087%</p>
<p>Times Square</p>	<p>G/F, Times Square, 1 Matheson Street, Causeway Bay, Hong Kong</p> 	<p><0.003</p>	<p><0.03%</p>

Ice Palace	<p>1/F, Cityplaza, 18 Taikoo Shing Road, Taikoo Shing, Quarry Bay</p> 	<0.003 / 0.0087	<0.03% / 0.087%
Pret A Manger – Queen’s Road East	<p>Shop 1, G/F, Garden East, 222 Queen's Road East, Wan Chai.</p>	0.0095 / 0.0111	0.095% / 0.111%
Hong Kong City Hall	<p>Low Block, 5 Edinburgh Place, Central, Hong Kong</p> 	<0.003 / 0.0057	<0.03% / 0.057%

HSBC Premier

Shop 2A, 2/F, Hopewell Centre,
183 Queen's Road East, Wan Chai,
Hong Kong

<0.003

<0.03%



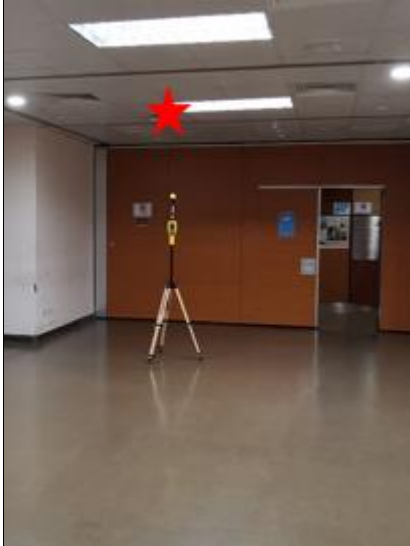

Hong Kong Central
Library

2/F, Children's Library

<0.003 / 0.0038

<0.03% / 0.038%



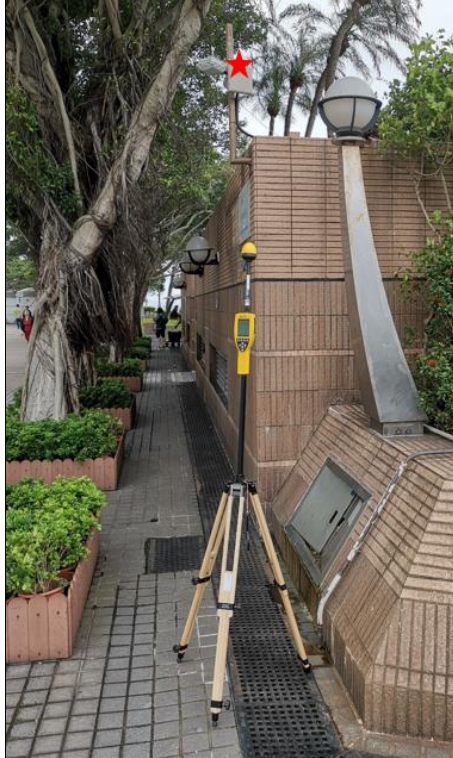
<p>Wan Chai Activities Centre</p>	<p>Room 01, LG/F, Wan Chai Market, 258 Queen's Road East, Wan Chai, Hong Kong</p> 	<p><0.003 / 0.0034</p>	<p><0.03% / 0.034%</p>
<p>Sheung Wan Sports Centre</p>	<p>11/F, Sheung Wan Municipal Services Building, 345 Queen's Road Central, Sheung Wan, Hong Kong</p> 	<p>0.0141 / 0.0183</p>	<p>0.141% / 0.183%</p>

Golden Bauhinia Square

Expo Drive, Wan Chai, Hong Kong

<0.003

<0.03%





HK- Macau Ferry Terminal (Inner Pier Passenger Departure Waiting Hall)

Shun Tak Centre, 200 Connaught Road, Sheung Wan



<0.003 / 0.0038



<0.03% / 0.038%



<p>Wanchai Law Courts</p>	<p>Outside Building Management Office, G/F, Lobby, Wanchai Tower, 12 Harbour Road, Wan Chai, Hong Kong</p> 	<p><0.003</p>	<p><0.03%</p>
<p>Lockhart Road Market Cooked Food Centre</p>	<p>2/F, 225 Lockhart Road, Wan Chai</p> 	<p>0.0072 / 0.0089</p>	<p>0.072% / 0.089%</p>

Kowloon (29 locations)

Pacific Coffee	Shop 26 & 27, On Basement 2, Langham Place, 8 Argyle Street, MongKok	<0.003	<0.03%
Circle K	<p>G/F, 50 & 52 Pitt Street, Yau Ma Tei, Kowloon</p> 	<0.003	<0.03%
7-Eleven	<p>Shop G01A & G01B, G/F, Oi Man Shopping Centre, Ho Man Tin</p> 	<0.003	<0.03%

Starbucks Coffee	<p>G/F, Auditoria Building, HK Cultural Centre</p> 	<0.003	<0.03%
Langham Place	<p>L4, Food court, Langham Place, 555 Shanghai Street, Mongkok</p> 	<0.003 / 0.0033	<0.03% / 0.033%

KMB Bus Terminus

Bus Shelter, 105 Nathan Road,
Tsim Sha Tsui

0.0220 / 0.0276

0.220% / 0.276%

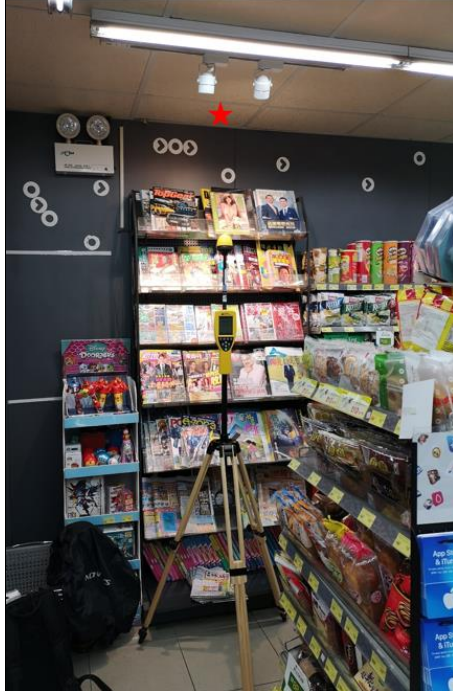




VanGO



Shop 12, G/F, Man Wai Building,
Ferry Point, Yau Ma Tei, Kowloon



<0.003 / 0.0036

<0.03% / 0.036%







<p>Elements</p>	<p>North Entrance, 1/F, Elements, 1 Austin Road West, Tsim Sha Tsui, Kowloon</p> 	<p><0.003</p>	<p><0.03%</p>
<p>The HK Jockey Club - Betting Branch</p>	<p>Shops G15, M20, 116 and 213 Kwun Tong Plaza, 68 Hoi Yuen Road, Kwun Tong</p> 	<p>0.0034 / 0.0106</p>	<p>0.034% / 0.106%</p>



<p>KMB Bus Terminus</p>	<p>Bus Shelter, Salisbury Road, East Tsim Sha Tsui Railway Station</p> 	<p><0.003 / 0.0074</p>	<p><0.03% / 0.074%</p>
<p>Queen Elizabeth Hospital</p>	<p>4/F, Ambulatory Care Centre, Queen Elizabeth Hospital, 30 Gascoigne Road, Kowloon</p> 	<p><0.003 / 0.0266</p>	<p><0.03% / 0.266%</p>

<p>Kowloon City Plaza</p>	<p>Inside shopping mall, 128 Carpenter Road, Kowloon City</p> 	<p><0.003 / 0.0048</p>	<p><0.03% / 0.048%</p>
<p>Ho Man Tin Estate</p>	<p>Outside Security Room, G/F, Nga Man House, Oi Man Estate, Ho Man Tin</p> 	<p><0.003</p>	<p><0.03%</p>

<p>Oi Man Estate</p>	<p>Outside Security Room, G/F, Kar Man House, Oi Man Estate, Ho Man Tin</p> 	<p><0.003</p>	<p><0.03%</p>
<p>Kwun Chung Market Cooked Food Centre</p>	<p>2/F, Kwun Chung Municipal Services Building, 17 Bowring Street, Yau Ma Tei, Kowloon</p> 	<p><0.003 / 0.0055</p>	<p><0.03% / 0.055%</p>

<p>Caritas Medical Centre</p>	<p>A&E Department, G/F Wai Shun Block, 111 Wing Hong Street, Sham Shui Po</p> 	<p>0.0037 / 0.0106</p>	<p>0.037% / 0.106%</p>
<p>Caritas Medical Centre</p>	<p>Specialty Out-Patient Clinic Department, 3/F Wai Ming Block, 111 Wing Hong Street, Sham Shui Po</p> 	<p>0.0033 / 0.0074</p>	<p>0.033% / 0.074%</p>

Lok Kwan Street Park	Lok Kwan Street, Mong Kok, Kowloon 	<0.003 / 0.0280	<0.03% / 0.280%
Hong Kong Tourism Board - Kowloon Visitor Centre	Star Ferry Concourse, Tsim Sha Tsui, Kowloon 	<0.003	<0.03%

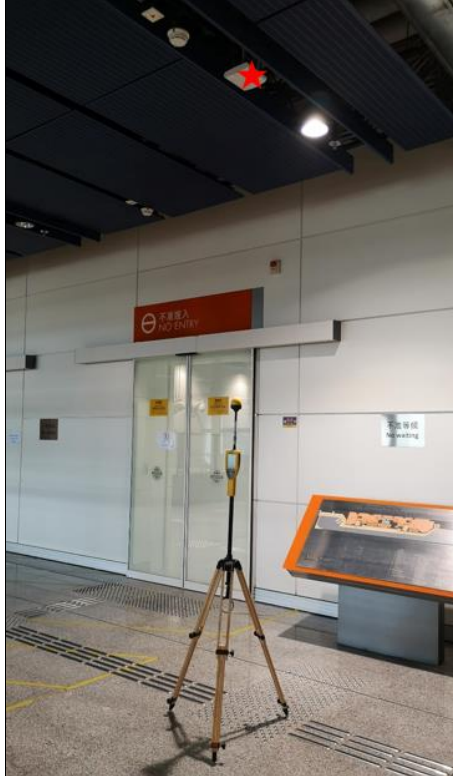
<p>City University of Hong Kong</p>	<p>The Podium (4/F), Academic 1</p> 	<p><0.003</p>	<p><0.03%</p>
<p>Bank of China</p>	<p>G1, Kwun Tong Plaza, 68 Hoi Yuen Road, Kwun Tong, Kowloon</p> 	<p>0.0034 / 0.0106</p>	<p>0.034% / 0.106%</p>

Kai Tak Cruise Terminal

G/F, Custom Hall, near Hong Kong Tourism Board

<0.003 / 0.0036

<0.03% / 0.036%



2/F, Waiting Hall B, near escalator

<0.003 / 0.0035

<0.03% / 0.035%



Kai Tak Cruise Terminal (Cont'd)

2/F, North Terrace, near Shop N205

0.0050 / 0.0079

0.050% / 0.079%





Student Finance Office (TITKT)

4/F, Trade and Industry Tower, 3 Concorde Road, Kowloon

<0.003 / 0.0090

<0.03% / 0.090%



<p>Mikiki</p>	<p>638, Prince Edward Road East, San Po Kong, Kowloon</p> 	<p><0.003</p>	<p><0.03%</p>
<p>Hong Kong Heritage Discovery Centre</p>	<p>Kowloon Park, Haiphong Road, Tsim Sha Tsui</p> 	<p><0.003 / 0.0031</p>	<p><0.03% / 0.031%</p>

Kowloon East
Government Office

12 Lei Yue Mun Road, Kwun
Tong

<0.003 / 0.0032

<0.03% / 0.032%

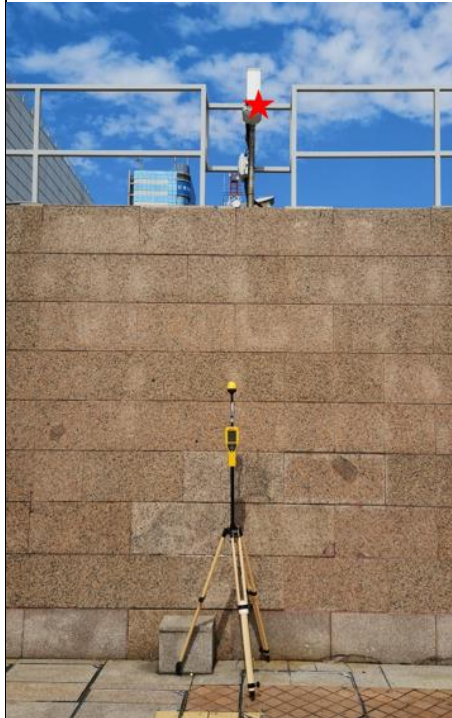




Kowloon Park

Near Piazza, Kowloon Park

0.0120 / 0.0195

0.120% / 0.195%



Hung Hom Promenade	<p>At Lamp Post LP27, Hung Hom (South) Ferry Pier, Hung Hom, Kowloon</p> 	0.0064 / 0.0068	0.064% / 0.068%
Tao Heung	<p>Shop No. S150-153. 2F. Phase 1. Amoy Plaza. 77 Ngau Tau Kok Road. Kowloon</p> 	0.0037 / 0.0055	0.037% / 0.055%

New Territories (18 locations)

AsiaWorld-Expo

Opposite Arena Kitchen, 1/F, Asia World Expo, Hong Kong International Airport, Lantau

<0.003 / 0.0040

<0.03% / 0.040%



Eu Yan Sang Hong Kong


Shop F7, Level 1, Luk Yeung Galleria, 22-66 Wai Tsuen Road, Tsuen Wan, New Territories



<0.003 / 0.0162



<0.03% / 0.162%



<p>Hong Kong Disneyland</p>	<p>Hong Kong Disneyland</p> 	<p><0.003</p>	<p><0.03%</p>
<p>Pacific Coffee</p>	<p>Shop 243, Citygate Outlets, Tat Tung Road, 20, Tung Chung, Lantau Island</p> 	<p><0.003 / 0.0051</p>	<p><0.03% / 0.051%</p>

<p>Tung Chung Cable Car Terminal</p>	<p>11 Tat Tung Road, Tung Chung, Lantau, Hong Kong</p> 	<p><0.003</p>	<p><0.03%</p>
<p>Luk Yeung Galleria</p>	<p>Near Escalator E90, L2, Luk Yeung Galleria, 22-66 Wai Tsuen Road, Tsuen Wan</p> 	<p>0.0067 / 0.0146</p>	<p>0.067% / 0.146%</p>

<p>T-Park</p>	<p>10/F, T-Sky, 25 Nim Wan Road, Tuen Mun</p> 	<p><0.003</p>	<p><0.03%</p>
	<p>1/F, T-Hall, 25 Nim Wan Road, Tuen Mun</p> 	<p><0.003</p>	<p><0.03%</p>

<p>T-Park (Cont'd)</p>	<p>G/F, Main Entrance, 25 Nim Wan Road, Tuen Mun</p> 	<p><0.003</p>	<p><0.03%</p>
<p>McDonald's Restaurant</p>	<p>Shop P316, 3/F Kwong Fuk Commercial Centre, Kwong Fuk Estate, 28 Plover Cove Road, Tai Po</p> 	<p>0.0036 / 0.0044</p>	<p>0.036% / 0.044%</p>

<p>Kwai Tsing Theatre</p>	<p>12 Hing Ning Road, Kwai Chung, New Territories.</p> 	<p><0.003 / 0.0031</p>	<p><0.03% / 0.031%</p>
<p>Airport Terminal 1, HK International Airport</p>	<p>Level 7</p> 	<p><0.003 / 0.0040</p>	<p><0.03% / 0.040%</p>

Airport Terminal 1,
HK International
Airport

Level 5



<0.003

<0.03%

Airport Terminal 2,
HK International
Airport

Level 6



<0.003

<0.03%

Airport Terminal 2,
HK International
Airport

Level 5



<0.003

<0.03%



Hong Kong Heritage
Museum



G/F, 1 Man Lam Road, Sha Tin





0.0096 / 0.0102

0.096% / 0.102%

<p>Tsuen Wan Public Library</p>	<p>Tsuen Wan Government Offices, Sai Lau Kok Road, Tsuen Wan</p> 	<p><0.003</p>	<p><0.03%</p>
<p>Sha Tin District Office -Public Enquiry Service Centre</p>	<p>Sha Tin Government Offices, 1 Sheung Wo Che Road, Sha Tin</p> 	<p><0.003</p>	<p><0.03%</p>

<p>Kwai Tsing District Office -Public Enquiry Service Centre</p>	<p>Kwai Hing Government Offices Building, Kwai Hing</p> 	<p><0.003</p>	<p><0.03%</p>
<p>Sha Tin Public Library - Children's Library</p>	<p>1/F, Children's Library, 1 Yuen Wo Road, Shatin</p> 	<p><0.003 / 0.0031</p>	<p><0.03% / 0.031%</p>

<p>Yuen Long Public Library - Children's Library</p>	<p>Children's Library, 1/F, Yuen Long Leisure and Culture Building, 52 Ma Tin Road, Yuen Long, N.T.</p> 	<p><0.003</p>	<p><0.03%</p>
<p>Osman Ramju Sadick Memorial Sports Centre</p>	<p>176, Hing Fong Road, Kwai Chung, New Territories</p> 	<p><0.003</p>	<p><0.03%</p>

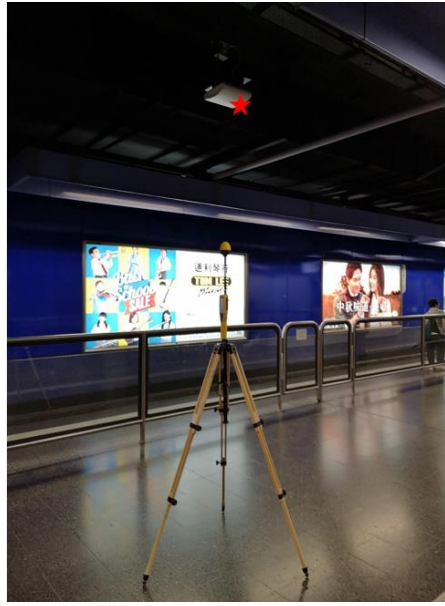
Public Transportation (7 locations)

Shau Kei Wan
MTR Station

Concourse

<0.003 / 0.0038

<0.03% / 0.038%

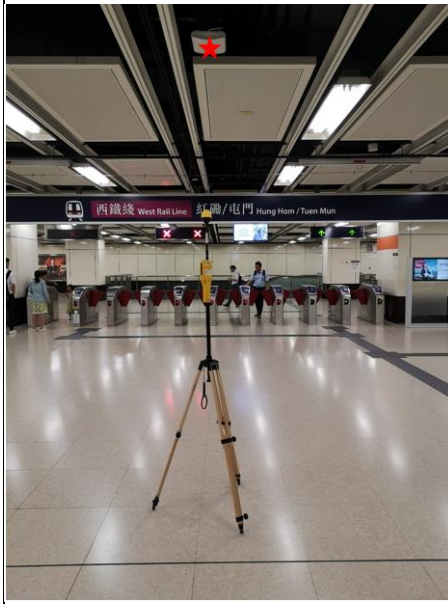




East Tsim Sha Tsui
MTR Station



Concourse



<0.003

<0.03%



<p>Airport Express Train</p>	<p>On board an Airport Express Train</p> 	<p><0.003 / 0.0119</p>	<p><0.03% / 0.119%</p>
<p>City Flyer Bus</p>	<p>On board City Flyer Bus (A11)</p> 	<p><0.003</p>	<p><0.03%</p>

<p>On Board TurboJET</p>	<p>On Board TurboJet (Barca), Lower Deck</p> 	<p>0.0036 / 0.0080</p>	<p>0.036% / 0.080%</p>
<p>Hong Kong West Kowloon Station</p>	<p>Hong Kong West Kowloon Station, 3 Austin Road West, Tsim Sha Tsui</p> 	<p><0.003 / 0.0090</p>	<p><0.03% / 0.090%</p>

<p>Hong Kong-Zhuhai-Macao Bridge Hong Kong Port</p>	<p>1/F, Passenger Clearance Building, 33 Shun Fai Road, Hong Kong-Zhuhai-Macao Bridge Hong Kong Port, Lantau, Hong Hong</p> 	<p><0.003 / 0.0032</p>	<p><0.03% / 0.032%</p>
<p>Hong Kong-Zhuhai-Macao Bridge Hong Kong Port</p>	<p>G/F, Passenger Clearance Building, 33 Shun Fai Road, Hong Kong-Zhuhai-Macao Bridge Hong Kong Port, Lantau, Hong Hong</p> 	<p><0.003</p>	<p><0.03%</p>