



# Telecommunications

## Overview

Hong Kong has one of the most sophisticated and successful telecommunications markets in the world. This has been an important factor in Hong Kong's development as a leading business and financial centre. The telecommunications sector employed around 18 000 persons in 2023, whilst its gross output amounted to HK\$115 billion in 2022.

All sectors of Hong Kong's telecommunications market have been liberalised with no foreign ownership restrictions. The government's objectives are to provide a level playing field in the telecommunications market and ensure that consumers get the best services available in terms of capacity, quality and price.

## The Communications Authority

The Communications Authority (CA) is an independent statutory body established under the Communications Authority Ordinance (Cap. 616) on 1 April 2012, comprising 10 non-officials from various sectors of the community and two public officers. The CA is a unified regulatory body for the broadcasting and telecommunications industries in Hong Kong. It regulates the broadcasting and telecommunications industries in accordance with the Broadcasting Ordinance, Telecommunications Ordinance, Communications Authority Ordinance, Broadcasting (Miscellaneous Provisions) Ordinance, Trade Descriptions Ordinance and Competition Ordinance. It also enforces the Unsolicited Electronic Messages Ordinance.

The Telecommunications Affairs Committee is set up under the CA to offer advice and report to the CA on relevant telecommunications matters.

The Office of the Communications Authority (OFCA), the CA's executive arm and secretariat, helps the CA administer and enforce the relevant ordinances governing the broadcasting and telecommunications industries.

## Local Fixed Carrier Services

The local fixed carrier services market is fully liberalised. There is no pre-set limit on the number of licences issued, nor deadline for applications. Furthermore, there is no specific requirement on network rollout or investment. The level of investment is determined by the market.

As at February 2024, there were 26 licensees permitted to provide local fixed carrier services on a competitive basis. They are PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited, HKBN Enterprise Solutions Limited, HKBN Enterprise Solutions

HK Limited, HGC Global Communications Limited, Hong Kong Broadband Network Limited, Tongas Telecommunications Fixed Network Limited, ComNet Telecom (HK) Limited, TraxComm Limited, HKC Network Limited, Hong Kong Cable Television Limited, Reach Networks Hong Kong Limited and Reach Cable Networks Limited, Telstra International Limited, Verizon Hong Kong Limited, SmarTone Communications Limited, Vodafone Enterprise Hong Kong Limited, Hong Kong Telecommunications (HKT) Limited, China Mobile Hong Kong Company Limited, VNET Group Limited, NTT Com Asia Limited, China Telecom Global Limited, PCCW Global (HK) Limited, Xenith IG Hong Kong Limited, China Unicom (Hong Kong) Operations Limited, Village Telephone Limited, Easy Tone Network Limited and China Mobile International Limited.

As at March 2023, 91.9 per cent and 80.6 per cent of residential households were able to enjoy a choice of at least two and three local fixed networks respectively.

Fixed-line users can make an unlimited number of calls within Hong Kong on payment of a fixed monthly charge. Internet protocol telephony services are also available in the market. Further, under the unified carrier licence jointly held by PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited, the licensee has a universal service obligation to provide a good, efficient and continuous basic service, including the provision of telephone services to consumers anywhere in Hong Kong within a reasonable period of time.

As at February 2024, there were around 3.45 million fixed lines, including about 1.82 million lines for residential customers. The telephone density was about 46 per cent by population or 67 fixed lines per 100 households, which was among the highest in the world.

Local fixed carriers are required to facilitate fixed number portability which enables consumers to switch to another local fixed operator without having to change their telephone numbers.

## Fixed Broadband Services

Fixed broadband Internet access services are very popular in Hong Kong. With the increased competition and coverage of broadband service using asymmetric digital subscriber line (ADSL), fibre-to-the-building (FTTB) / fibre-to-the-home (FTTH), hybrid fibre coaxial cable and other technologies, broadband networks cover virtually all commercial buildings and households. As at February 2024, there were 312 Internet service providers licensed to provide broadband services, and about 2.96 million registered fixed broadband service subscriptions. Fixed broadband services are currently available at speeds up to 10 Gbps (Gigabits per second). In the residential market, 97.4 per cent of the households are using fixed broadband service. The local FTTH/B residential unit coverage rate has reached 91.4 per cent. Hong Kong ranked third out of 83 economies in terms of FTTH/B household penetration according to a report published by the Fibre to the Home Council Europe in 2024. In addition, the Speedtest Global Index published by Ookla ranked Hong Kong top three globally during the period from July to December 2023 with the median upload and download speeds over fixed broadband at 189.77 Mbps and 266.63 Mbps respectively. The Affordability of ICT Services 2023 report jointly issued by the International Telecommunication Union and the Alliance for Affordable Internet ranked Hong Kong the seventh in fixed broadband affordability globally out of 194 economies.

Operators have been actively providing services with Wi-Fi networks. As at February 2024, there were 85 847 public Wi-Fi hotspots in the city. Free Wi-Fi services were available to the public in 1 629 government premises.

## External Telecommunications Services

As at February 2024, there were 192 licensees authorised to provide external telecommunications services (ETS) in Hong Kong.

International Direct Dialing (IDD) service to most countries and regions of the world is available. In 2023, the traffic minutes of outgoing and incoming IDD calls were 807 million and 506 million respectively.

Competition has resulted in a substantial reduction in IDD call rates and improved quality of services.

## External Telecommunications Facilities

As at February 2024, there were 39 licensees permitted to operate either external cable or non-cable based facilities for the provision of external telecommunications services.

Hong Kong adopts the open sky policy in regulating the provision of satellite services. Satellite-based telecommunications and television broadcasting services are provided via a multitude of satellites in the region with more than 160 transmitting/receiving satellite antennae in earth stations operated by a number of fixed carriers. As at February 2024, there were two licensees operating

nine satellites for the provision of satellite communications services.

As a major telecommunications and internet hub in the region, Hong Kong has eight submarine cable landing stations connected to 12 regional and transcontinental submarine cable systems. The landing stations also connected to the Mainland via 24 overland cables. As at December 2023, the total equipped capacity of external telecommunications facilities was over 239 306 Gbps.

## Mobile Services

Competition in public mobile services is vibrant. Currently, there are four major mobile network operators, namely China Mobile Hong Kong Company Limited, Hong Kong Telecommunications (HKT) Limited, Hutchison Telephone Company Limited and SmarTone Mobile Communications Limited, providing a wide range of public mobile services. The availability of mobile number portability service since March 1, 1999 has contributed to promoting effective competition among the mobile network operators as it allows customers to retain their telephone numbers when they switch to another mobile network operator.

In February 2024, the number of mobile service subscriptions was 24.95 million, remaining one of the highest penetration rates<sup>#</sup> in the world at 324 per cent. Among them, 24.94 million were 3G/4G/5G service subscriptions. According to the Affordability of ICT Services 2023 report, Hong Kong ranked first in mobile-voice affordability globally out of 208 economies and ranked second in mobile broadband affordability globally out of 207 economies.

Other than basic voice services, mobile data services are very popular among consumers. In February 2024, monthly local mobile data usage surged to 186 940 Terabytes, or an average of about 24 763 Megabytes per capita<sup>#</sup>. This represents a growth of 1.31 times in the mobile data usage over the same period in 2023.

The four major mobile network operators launched their 5G services from April 2020 utilising New Radio (NR) technology. With enhanced Mobile Broadband (eMBB) in 5G technology, mobile service subscribers are able to enjoy data download speed of up to 20 Gbps<sup>##</sup>. Together with massive Machine Type Communications (mMTC) and Ultra Reliable and Low Latency Communications (URLLC), 5G technology is changing our mode of communications and enables the development of various innovative applications.

## Office of the Communications Authority June 2024

<sup>#</sup> Calculations of mobile penetration rate and mobile data usage per capita do not include machine type connections.

<sup>##</sup> The ITU has set the targeted download speed for eMBB under ideal circumstances at 20 Gbps. However, the actual data download speed will be affected by various factors including but not limited to the number of subscribers, user devices, network coverage, frequency bands and amount of spectrum used, network settings, network traffic, etc.