# 5G啟發無限可能
# 5G Makes the Impossible Possible

## 香港的5G覆蓋
## 5G Coverage in Hong Kong

- 自2020年4月推出5G商用服務後，香港目前的5G網絡覆蓋率已逾九成人口，包括所有主要商業區、商場及港鐵站。

  Since the commercial launch of 5G services in April 2020, 5G coverage in Hong Kong has reached over 90% of the population, covering all major business districts, shopping centres and Mass Transit Railway stations.

- 5G技術的獨特之處在於支援超高速、低時延及大規模機器類型通訊，因此可供個人用戶和商界作廣泛應用。

  The unique characteristics of 5G technology which supports ultra high speed, low latency and massive scale of machine type communications empower a wide spectrum of applications by individual users and business sectors.

## 5G特性
## 5G Characteristics


### 增強型流動寬頻
### Enhanced Mobile Broadband

支援高速*數據下載傳輸速度
Supporting very high data download speed*




在數秒內下載一部高解像度電影
Download of a high-definition movie in seconds




支援360度視像串流
360-degree video streaming

*國際電信聯盟(ITU)把eMBB在理想條件下的目標下載速度定為每秒20吉比特，然而實際數據下載速度會受多種因素影響(包括但不限於用戶人數、用戶裝置、網絡覆蓋、使用頻帶及頻譜數量、網絡設定、無線電傳輸質素及網絡流量等)。

*The International Telecommunication Union (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, quality of radio transmission and network traffic).

### 超可靠和低時延通訊
### Ultra Reliable and Low Latency Communications

支援關鍵應用系統和時延時間低至一毫秒的低時延通訊
Supporting mission critical applications and low latency communications with delay as low as 1 ms



遙距診症及遙距手術
Remote medical consultations and remote surgery



遙距控制位處偏遠地點的設備
Remote control of equipment in relatively inaccessible areas

### 大規模機器類型通訊
### Massive Machine Type Communications

支援一平方公里範圍內達100萬個機器類型裝置的通訊
Supporting communication of up to 1 million machine-type devices within 1 km$^2$



智能家居及智能大廈
Smart home and buildings



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To know more, watch the short video.

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## 5G的應用
## 5G Applications

### 用於STEM教育的5G智能農場系統
### 5G Smart Farming System for STEM Education

系統讓學生透過實時收集及分析植物數據，監察不同種類水耕植物的生長。

It enables students to monitor the growth of different hydroponic plants through real-time collection and analysis of plant data.

### 5G遙距操作輪胎式龍門架吊機操作系統
### 5G Rubber-tyred Gantry Crane Remote Operation System

系統讓吊機操作員於控制中心遙距操作吊機，進行起吊或卸下貨櫃箱的工序。

It facilitates crane operators to remotely control the cranes in the control centre, for loading and unloading containers.

### 5G智能乘客人流分析系統
### 5G Smart Passenger Flow Analysis System

系統收集巴士轉車站候車乘客的實時數據，靈活地調配巴士班次，以應付乘客需求。

It collects real-time data of passengers waiting at bus interchanges for more flexible deployment of buses in response to passenger demand.

### 5G體溫篩查機械人
### 5G Body Temperature Robot

機械人在指定場所進行非接觸式體溫檢測、監測社交距離、檢測未有佩戴口罩的人士，及發放健康資訊。

It is deployed at designated premises for contactless body temperature checking, monitoring social distancing, detecting people without wearing a mask, and disseminating health care information.

## 通訊局為促進香港5G服務持續發展的工作
## Work of the CA to Facilitate Continued Development of 5G Services in Hong Kong

在2019至2022年間，通訊事務管理局（通訊局）已向流動網絡營辦商指配位於低、中及高頻帶合共超過2100兆赫的新無線電頻譜，以供5G服務發展。另外，按技術中立的頻譜指配原則，流動網絡營辦商亦可自行重整其已獲指配的頻譜以提供5G服務。通訊局會繼續留意市場和技術發展，適時發放頻譜以滿足公眾對5G服務的需求。

From 2019 to 2022, the Communications Authority (CA) has assigned more than 2100 MHz of new spectrum in low, mid and high frequency bands to mobile network operators (MNOs) for the development of 5G services. Under the technology-neutral approach in spectrum assignment, MNOs can also freely refarm the spectrum previously assigned to them for the provision of 5G services. The CA will continue to monitor the market and technological developments, releasing spectrum in a timely manner to meet public demand for 5G services.

5G 專題網站
5G Thematic Website


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