台股企業日-正文科技

Oct, 2020

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Wireless Broadband Anywhere

安全港條款

- **The following presentation may contain forward-looking statements regarding, among other things, our financial condition, future expansion plans and business strategies based on our current expectations and projections about future events. Although we believe that these expectations and projections are reasonable, such forward-looking statements are inherently subject to risks, uncertainties and assumptions.**

- **The company undertakes no obligation to publicly update or revise any forward-looking statements whether as a result of new information, future events or otherwise. The actual results could differ materially from those contained in these forward-looking statements.**

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正文科技公司簡介

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關於正文

- 成立時間: 1988
- 地點: 新竹工業區(總部)
- 全球員工人數:≈ 4,000 (TWN: 1,000)
- 資本額: NT$35.6 億元 (US$1.2 億元)

Certified Sites:

ISO 9001
ISO 14001
ISO 13485
OHSAS 18001
TL9000
C-TPAT

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正文越南廠

- 開幕日期: 2019/02/20
- 地點 : Dong Van II Industrial Park, Bach Thuong Commune, Duy Tien District, Ha Nam Province, Vietnam

Land : 36,000 m^2

Building : 26,000 m^2

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越南廠外觀

正門

內部

外部

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2020 Q2
財務數字

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2020 Q2 損益表

Units: NT$ Thousands; Consolidated

	Apr 1 - June 30 2020		Apr 1 - June 30 2019	
	Amount	%	Amount	%
Sales Revenue (k)-	5,651,465	100%	5,492,557	100%
Gross Profit(K)	623,035	11%	516,423	10%
Operating Income	176,054	3%	74,517	2%
Non-Operating income and expense	44,811	1%	69,678	1%
Net Profit After Tax (k)	170,588	3%	108,393	2%
EPS after tax	0.43		0.3	

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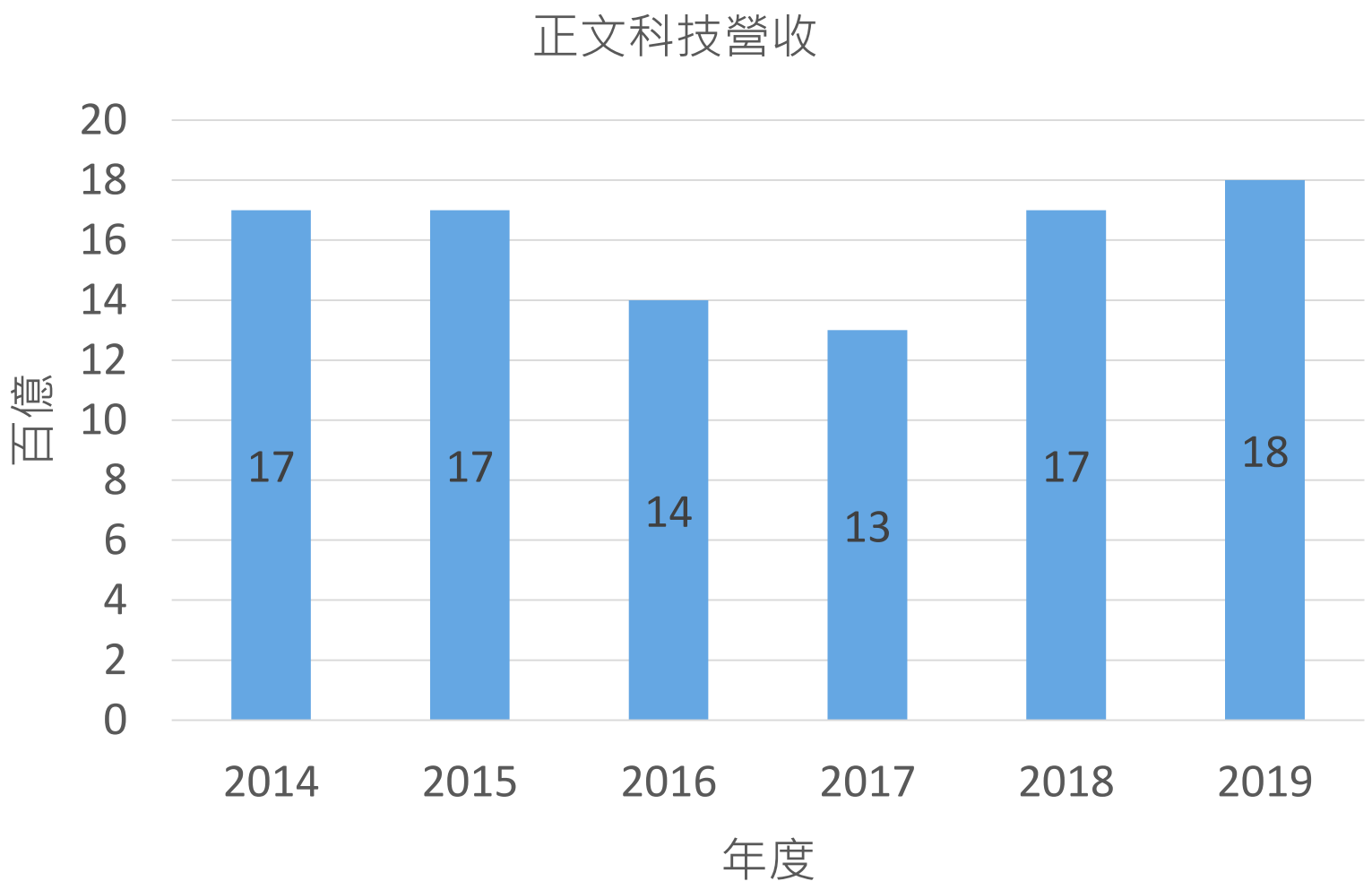
近六年營收



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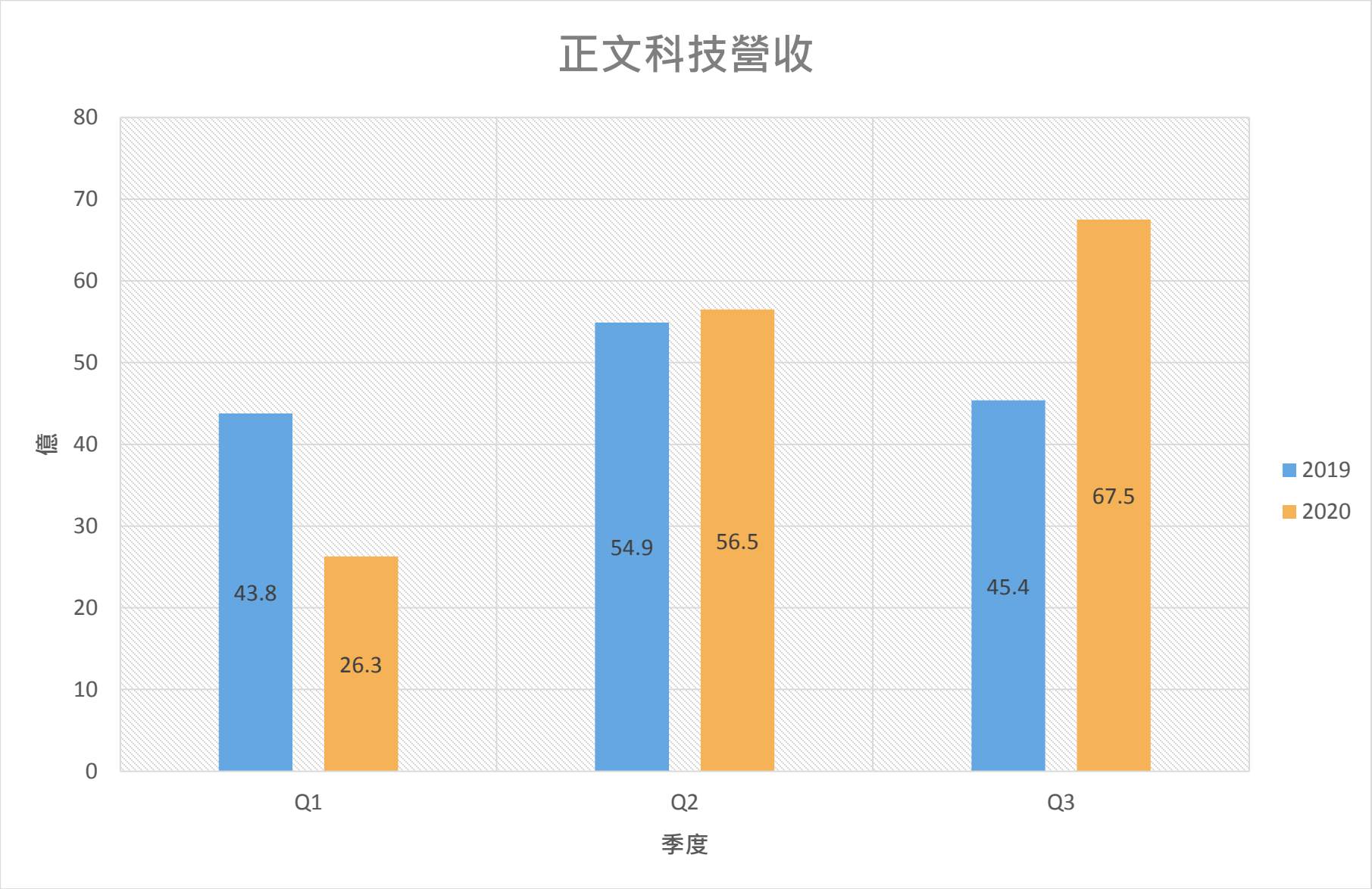
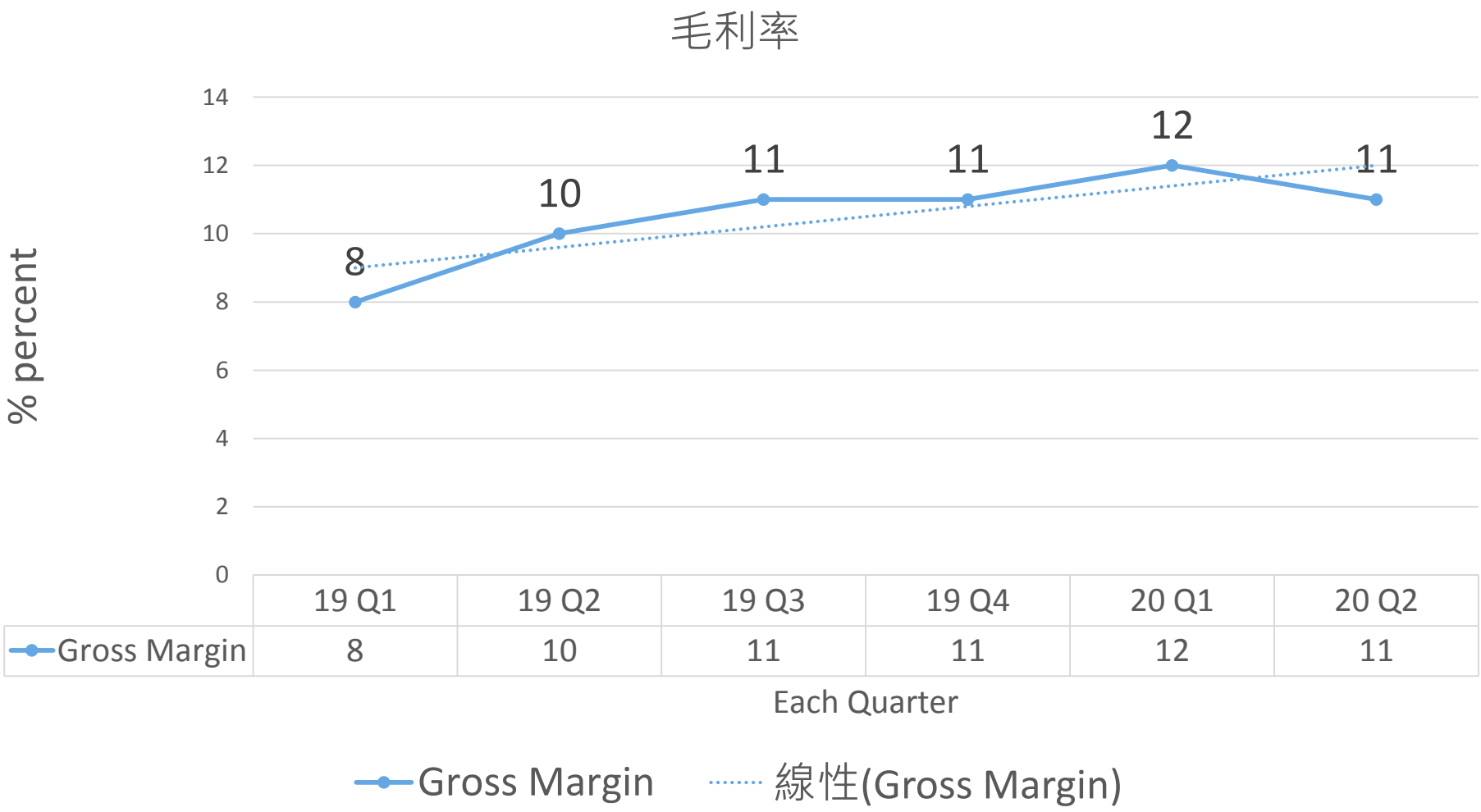
2020 營收比較


正文科技營收
80
70
60
50
40
30
20
10
0
億
43.8
26.3
54.9
56.5
45.4
67.5
Q1
Q2
Q3
季度
2019
2020

2019-2020 各季度毛利



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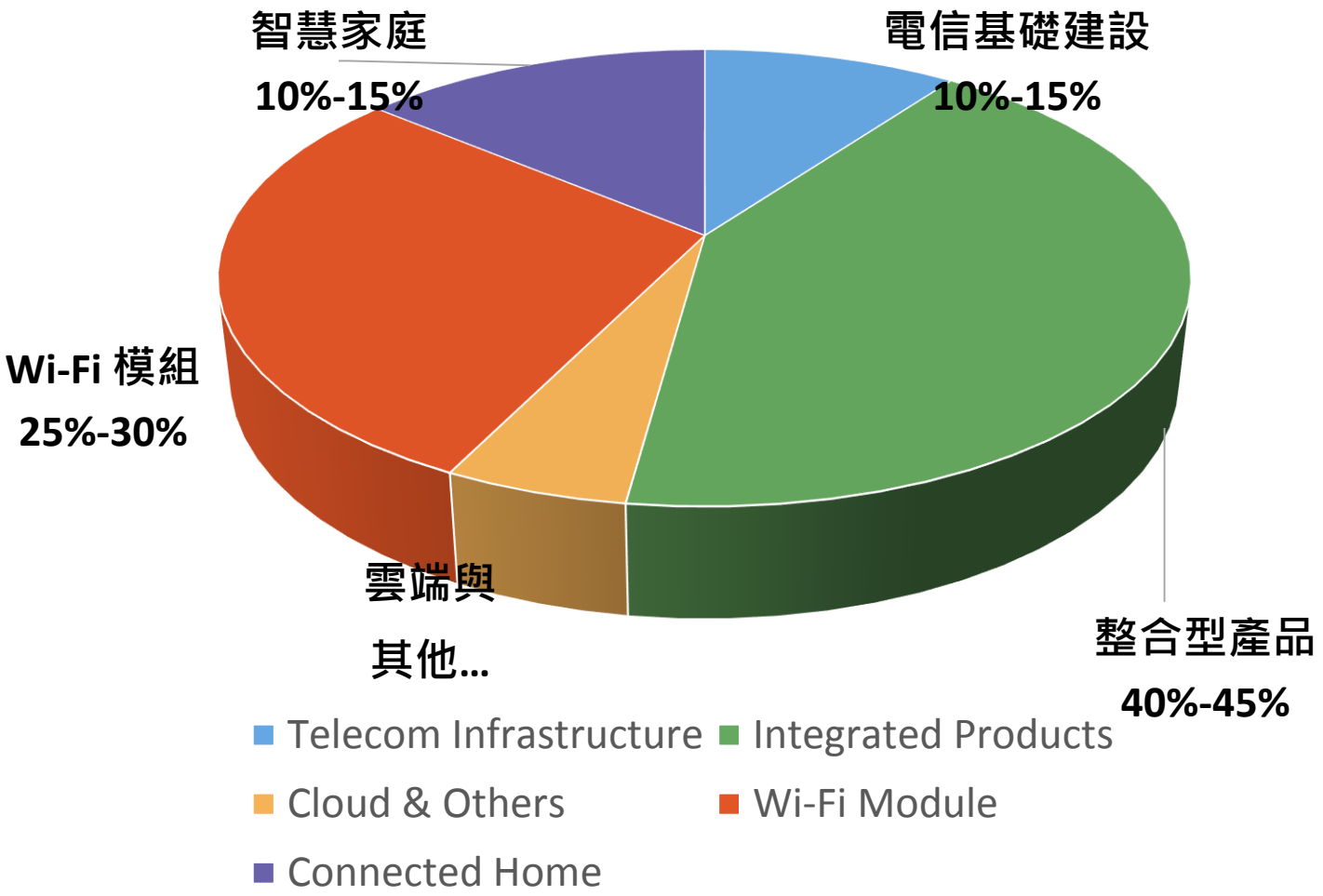
2020 上半年產品佔比



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整合型產品

近況

Broadband:
DSL, Cable, PON

IP STB

MOSTLY STB PRODUCTS

BULK SHIPMENT

未來展望

- Broadband Gateway with 11ax
- GPON Router
- 10G EPON
- XGS-PON
- NG-PON2

NEW PRODUCTS

NEW CUSTOMERS

TELECOM MARKET

電信基礎建設

近況

- 4G LTE CPE Mass Produce

- LTE Small Cell For Private Network

- 5G CPE (Sub-6) Start Shipping

未來展望

- 5G Products Start to MP
- Customers Will Have Better chance to Compete with Huawei in Telecom Markets

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智慧家庭

近況

- Wi-Fi 5 → Wi-Fi 6
- Work From Home Brings New Demand

未來展望

Wi Fi 6E CERTIFIED

- Wi-Fi 6 & Wi-Fi 6E Products
- AP, Router, Repeater
- CPE with Wi-Fi 6

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Wi-Fi 模組

近況

Spin-Off

AMPAK TECHNOLOGY INC.

未來展望

WiFi 6E

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雲端與其他

近況

LoRa Temperature & Humidity Sensor

Cat M1/NB1 Car Tracker

System Integrated Software Combined With Hardware

- **LoRa/NB-IoT/ Cloud Technologies**

未來展望

LoRa

- **LoRa/NB-IoT Products**
- **Cloud/Network Management System**

網通產業發展趨勢-5G

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5G 頻段比較

Source: DIGITIMES

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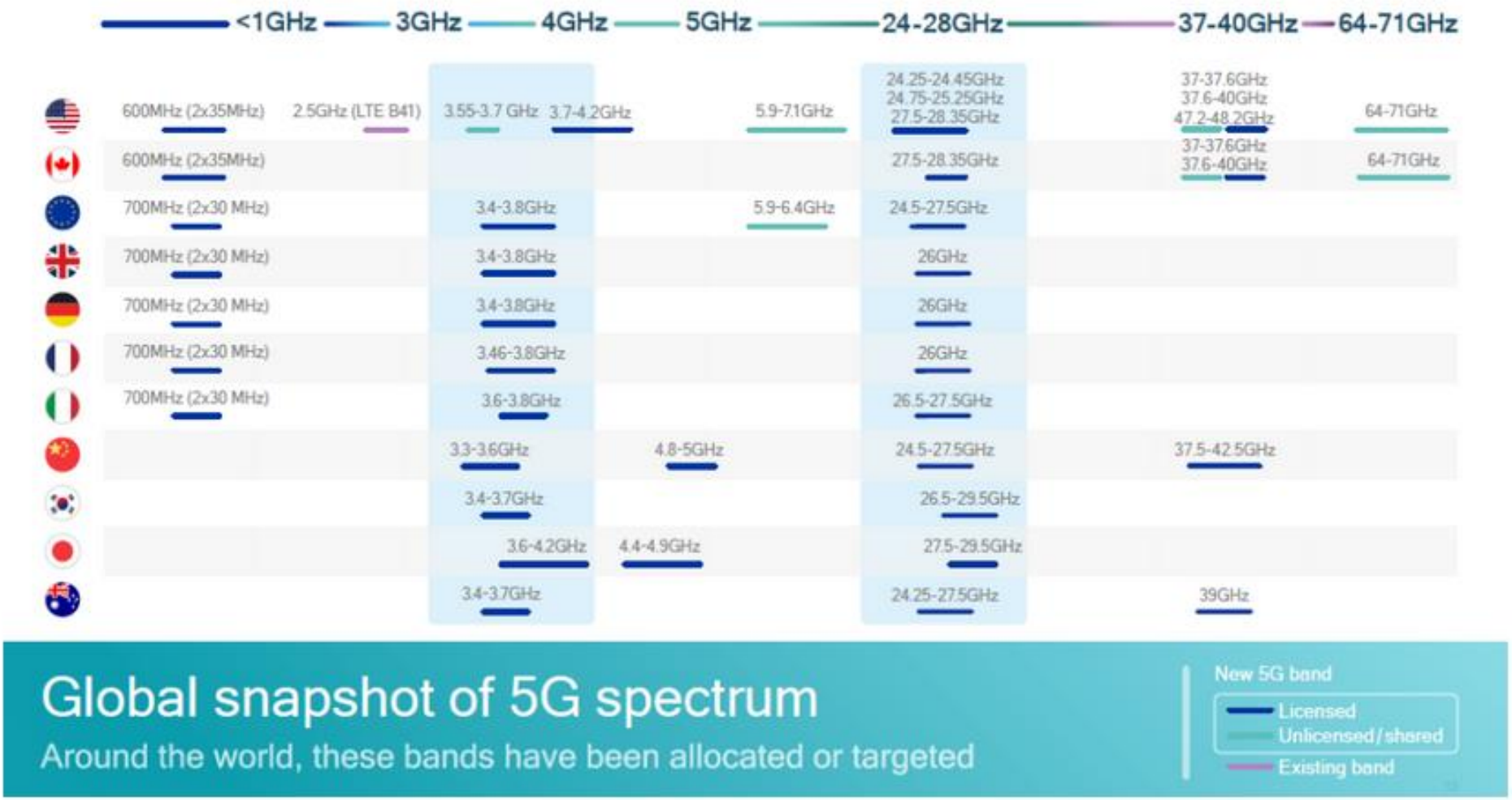
5G 頻段



Source: https://www.everythingrf.com/community/5g-frequency-bands

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5G 產業機會

- 基礎建設布建需求
- 軟硬體整合應用
- 關鍵零組件
- EX: RF, 天線, RF 前端模組

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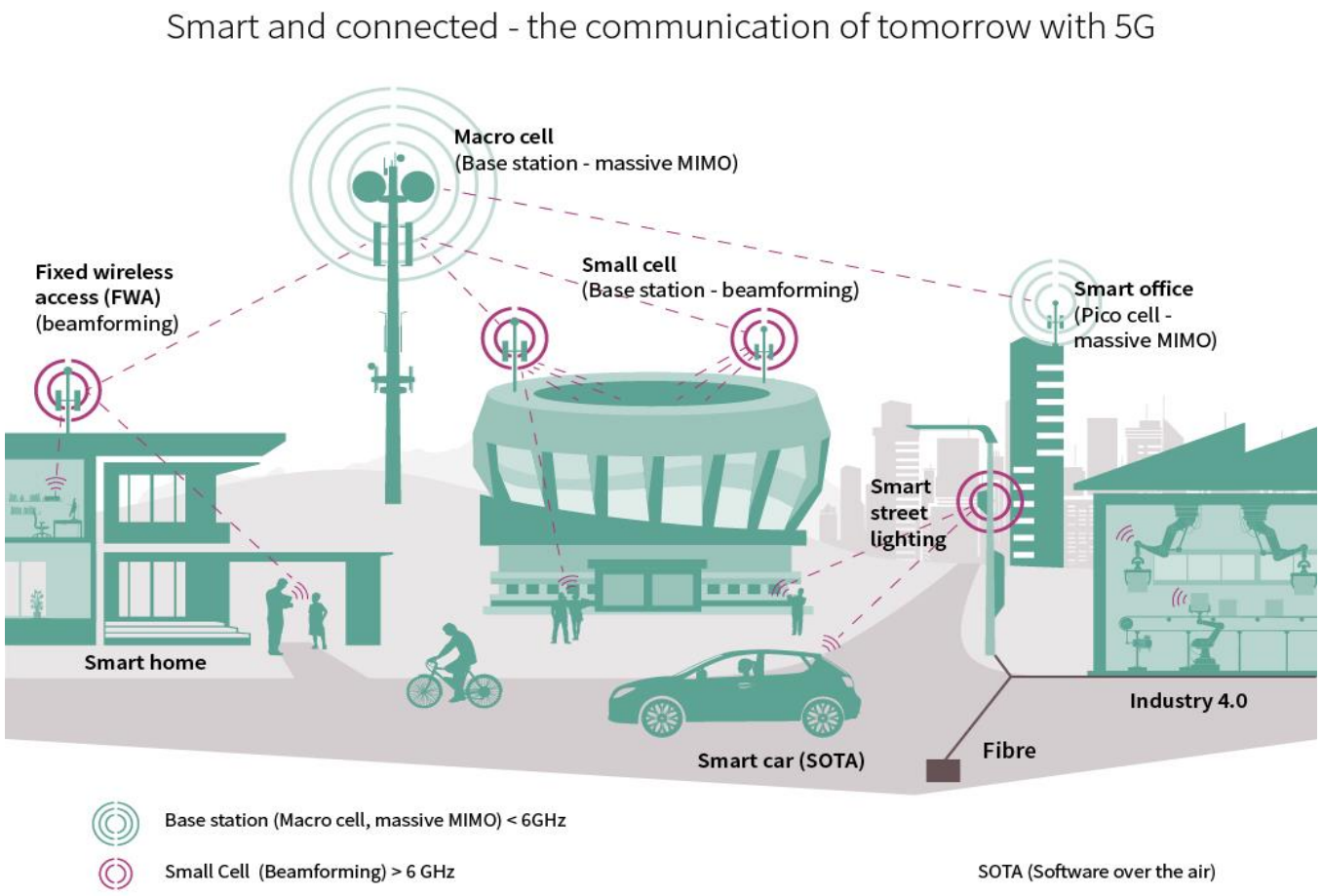
電信基礎建設



Base Station

Small Cell

Mobile Terminal Equipment

Fixed Terminal Equipment

Switch

MERC

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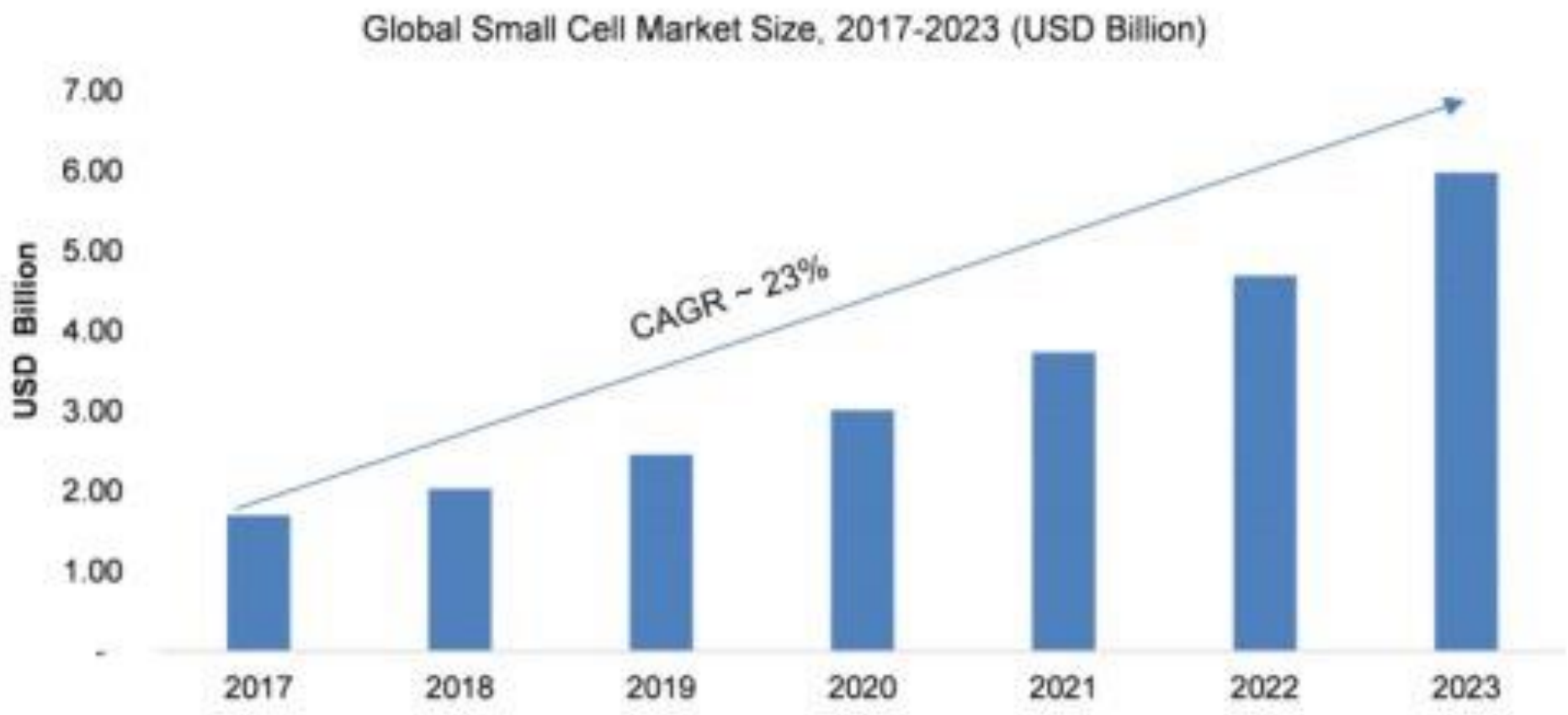
電信基礎建設 - 小細胞基站市場



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正文科技小型基站產品

LTE Single mode

Outdoor Small Cell

Pre-5G band (Sub 6G, i.e. 3.5GHz)

- ~64 or ~128 simultaneous calls
- Band: FDD, TDD includes CBRS and 5G New Radio (3.5GHz, Sub 6G, and 28GHz)
- MIMO and SON, all in one with EPC and HSS

mmWave Small Cell

In Developing with partners
5G band (mmWave)

- 26.5 ~ 28.5 GHz operation
- TDD only
- Fast beam update rate

Gemtek Small Cell

Outdoor Small Cell

Pre-5G band (CBRS)

- Support up to 32 UEs connected
- Band: FDD, TDD includes CBRS
- Support Gemtek EMS system for Remote Management

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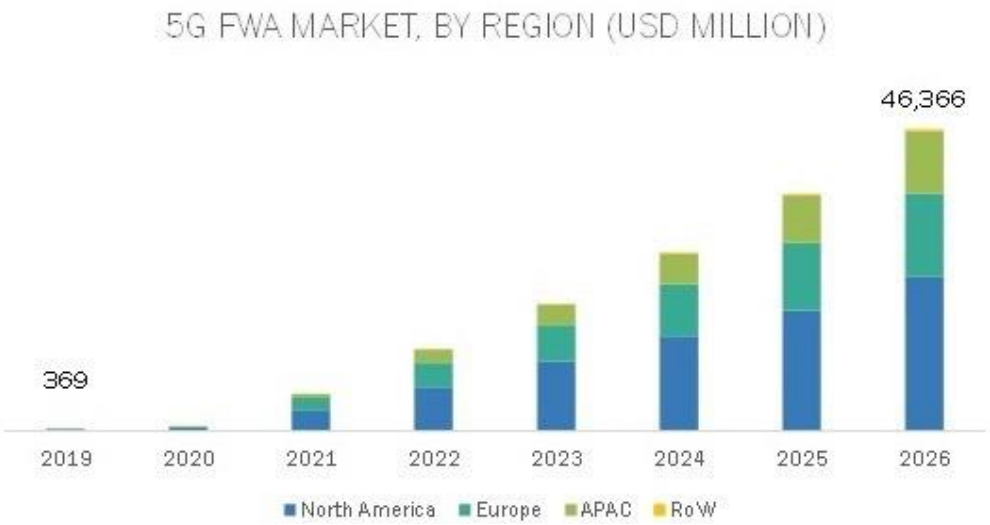
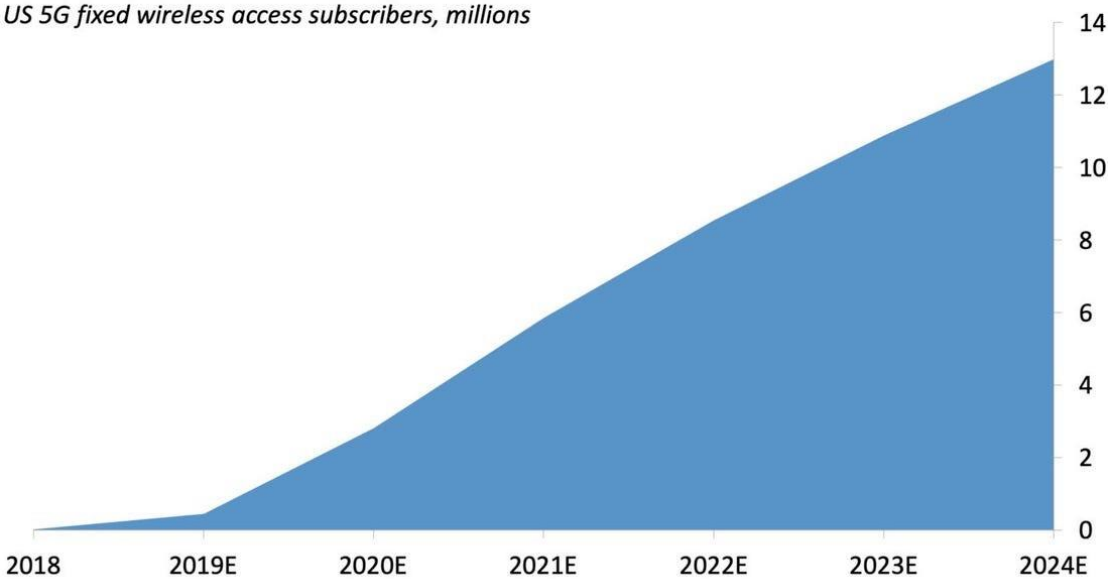
固定終端設備市場



MARKETSANDMARKETS

5G Poised To Shake Up Home Internet Through Fixed Wireless Access

US 5G fixed wireless access subscribers, millions



Source:
Business Insider

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LTE CPE Roadmap with 5G NR – 室內型

Gigabit LTE CPE

- Cat 16 : 4x4+2CA ; ULCA
- 2.xGHz TDD + FDD
- LTE 1T4R
- 2GE + 1RJ-11 + AC1200
- Cat 20 or beyond upon module availability
- **Pre -5G**

5G NR CPE

- 2Gbps LTE
- FDD/TDD NR (sub 6G)
- 11AX 4x4 DBDC
- Multi-Giga (2.5G)

Ready in 2020

4x4 Cat 4

- Cat 6 : 4x4 or 2CA
- FDD (EU / LATAM)
- 4GE + 1 RJ-11 + AC1200

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LTE CPE Roadmap – 戶外型

Cat 12 HE Outdoor

- Cat 12 : DL 4x4+2CA + UL CA
- TDD only (3.xGHz or 2.xGHz)
- LTE 2T/4R
- 1GE + GPS + IP67 + Full Industrial
- **Official CBRS**

5G NR Outdoor

- TDD 3.5GHz/ 2.5GHz
- 1GE + GPS + IP67 + Full Industrial
- Multi-Giga (2.5G)
- PoE IDU (Voice + 4x4 AX)

Ready in 2020

Cat 12 LE Outdoor + IAD

- Cat 12 : DL 4x4+2CA + UL CA
- TDD only (3.xGHz)
- LTE 2T/4R
- 1GE + IP55+ Light Industrial
- PoE IDU (Voice + AC1200)

Gigabit Outdoor

- Cat 16 : 4x4+2CA ; ULCA
- TDD + FDD
- LTE 1T4R
- 1GE + GPS + IP67 + Full Industrial
- PoE IDU (Optional)
- **Pre-5G**

MP / Developing/Planning

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電信基礎建設 – 高速交換器 Switch

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軟硬整合應用 – 軟硬體整合應用

- Need gateway
- Hard to set up

- Built-in 5G connection
- Easy to set up
- Plug and Play

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軟硬整合應用 - AIoT

IoT裝置進入5G世代的主流應用

家居與辦公室自動化

智慧電表與智慧能源

健康照護與智慧醫療

安全追蹤與智慧交通

自駕車與工業4.0應用

Source: DIGITIMES

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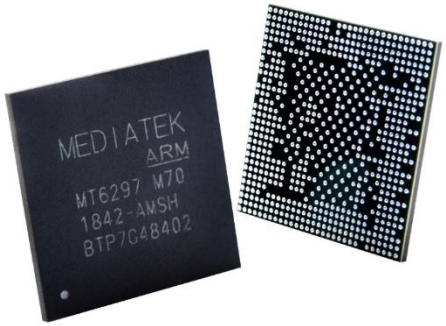
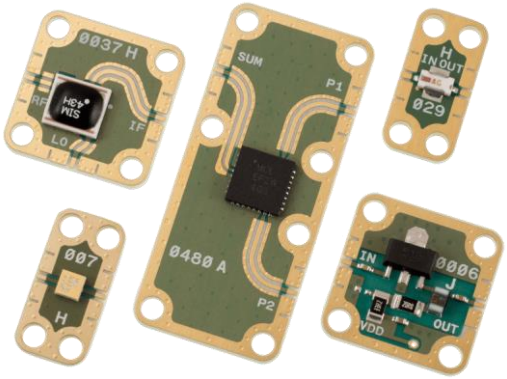
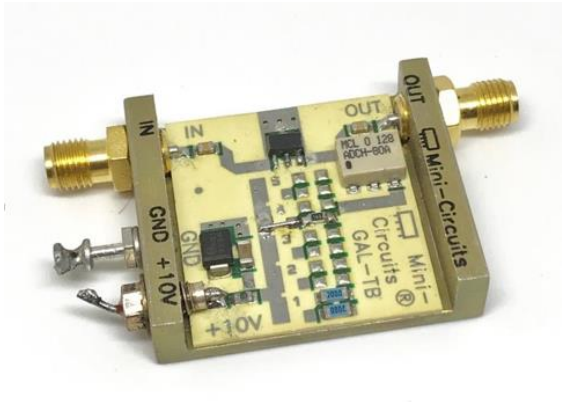
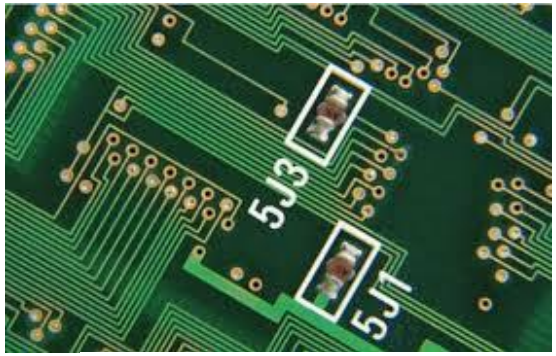
關鍵零組件

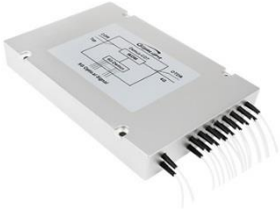

MEDIATEK
ARM
MT6297 M70
1842-AMSH
BTP7G48402


0037 H
SUM
P1
0480 A
P2
007
H
029
0006
IN
OUT
VDD


IN
OUT
GND
+10V
Mini-Circuits
GAL-TB


5J3
5J1

KYOCERA
87F5195
24.9000
9135JPN



網通產業發展趨勢-WiFi 6

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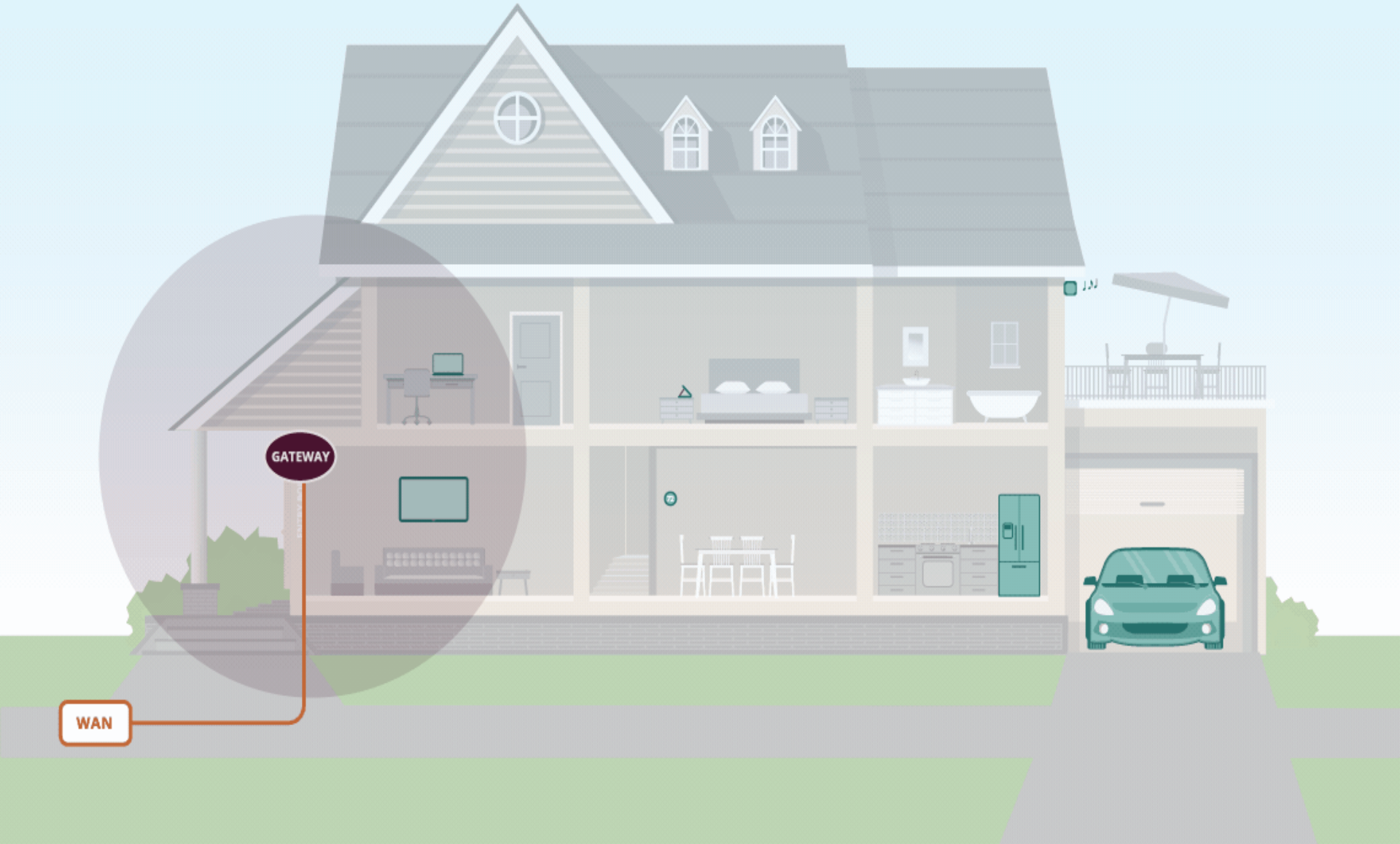
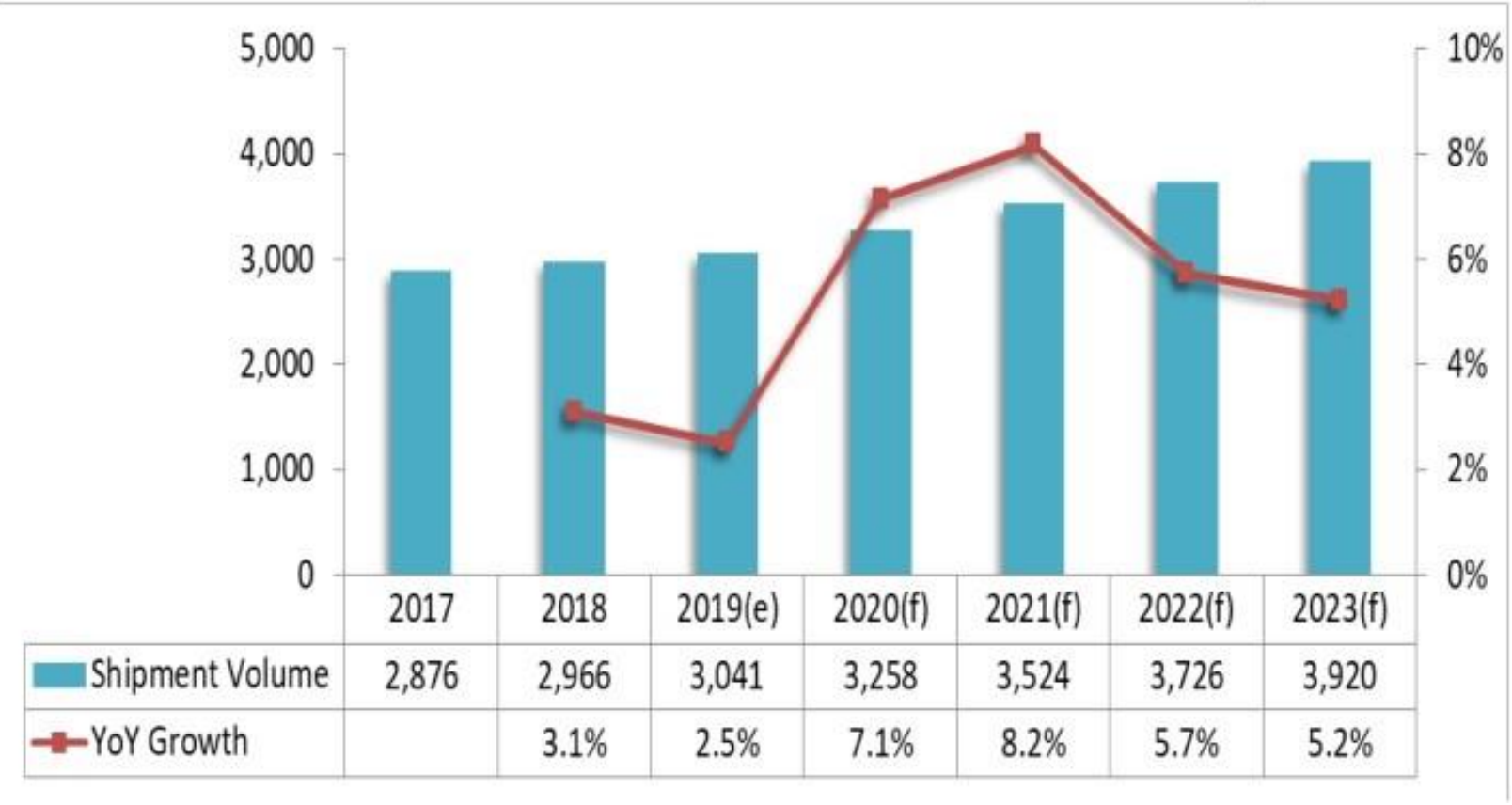
Wi-Fi CERTIFIED EasyMesh™:
Smart, extended coverage home Wi-Fi®



Wi-Fi 6 設備市場

全球Wi-Fi連網裝置出貨量預測 2017-2023年

單位：百萬台



	2017	2018	2019(e)	2020(f)	2021(f)	2022(f)	2023(f)
Shipment Volume	2,876	2,966	3,041	3,258	3,524	3,726	3,920
YoY Growth		3.1%	2.5%	7.1%	8.2%	5.7%	5.2%

資料來源：MIC · 2019 年 8 月

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Wi-Fi 6 SiP 模組

AP6275S

- WiFi 6
- 802.11 ax/ac/a/b/g/n
- 13x15 mm
- Ready on 2019 Q2

AP6275P

- WiFi 6
- 802.11 ax/ax/a/b/g/n
- 13x15 mm
- Ready on 2019 Q2

Wi-Fi 6 路由器

2.5GE

802.11ax

EasyMesh

- 2.5 GE
- 802.11 b/g/n/ac/ax
- EasyMesh
- IPv6
- WPA3

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THANK YOU

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Q & A

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