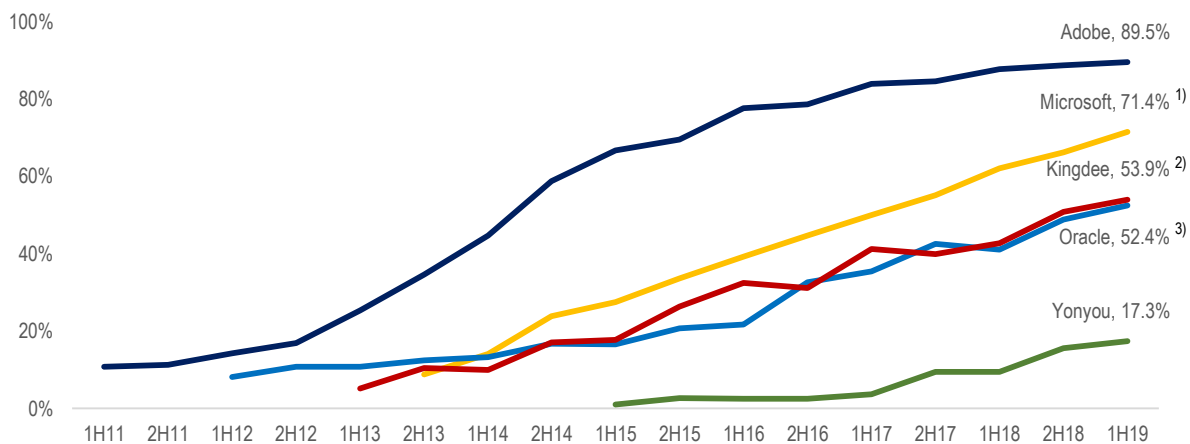




Kingdee International – benefits of cloud transition have yet fully come

Figure 1: Major software companies' cloud transition progresses (SaaS revenue as % of total software revenue)



Source: Company data, AMTD Research estimates

*Note: 1) Software revenue of Microsoft only include revenues of Office Consumer, Office Commercial and Dynamics; 2) Software revenue of Kingdee does not include revenues of Implementation, Maintenance and others; 3) Software revenue of Oracle only include revenues of Software License, SaaS and PaaS

AMTD views: The progress of cloud transition of those traditional software companies may be different due to their different types of software business. ERP/System software links systems internally within an enterprise to streamline workflow, share information among different departments; and normally deals with many user accounts at the same time to realize collaboration between different departments. On the contrary, Application/Utility software faces end-users directly, normally requiring less collaboration. Thus, this kind of software companies is easier than those ERP/System software companies to implement cloud transition. We can see that Adobe has perfect cloud transition path, followed by Microsoft, however, ERP companies, such as Oracle, Kingdee, and Yonyou have relatively slower progress. **In this issue, we will look into Kingdee's cloud transition, which performs differently in different market segments, as a result benefits of cloud transition have yet fully come.**

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Cloud/SaaS

Kingdee Int'l

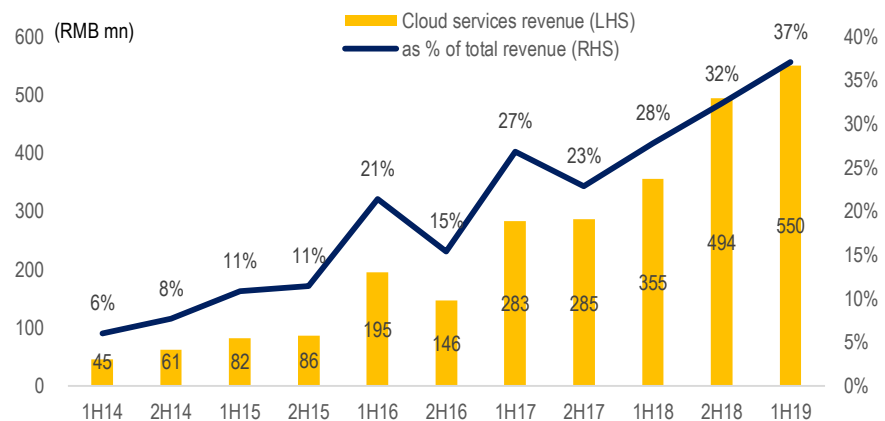
Kingdee International – benefit of cloud transition has yet come

Founded in 1993, Kingdee International, is one of the leading enterprise management software companies in China. It engages in the design and development of Enterprise Resource Planning (ERP) and cloud-based management software products. In particular, according to IDC, Kingdee maintained the leading position in China's enterprise SaaS market since 2016 and accounted for 15.2%/34.0% market share in China's SaaS ERM market and finance cloud market, respectively in 2H2018.

Cloud services grew steadily and the proportion of total revenue was increasing

Kingdee cloud services began in 2010, when the Suishouji app was launched, and it ranked second in the financial applications for iPhones in China two weeks just after its release. In 2011, Kingdee rolled out Kingdee Weibo, the predecessor of Cloud-Hub, and in the same year, Kingdee announced "cloud management" strategy, the official launch of cloud transition. In the following years, in addition to its ERP cloud – Kingdee Cloud Galaxy, Kingdee announced Jingdou and Gunayi in 2016, targeting micro and small business market, and Kingdee Cloud Cosmic in 2018, aiming to tap into large-sized enterprise market. Until now, Kingdee has built up several cloud product lines to target different segments.

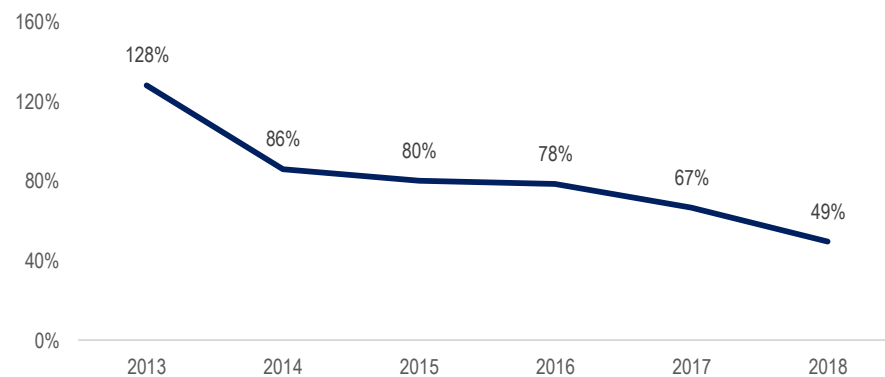
Figure 2: Kingdee's cloud services revenue and the cloud services revenue as % of total revenue



Source: Company data, AMTD Research

Kingdee's cloud services had decent revenue growth over the past few years. In 1H19, its cloud services revenue reached RMB550mn, up 54.9% YoY and accounting for 37% of its total revenue.

Figure 3: Kingdee's cloud services revenue growth, YoY

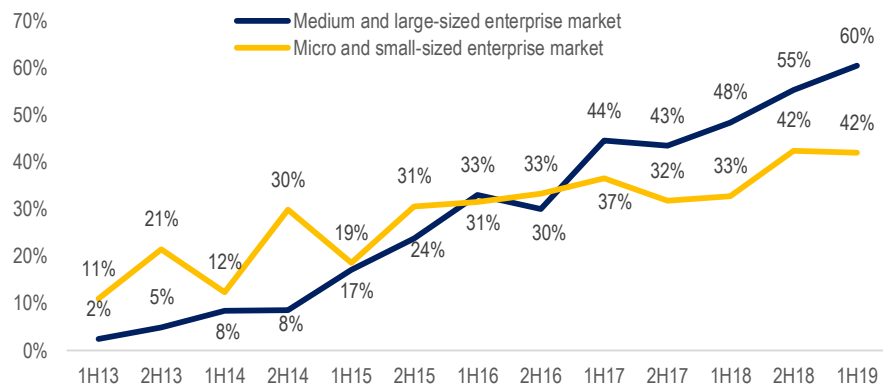


Source: Company data, AMTD Research

However, cloud transition progressed differently in different market segments

In general, large enterprises are prudent to review the viability of transition to public cloud, because: 1) they have relatively mature ERP system, which cannot 100% guarantee smooth switching current ERP system onto the cloud; 2) the current mature ERP system has a heavy upfront investment costs; 3) there are still security risk concerns about public cloud. On the contrary, small businesses are willing to adopt cloud as they can save a lot of upfront costs and deploy their business with more flexibility to meet fast changing demand. As a result, large enterprises are normally slower than small businesses to adopt cloud transition. This was no exception for Kingdee cloud business before 2016. During the early stage of its cloud transition, more small businesses were willing to adopt cloud products as the proportion of cloud services revenue in micro and small-sized enterprises market was higher than that in medium and large-sized enterprise market.

Figure 4: Kingdee's cloud services revenue as % of software revenue in different market segments



Source: Company data, AMTD Research estimates

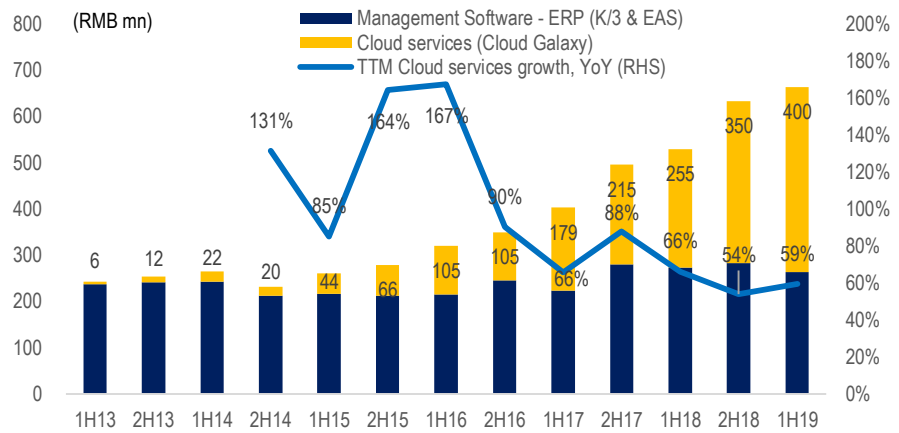
However, since 2016, when the proportions of cloud services revenue in both market segment reached 31%, the growth of proportion of cloud services revenue has slowed down in micro and small-sized enterprises market while the proportion of cloud services revenue continued to rise in medium and large-sized enterprise market. In 1H19, the proportion of cloud services revenue was 60% and 42% in micro/small-sized enterprises market and medium/large-sized enterprise market, respectively. After years of effort and customer education, Kingdee has brought cloud business on track in medium/large-sized enterprise market while cloud business in micro/small-sized enterprises market still looks more volatile.

In medium/large-sized enterprise market, cloud transition looked healthy and robust

Within medium/large-sized enterprise market segment, total software revenue growth was primarily driven by cloud services (Kingdee Cloud Galaxy) as its traditional ERP software revenue (K/3 & EAS) growth was flat for several years. The TTM cloud services growth stayed at around 60% YoY over the past two years. Strong cloud revenue growth came from expanding customer base and low attrition rate. By the end of first half of 2019, total number of paying customers of Kingdee's Cloud Galaxy has exceeded 11,500, more than 4 times of that by the end of 2016. Customer retention rate maintained above 80% since 2016.

In addition, in 2H2018, Kingdee launch Cloud Cosmic, which is an open-source cloud ERP aiming to compete with rivals, such as SAP, Oracle, etc., in mega enterprises market. In 1H19, Kingdee successfully acquired 28 new customers of Cloud Cosmic, with a total contract size of RMB33mn.

Figure 5: ERP software and cloud services revenue and growth in medium/large-sized enterprise market



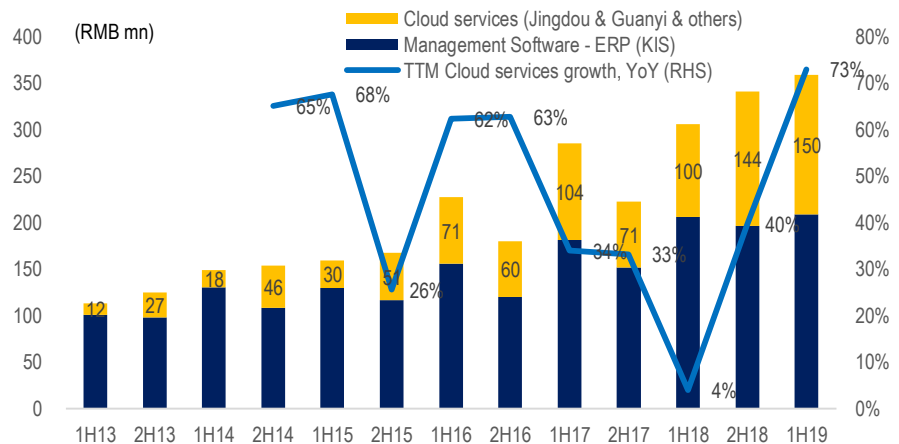
Source: Company data, AMTD Research estimates

In micro/small-sized enterprise market, cloud transition performed more volatile

In micro/small-sized enterprise market, Kingdee offers ERP software – KIS (accounting, procurement and inventory management ERP). Its corresponding cloud version is called Jingdou Cloud. In the meantime, Kingdee also offers Guanyi Cloud (order and warehouse management ERP), and other vertical cloud products in this market segment. Because it is a relatively big and fragmented market with different size of small businesses playing in different niche markets, Kingdee may not be able to meet all the demand with its relatively standard and limited product choices. On the other hand, for cloud products and services, Kingdee would be facing more challenges from those cloud native SaaS companies, such as Weimob, Youzan, etc., which are normally proficient in specific vertical sectors and have rich knowledge of business processes on mobile internet.

The paying customers of Jingdou Cloud was 95,000 in 1H19, only up 11% from 85,000 in 2016; and the paying customers of Guanyi Cloud was down from 5,000 in 2016 to 4,500 in 1H19. The weak customer growth indicates a fierce competition in this segment.

Figure 6: ERP software and cloud services revenue and growth in micro/small-sized enterprise market

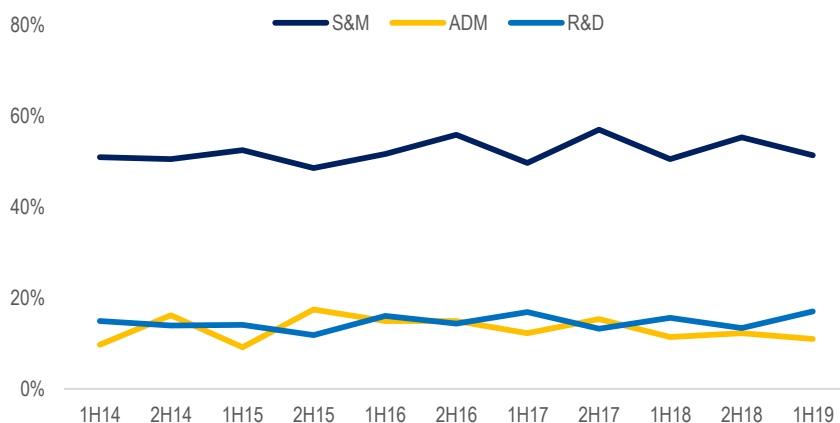


Source: Company data, AMTD Research estimates

Operating leverage has yet come due to high sales & marketing expenses

For SaaS companies, the operating leverage comes primarily from sales & marketing. Although the cloud revenue continued to grow, reaching 37% of total revenue in 1H19, Kingdee's operating leverage has yet shown as S&M expenses as percentage of revenue stayed above 50% over the past few years. High S&M expenses was due to its sales-driven business model, in our view. To acquire more small-sized business customers, Kingdee has to add more salespeople, in the same time, those customers tend to have a high attrition rate, which reduces the operating efficiency accordingly. The total number of employees was 8,181 by the end of 1H19, up 18% YoY, and the S&M expense rose by 18% as well during the same period. Management said in 1H19 results briefing the company will re-examine the incentive policy and partner commissions to balance growth of expense and revenue.

Figure 7: Trends of S&M, R&D, and G&A as % of revenue

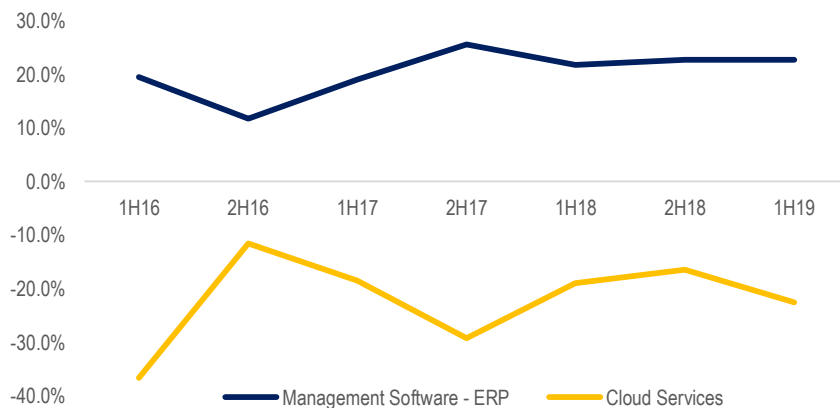


Source: Company data, AMTD Research

The company expected Cloud Galaxy targeting in medium/large-sized enterprise market turn profitable this year

Based on the analysis above, we believe cloud services in micro/small-sized enterprise market dragged down the profitability of the whole cloud services. But for, which targets medium/large-sized enterprise market, added 2,000 new customers in 1H19, among which 77% was new customers. Management was more optimistic about Cloud Galaxy and expected Cloud Galaxy turn profitable this year given its high retention rate.

Figure 8: Kingdee's ERP and cloud services operating margin



Source: Company data, AMTD Research

News updates

25 Oct 2019

Semiconductor

Intel

Intel post strong 3Q19 results with prolonged microprocessor shortage

Intel reported 3Q19 total revenue of US\$19.2bn, up 16.3% QoQ/flat YoY, beating consensus of US\$18bn. Client Computing Group revenue was US\$9.7bn, up 9.8% QoQ/down 5.1% YoY. Data Center Group revenue was US\$6.4bn, up 28.1%QoQ/4.0% YoY. IoT revenue was US\$1.0bn, up 1.9% QoQ/9.4% YoY. Non-Volatile Memory Solution revenue was US\$1.3bn, up 37.2% QoQ/19.3% YoY. Programmable Solutions Group revenue was US\$507mn, up 3.7% QoQ/2.2% YoY. Non-GAAP gross margin was 60.4%, down 119bps QoQ and Non-GAAP EPS came in at US\$1.42, US\$0.18 ahead of consensus. Management indicated US\$200mn in Chinese enterprise tariff related pull-ins in 3Q19. In addition, the company announced a new US\$20bn stock buyback to be completed in next 15 -18 months. Based on strong 3Q results, Intel revised up full year revenue to US\$71bn, compared to US\$69.5bn from last quarter, and expected full year EPS of US\$4.6 and capital spending of US\$16bn. (Source: [Intel](#))

AMTD views: Despite strong 3Q results, Intel's own microprocessor shortage did increase competitive risks from its rivals such as AMD and Nvidia. AMD's move to 7nm did occur before Intel began ramping its own 10nm chips and has been constantly gaining market share from Intel. To fix this, Intel said it would increase capex to raise capacity in 14nm and 10nm (measured in wafer starts) by 25% next year. On the other hand, 10nm yields during product ramp up would put pressure on gross margin. According to management, 18 new 10nm Ice Lake-powered system notebooks was launched with a total of 30 models of notebook expected to launch in 2019.

24 Oct 2019

Cloud

Microsoft

Microsoft reported solid 1QFY20 results and won US\$10bn JEDI contract

Microsoft reported solid 1QFY20 results. Revenue grew by 14% YoY to US\$33.1bn with Intelligent Cloud to US\$10.8bn (+26.6% YoY), Productivity and Business Processes to US\$11.0bn (+13.4% YoY), and More Personal Computing to US\$11.1bn (+3.6% YoY). Overall operating margins improved significantly by 415bps YoY to 38.4% as operating leverage became more visible in S&M with declining from 14.7% in FY4Q19 to 13.1% in 1QFY20. Adjusted EPS came to US\$1.38, up 21% YoY. For next quarter, management expected Productivity and Business Processes revenue between US\$11.3-11.5bn, Intelligent Cloud revenue between US\$11.25- 11.45bn and overall COGS of US\$12.45-12.65bn, implying a gross margin of 64.7%. (Source: [Microsoft](#))

AMTD views: More specifically, in 1QFY20, Commercial bookings grew 35% YoY CC and commercial RPO was US\$86bn, up 27% YoY CC. Commercial cloud revenue grew 39% YoY CC to US\$11.6bn, a slightly deceleration from 42% YoY CC last quarter. Among it, Azure revenue growth and Commercial Office revenue growth slowed down a little bit from 68% YoY CC and 34% YoY CC last quarter to 63% YoY CC and 28% YoY CC this quarter, respectively. Commercial cloud gross margin continued to improve, up to 66% from 65% last quarter. In addition, Microsoft just won US\$10bn JEDI contract. If the total contract value is spent evenly over the ten years, JEDI contract will only have 6-7% impact on Azure's annualized run rate (we estimate Azure's current run rate is about US\$15bn). However, the most important is that JEDI contract will put Azure in a better position to compete against other rivals going forward, in our view.

24 Oct 2019

E-commerce/Cloud

Amazon

Amazon reported mixed results with a record capex in 3Q19

Amazon reported 3Q19 revenue of US\$69.98bn, up 23.7% YoY, ahead of consensus. Despite the strong revenue growth, operating income fell from US\$3.7bn 3Q18 to US\$3.2bn this quarter with operating margin down from 6.6% in 3Q18 to 4.5% this quarter. Lower margin was mainly due to higher cost for One-Day shipping. AWS revenue grew by 34.7% YoY to US\$9.0bn in 3Q19, compared to 37.3% YoY in 2Q19. AWS operating margin was down 20bps to 25.1% from 25.3% in 2Q19. (Source: [Amazon](#))

AMTD views: Capital spending hit record high of US\$4.7bn this quarter, which was expected to invest in construction of its second headquarter. Besides Amazon added nearly 97k employees to its payrolls this quarter. On top of that, capital lease, which mainly reflects investments in technology infrastructure for AWS, grew 36.3% on trailing 12-month basis to US\$3.6bn in 3Q19, compared to 24.0% in 2Q19 and 8.9% in 3Q18. As capex is a good indicator of cloud business growth, we expect investment will continue to fuel the future growth of AWS.

18 Oct 2019

Semiconductor

TSMC

TSMC 3Q19 results beat with capex hike for 2020

TSMC reported solid 3Q19 results. Revenue reached NT\$293bn, up 21.6% QoQ/12.6% YoY and beating company's target of NT\$282-285bn. Gross margin and operating margin was 47.6% and 36.8%, respectively, in line with company's guidance. Net profit came in at NT\$101bn, 2% ahead of consensus. Management guided strong 4Q revenue of US\$10.2-10.3bn, implying 9% QoQ growth and gross margin/operating margin at 48-50%/37-39%. In the same time, company raised 2020 capex to US\$14-15bn to meet strong demand of 5nm and 7nm process. (Source: [TSMC](#))

AMTD views: in terms of technology node, 7nm revenue grew 56% QoQ and accounted for 27% of its total revenue in 3Q19, mainly driven by new smartphone launches last quarter. In terms of platform, smartphone and HPC accounted for 49% and 29% of its total revenue in 3Q19, respectively. The order cut from Huawei due to Google apps restriction would be a concern for investors, as TSMC has 15% revenue exposure to Huawei smartphones. However, we believe the order growth from other customers, such as Apple, MediaTek, AMD, could make up for this production capacity. In particular, AMD's Ryzen 3000 series and new EPYC Rome built on TSMC's 7nm have been gaining market share from Intel since its launch last quarter, which could be a strong driver for TSMC's HPC segment into 2020.

30 Oct 2019

Devices/Wearables

Apple

New US\$249 AirPods Pro has launched

Apple has launched AirPods Pro, a higher-end version of its existing AirPods with an updated design, noise cancellation technology and better sound. The price is US\$249. The AirPods Pro look similar to the original AirPods, but feature a wider front to accommodate silicone tips for comfort, fit, and noise cancellation purposes. AirPods Pro are powered by an Apple-designed H1 chip and water-resistant with an IPX4 rating. The AirPods became available for purchase on Oct 28 and began arriving to customers on Oct 30. (Source: [Forbes](#))

24 Oct 2019

NVIDIA unveiled software development kit Aerial

Semiconductor

NVIDIA

NVIDIA unveiled Aerial, a software development kit for building GPU-accelerated 5G wireless RAN. Telcos could optimize 5G networks using the unified software stack and AI models. The company also rolled out a series of partnerships to enhance its role in 5G and edge computing, for deployment of AI systems: Red Hat's OpenShift platform for Kubernetes will help build a cloud native telecom infrastructure to push 5G networks adoption; Ericsson will bring experience in 5G Radio Access Networks (RAN); Microsoft's Azure IoT Edge will provide enterprise customers with cloud computing for edge devices and for IoT sensors. (Source: [NVIDIA](#))

23 Oct 2019

Samsung unveiled new premium mobile processor Exynos 990

Semiconductor

Samsung

Samsung has announced a new processor, the Exynos 990. The new processor is built on Samsung's 7nm EUV process, and includes a Mali-G77 GPU. It is 20% more efficient compared to Samsung's previous chip. However, the Exynos 990 lacks an integrated 5G modem, meaning it will be better suited to 4G devices. It could only be used in 5G devices if Samsung pairs it with a separate modem - the 5G Exynos Modem 5123. The Exynos 990 could support up to 6 cameras, with a maximum resolution of 108MP. The Exynos 990 and Exynos Modem 5123 are expected to begin mass production by the end of this year. (Source: [Cnet](#))

23 Oct 2019

Huawei's Mate X finally launched, but only in China

Smartphone

Huawei

Huawei's 5G foldable phone Mate X is finally ready to go on sale but it won't be available outside of China for now. The Mate X will be available on Nov 15 from RMB16,999. The Mate X features Huawei's Kirin 980 processor and Barong 5000 modem, and supports 55W fast charging that can fill its battery to 85% in half an hour. When unfolded, the screen is 8 inches diagonal, and when closed it's like having a phone with a 6.6-inch screen on the front. Huawei has already shipped 200 million smartphones in 2019, reaching that milestone 64 days earlier than it did last year. (Source: [Cnet](#))

23 Oct 2019

Huawei 5G industrial module released at RMB999

Module

Huawei

Huawei launched 5G products for the industrial market at the Shenzhen conference. The Huawei MH5000 is the first single-core multimode 5G module for industrial purposes. It is priced at RMB999. In addition, the Huawei MH5000 fully supports 2G/3G/4G/5G networks. It also supports 5G SA/NSA dual mode. The uplink rate reaches 230Mbps while the downlink rate is up to 2Gbps. (Source: [Gizchina](#))

22 Oct 2019

Samsung Display to supply additional 10% OLED panels for iPhone 11 series

Module

Samsung

Samsung Display will increase its OLED panel supply to iPhone 11 series by 10%. This means its 2H19 shipment to Apple will be totalled up to 40-50mn units. Samsung Display's 3Q shipment to Apple was 22.2mn units, with the September volume 40% higher than the planned 6.9mn units. Samsung Display accounts for over 90% of OLED supplies for iPhone worldwide. (Source: [The investors](#))

21 Oct 2019

NVIDIA collaborated with Microsoft on intelligent edge computing

Cloud

NVIDIA/Microsoft

NVIDIA and Microsoft announced a technology collaboration on intelligent edge computing. With integration of Microsoft Azure and NVIDIA EGX platform, the companies aimed to improve edge-to-cloud AI computing capabilities. The NVIDIA Metropolis video analytics application framework has been optimized to work with Azure. They targeted to help industries better manage and gain insight from mass data created by retail stores, connected buildings, urban infrastructure and so on. (Source: [NVIDIA](#))

20 Oct 2019

Apple is working on next iPhone SE

Smartphone

Apple

LG is in talks with Apple to supply LCD displays for the successor to the iPhone SE. The panels are currently undergoing last-minute quality check. According to a report, the phone will use the latest A13 Bionic chip and will look similar to iPhone 8, with a touch ID home button and a 4.7-inch display. The device is expected to be released by the end of 1Q20. (Source: [Cnet](#))

18 Oct 2019

Tencent Cloud helps Guangdong work on digital government

Cloud

Tencent

“Yueshengshi”, Guangdong’s mobile platform of government services, has now over 19mn identified registered users since its launch a year ago. It is established on Tencent Cloud and WeChat. Users could access 654 kinds of government services at home. The Wechat mini program is set to cover all the 21 cities in Guangdong this year. During the past three years, Tencent Cloud has launched programs in 22 provinces, with its digital government segment growing by 25 times. (Source: [Sina](#))

18 Oct 2019

Samsung Galaxy A90 5G now available in China

Smartphone

Samsung

Samsung has officially launched Galaxy A90 5G in China. It is the first 5G smartphone in Samsung A series. The phone is equipped with a 6.7-inch Super AMOLED display. The display has a small U-shaped notch for the 32MP selfie cam, and is built with an optical UD fingerprint scanner. In addition, the phone has a triple rear camera set with a 48MP main camera, and supports Face ID. The phone features Snapdragon 855 chipset, and is priced at RMB4,499. (Source: [Gsmarena](#))

17 Oct 2019

Huawei Hisilicon to sell 4G communication IoT chip Balong 711

Semiconductor

Huawei Hisilicon

Huawei Hisilicon will start to sell the Huawei Hisilicon LTE Cat4 platform Balong 711 to IoT companies. It is Huawei’s first time to sell in-house chips to other companies. The chip has shipped about 100mn units to Huawei since its launch in 2014. Balong 711 chipset consists of baseband chip Hi2152, RF chip Hi6361 and power management chip Hi6559. It supports LTE-FDD/LTE-TDD/WCDMA/GSM, and could be used for IoT products that require stable Internet connections, such as surveillance cameras, vending machines and smart lockers. (Source: [Huawei](#))

17 Oct 2019

AI expert, Kaldi Creator Daniel Povey to join Xiaomi

AI

Xiaomi

Daniel Povey, an expert in voice recognition and the main developer of the widely used open-source speech recognition toolkit Kaldi, will join Xiaomi. He will arrive in China later this year and hire a small team to work on the next-gen PyTorch-y Kaldi. Xiaomi has launched its own AI voice assistant XiaoAI in 2017 - its global shipment has exceeded 10mn units. (Source: [Medium](#))

17 Oct 2019

China Unicom has constructed over 50% of 5G base stations in 2019 plan

5G/Infrastructure

China Unicom

China Unicom announced that it has completed and opened 28,000 5G base stations. The company planned to build 50,000 base stations this year. China Unicom is now conducting 5G trials in some cities. With its sharing plan with China Telecom, China Unicom's 5G coverage is expected to double after the official launch. (Source: [Sina](#))

17 Oct 2019

Samsung's next foldable phone to employ ultra-thin glass

Smartphone

Samsung

Samsung's next foldable phone will employ flexible UTG (ultra-thin glass) as its cover glass material, instead of transparent polyimide. The company aimed to eliminate the crease that forms on the flexible panel along the hinge. Samsung Display has started to produce the foldable displays, while DOWOO INSYS is working on the first batch of UTG panels. The smartphone codenamed Bloom is expected to be launched in 1H20. (Source: [ETnews](#))

15 Oct 2019

Huawei unveiled 5G full-series solutions

5G/Infrastructure

Huawei

Huawei unveiled its latest 5G full-series solution. The 3rd-gen 5G Massive MIMO is a standard configuration for 5G mobile networks. By using 7nm process and new compound materials, the new 5G M-MIMO product supports up to 400 MHz bandwidth in all spectrum scenarios, the highest in the industry. Huawei also introduced the latest 5G full-series all-scenario products, as well as the industry's first wireless software innovation framework and ADN Mobile solution. (Source: [Huawei](#))

15 Oct 2019

Japan PCB output in August down 18.5% YoY

Component

PCB

According to Japan Electronic Packaging Circuits Association (JPCA), Japan's printed circuit board (PCB) production volume was 933,000m² in August, down 18.5% YoY. It is the biggest drop this year, as well as the ninth consecutive month of decline. The output value shrank by 7.7% to JPY35.598bn. Among them, the output volume of rigid PCB decreased by 14.6% YoY to 704,000m². Flexible PCB output went down to 154,000m², down 37.1% YoY – its 27th consecutive month of decline. Module substrates is the only category that realized output value growth of 10.5% YoY, reaching JPY9.668bn. (Source: [CSIA](#))

15 Oct 2019

Devices

Google

Google has announced a series of new products on its big product event

Google has announced a series of new products, including smartphones Google Pixel 4 and Pixel 4XL, priced at US\$799-999; laptop Pixelbook Go, with 8th-gen Intel processors and priced at US\$649-1399; wireless earbuds Pixel Buds priced at US\$179; Google Nest Mini priced at US\$49; Nest Wi-Fi priced from US\$269-349 and a whole-home Nest Aware subscription plan with a monthly fee of US\$6-12. In addition, game streaming service Google Stadia will be available on November 19th. (Source: [CNBC](#))

15 Oct 2019

VR

Google

Google's Daydream VR experiment is over

Google has essentially abandoned its Daydream virtual reality platform. The company confirmed that the new Pixel 4 phone won't support Daydream. Also Google has confirmed that it will no longer sell the Daydream. The plan has been on the wall for a while, as the Pixel 3a and Pixel 3a XL released earlier didn't work with daydream either. Hulu dropped support for Daydream VR last month. Google also shut down its Spotlight Stories VR studio, Daydream's Play Movies and TV app. (Source: [Theverge](#))

IMPORTANT DISCLOSURES

Analyst Certification

We, Brian Li, Michelle Li and Roy Wu, hereby certify that (i) all of the views expressed in this research report reflect accurately our personal views about the subject companies and their securities; and (ii) no part of our compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed by us in this research report, nor is it tied to any specific investment banking transactions performed by AMTD Global Markets Limited.

As of the date the report is published, Brian Li holds financial interest in the securities of Amazon mentioned in the report.

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