

Global server market

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Betty Shyu, DIGITIMES Research, October 2018

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Report sample (not for sale)

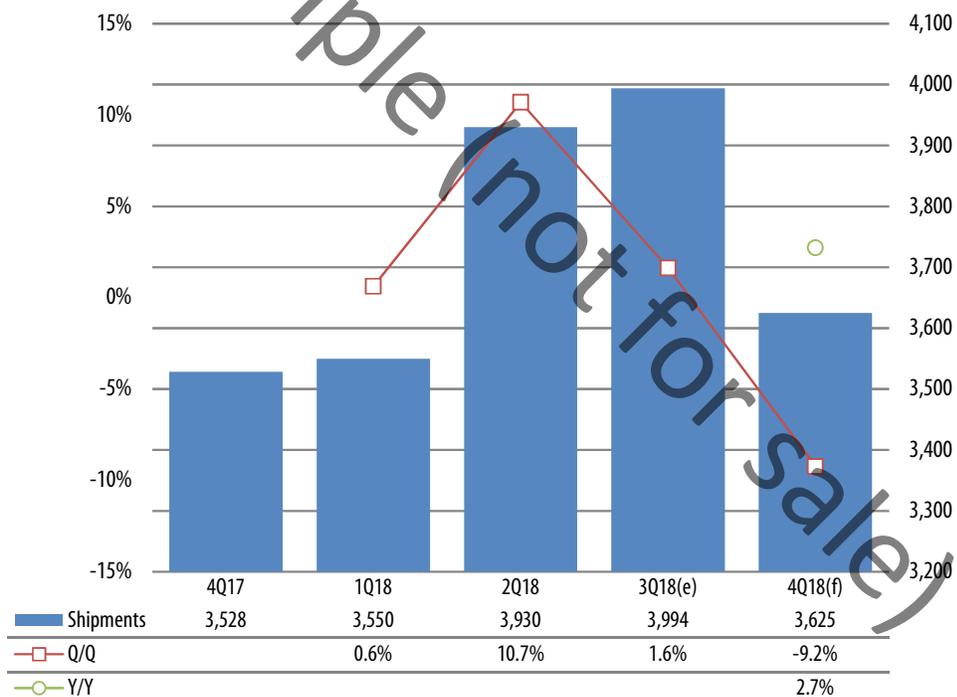
Introduction

According to Digitimes Research statistics and analyses, third-quarter 2018 global server shipments totaled 4 million units (calculated based on motherboard quantity), showing only a moderate quarter-over-quarter growth rather than a large increase as previously anticipated. This can be attributed to some customers making large purchases in the second quarter and thus becoming more conservative on orders in the third quarter. Moreover, vendors are in the process of upgrading to new server platforms and thus are holding out for new platforms. Digitimes Research expects these conditions to continue into the fourth quarter. The fast escalating US-China trade tension will also undermine fourth-quarter shipments, which are now expected to decline 9% on quarter.

The top three server vendors including Dell, HPE and Super Micro exhibited either flat growth or slight decline sequentially in third-quarter 2018 shipments. Large-scale data centers remained the major growth driver, with shipments in this category up 11% on quarter. Looking forward into fourth-quarter 2018, total server shipments will not show a significant increase as previously forecast but instead will decrease 9% sequentially as most vendors will cut down orders amid the US-China trade conflict.

In sum, whole-year 2018 server shipments will still show growth, which however will be smaller than previously expected and thus is revised downward to 10.5%. Server shipments in first-quarter 2019 will remain sluggish and growth momentum is more likely to resume in the second quarter.

Chart 1: Global server market shipments, 4Q17-4Q18 (k units)



Source: Digitimes Research, October 2018

Global server shipments came to 4 million units in third-quarter 2018, up only 1.6% on quarter, much lower than the 16% growth forecast in July.

The lower-than-expected growth was due to the migration to the Purley platform, China-based customers' demand reaching a peak in the second quarter and their changing purchase pattern. Some customers plan to fully migrate to Purley platform products in first- and second-quarter 2019 so the demand is showing slow growth during the interim period.

China-based customers' demand for servers usually peaks in the second quarter and gradually comes down starting in the third quarter. This is a seasonal pattern. But there is a change in how China-based customers make server purchases. They used to make purchases 4-6 weeks in advance but now they only do so 2-3 weeks ahead of time to avoid excess inventory, resulting in weakening demand.

The previous forecast indicated significant sequential growth in fourth-quarter 2018 global server shipments. However, for reasons mentioned above as well as rising US-China trade tension, rather than showing any increase, fourth-quarter 2018 global server shipments will slide 9% to 3.62 million units.

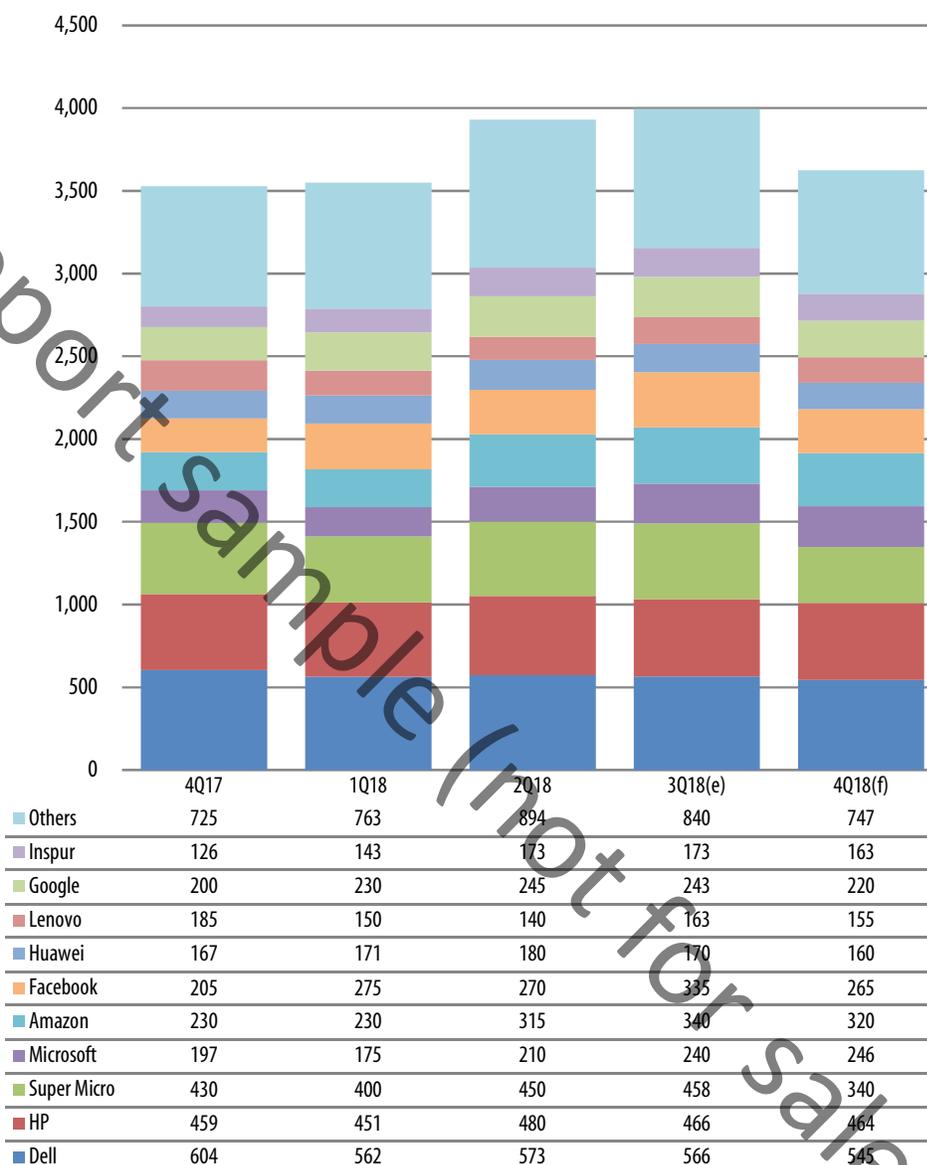
To minimize the impact of an additional 10% import duty, reducing orders is one of the possible options for US-based customers, and many customers are indeed cutting down purchases compared to the third quarter.

However, annual growth can still reach 2.7%.

Report sample (not for sale)

Shipments breakdown

Chart 2: Global server shipments by top-10 player, 4Q17-4Q18 (k units)



Source: Digitimes Research, October 2018

In third-quarter 2018, many customers lowered their demand for servers with the only exceptions being Facebook and Google, both of which maintained growth momentum and increased orders.

Dell, HPE and Super Micro remained the three major customers for Taiwan-based manufacturers, each shipping more than 450,000 units per quarter. Demand from the three major customers either showed moderate growth or slight decline. Their combined share among the global total arrived at 37.3%, down 1pp from the prior quarter.

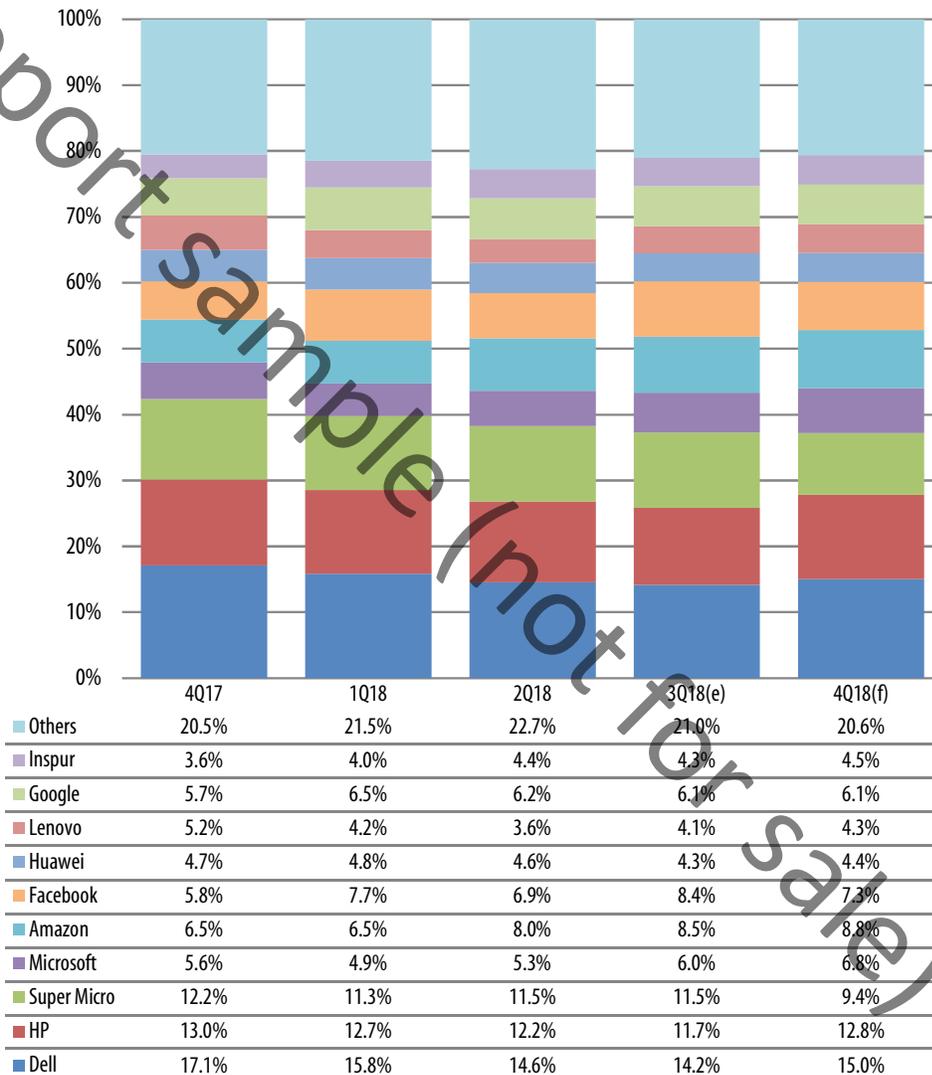
Demand from large-scale data centers was still the main growth driver, with Facebook and Microsoft particularly showing significant sequential growth in the range 10-25%. As a result, their shares among the global total exhibited significant increases.

Digitimes Research's previous forecast indicated that major customers would all have sequentially growing demand for servers in fourth-quarter 2018. However, amid uncertainties such as the US-China trade tension, most of them are expected to cut down orders.

Super Micro and Facebook will exhibit the most significant decline, down 20-25% on quarter. Super Micro will sustain more serious impact of the US-China tariff war as it imports products manufactured by ODM in China to the US for final assembly, which are subject to import duty. Super Micro has assembly facilities in the US, the Netherlands and Taiwan, with the US site being the largest.

Facebook will also reduce orders due to the tariff hike and excessive inventory remaining from the prior quarter.

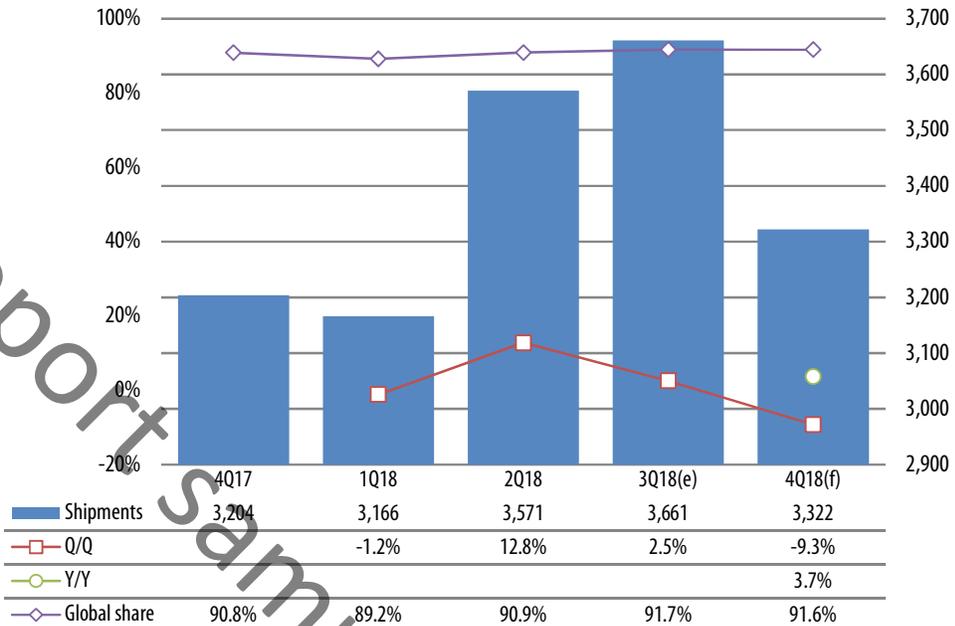
Chart 3: Global server shipment share by top-10 player, 4Q17-4Q18



Source: Digitimes Research, October 2018

Shipments from Taiwan makers

Chart 4: Taiwan server shipments and global share, 4Q17-4Q18 (k units)

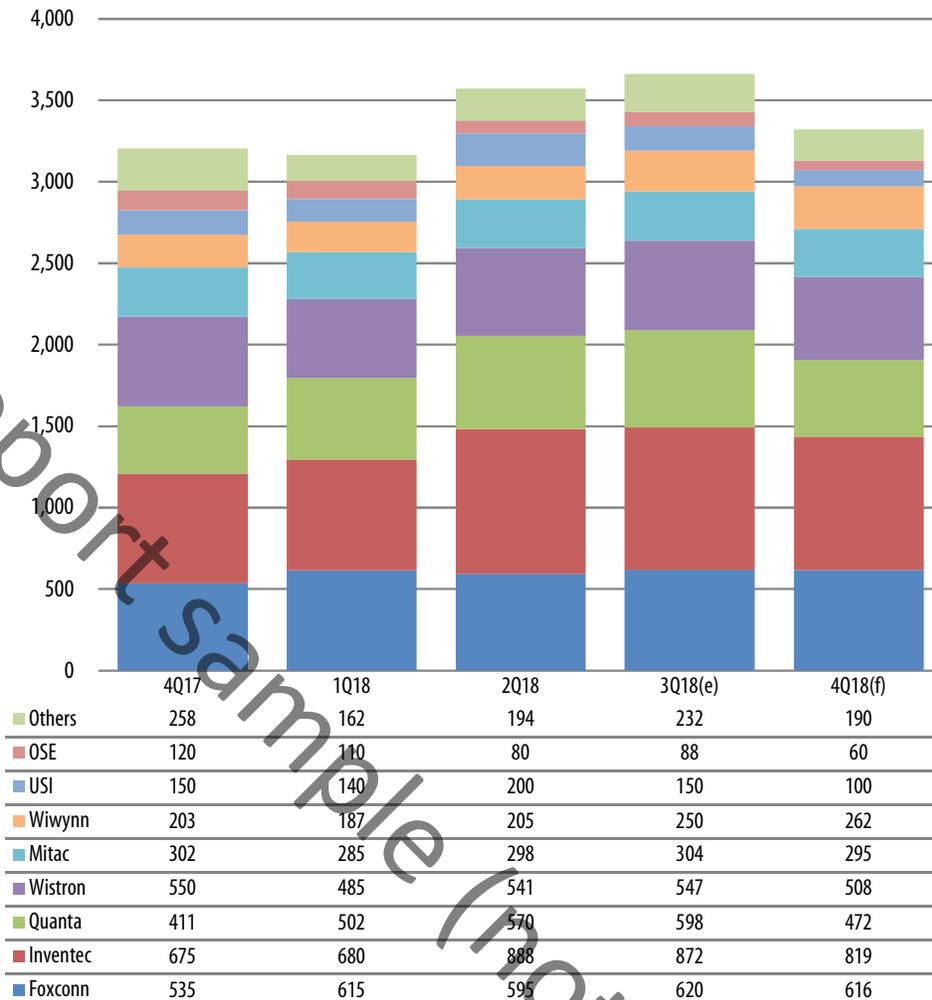


Source: Digitimes Research, October 2018

Taiwan-based ODMs shipped a combined total of 3.66 million servers in third-quarter 2018, accounting for 91.7% of global shipments. They are estimated to ship 3.32 million servers in fourth-quarter 2018 and their share will fall back 0.3pp. The share of Taiwan-based ODMs expanded in the third quarter because their shipments increased 2.5% from the prior quarter while shipments by Huawei, which manufactures servers on its own, slid 5-6% sequentially.

For fourth-quarter 2018 outlook, Taiwan-based ODMs will see their customers' demand decline more significantly than Huawei's sales, so their share will likely drop.

Server manufacturers (those making motherboards) that are not Taiwan-based ODMs only include Huawei and EMS such as Celestica.

Chart 5: Taiwan shipments by top maker, 4Q17-4Q18 (k units)

Source: Digitimes Research, October 2018

Remaining unchanged from the prior quarter, the top five Taiwan-based ODMs in terms of shipment volumes in third-quarter 2018 were Inventec, Foxconn, Quanta, Wistron and Mitac.

Inventec's shipments dipped compared to the prior quarter while those of the other manufacturers mostly increased so Inventec's share edged down but still held above 20%. Inventec's largest customer HPE continues to be squeezed by ODMs directly supplying to cloud service providers, resulting in declining shipments. Furthermore, HPE shifted more ODM orders to Wistron so Inventec's shipments to HPE showed a more significant sequential decline.

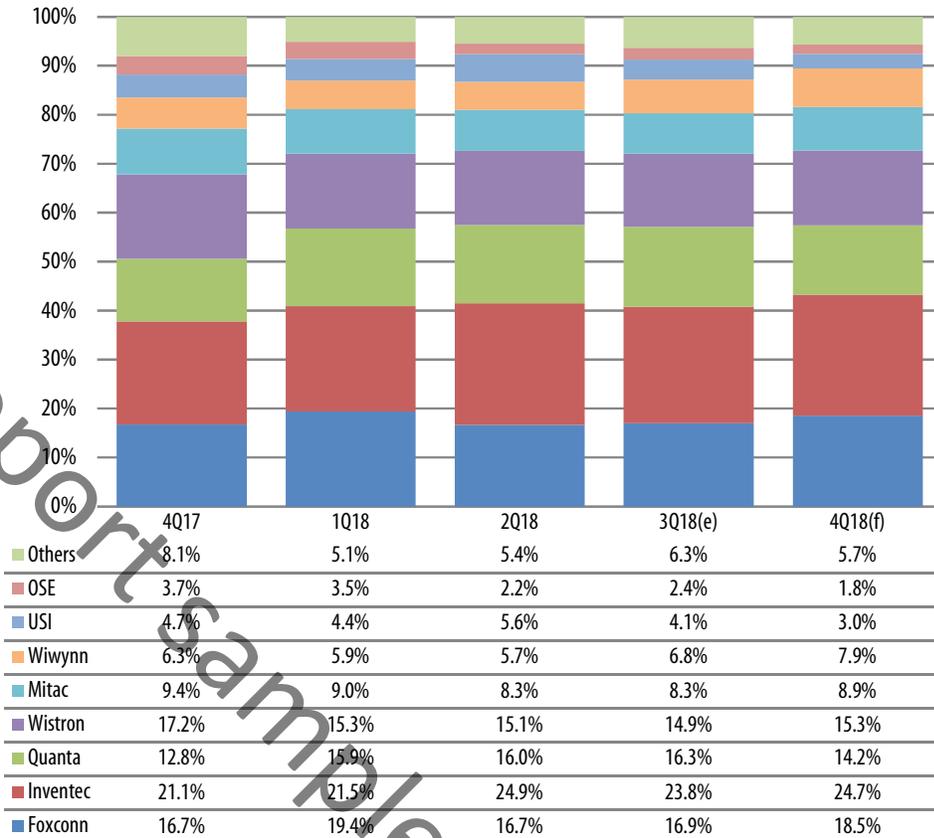
Shipments by Quanta and Wiwynn increased more considerably from the prior quarter, buoying their shares up moderately. Amid unfavorable conditions mentioned above, with the exception of Wiwynn, leading Taiwan-based ODMs will all experience a sequential decline in shipments.

Quanta's shipments to its largest customer Facebook surged in the third quarter and thus will likely fall back significantly in fourth-quarter, so Quanta's share will fall behind Wistron's.

Inventec's shipments will show a smaller decline than Taiwan-based ODM's average so its share can go back to the level seen in the second quarter.

Wiwynn's shipments will likely expand 4-5% on a quarterly basis.

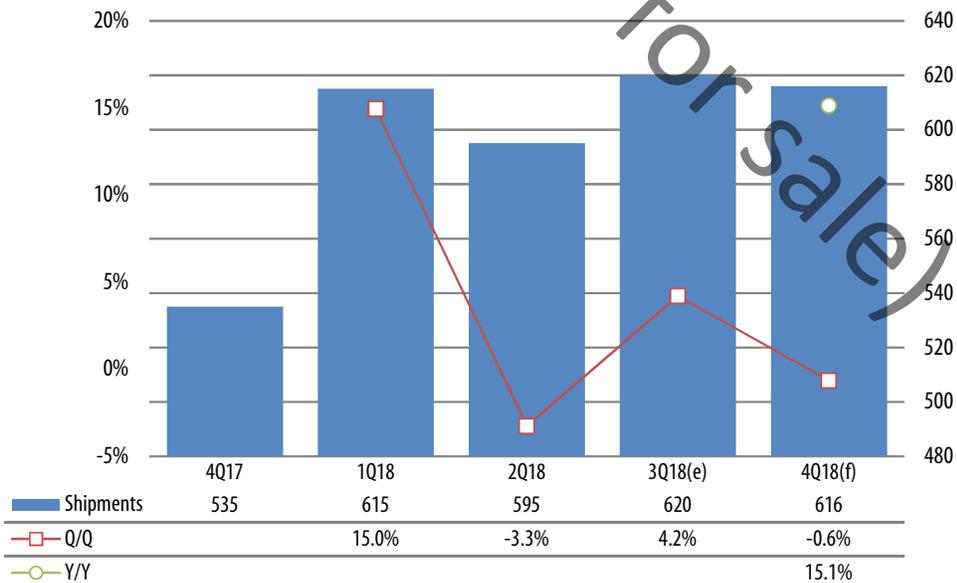
Chart 6: Taiwan shipment share by top maker, 4Q17-4Q18



Source: Digitimes Research, October 2018

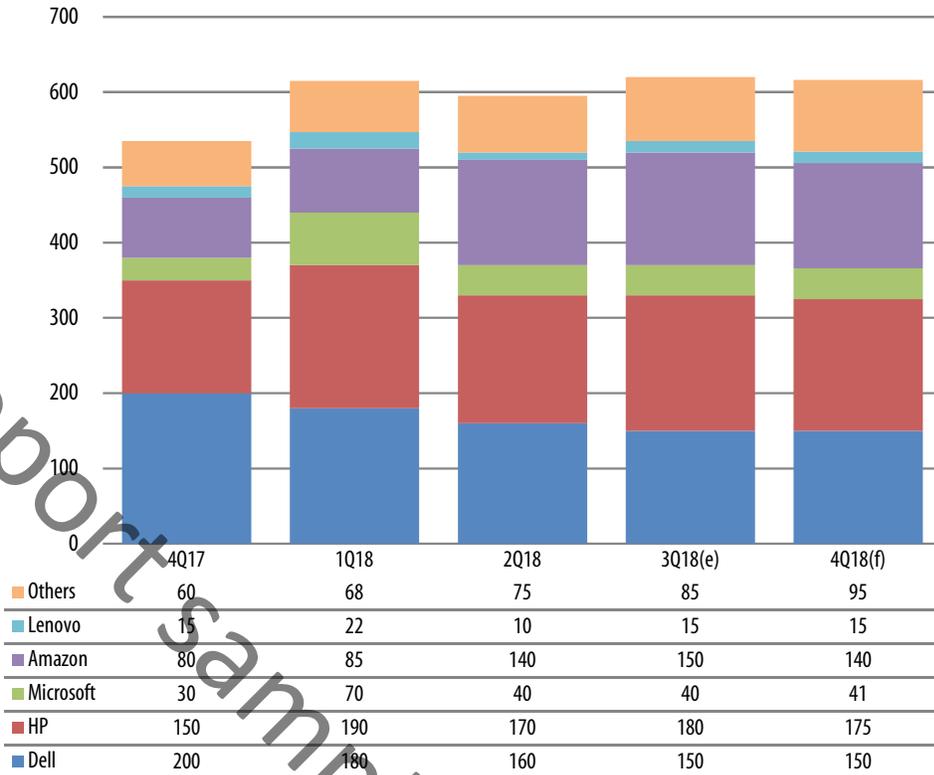
Foxconn

Chart 7: Foxconn server shipments, 4Q17-4Q18 (k units)



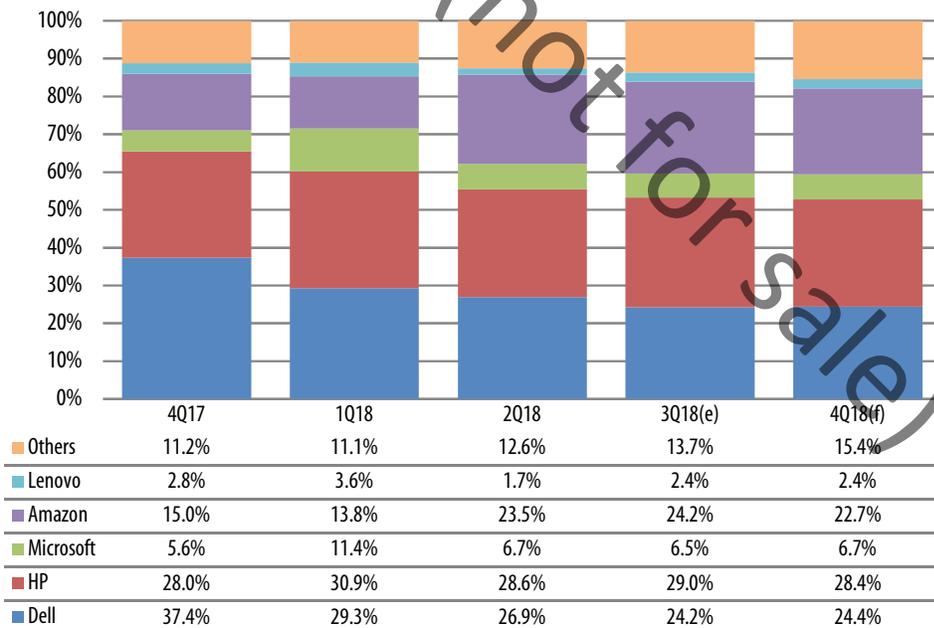
Source: Digitimes Research, October 2018

Chart 8: Foxconn shipments by client, 4Q17-4Q18 (k units)



Source: Digitimes Research, October 2018

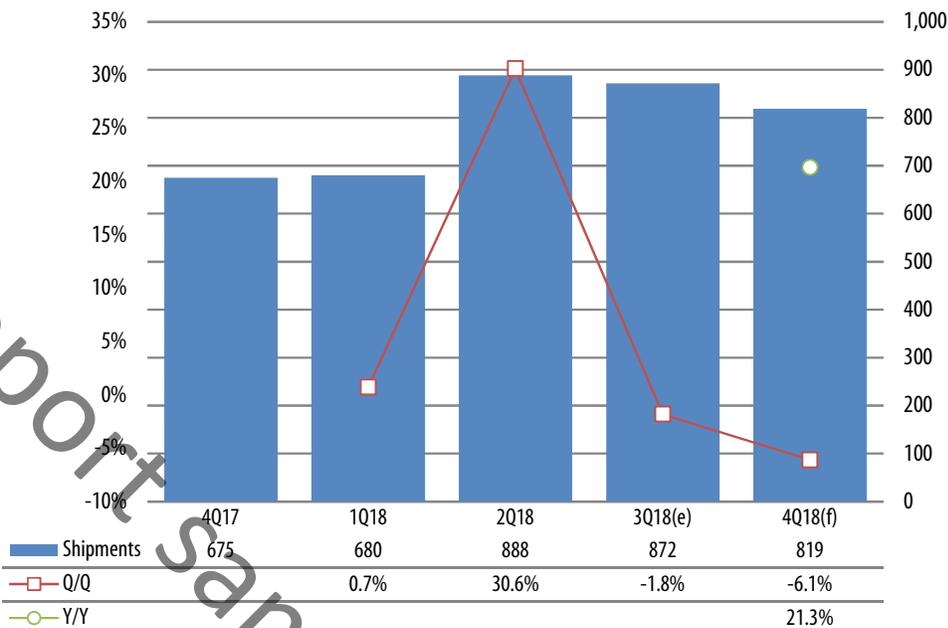
Chart 9: Foxconn shipment share by client, 4Q17-4Q18



Source: Digitimes Research, October 2018

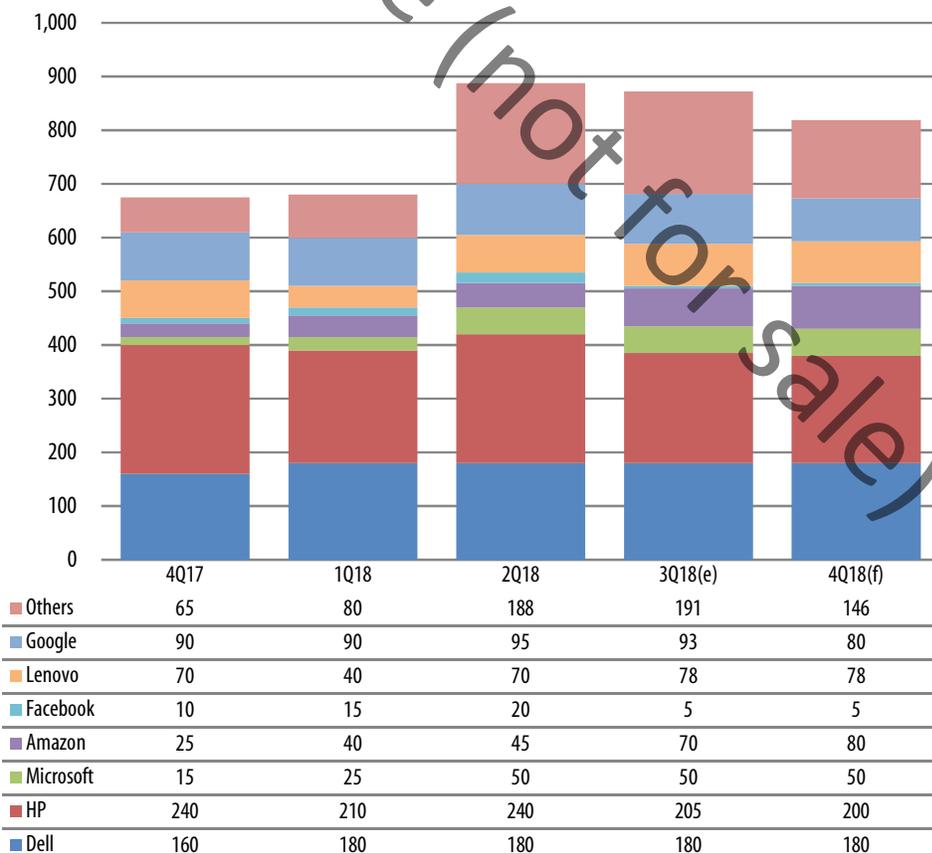
Inventec

Chart 10: Inventec server shipments, 4Q17-4Q18 (k units)



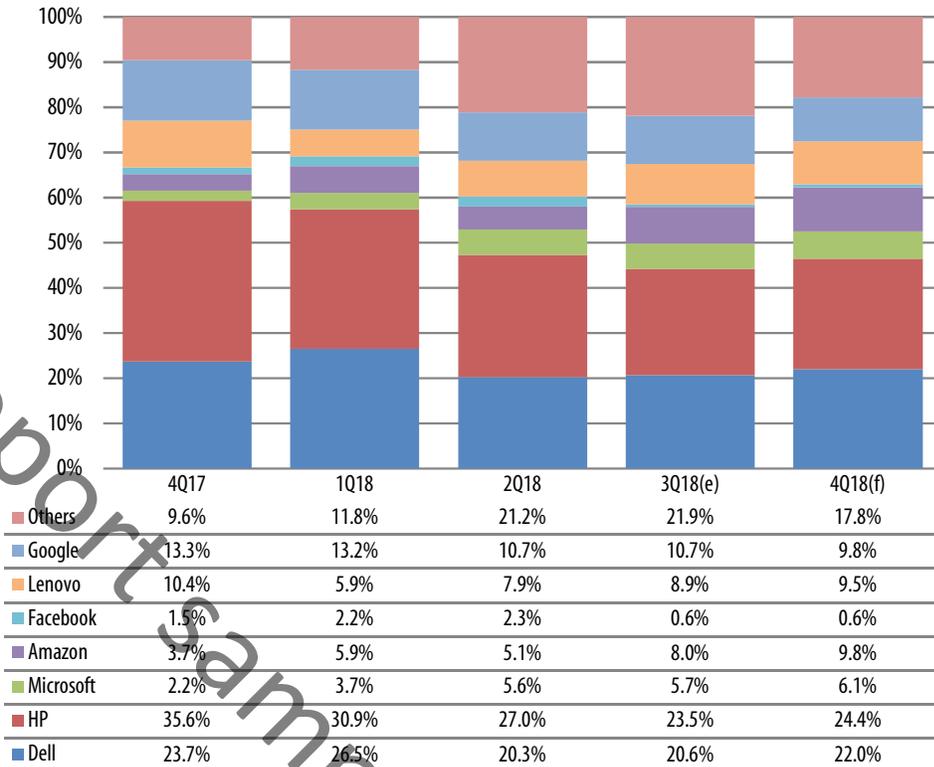
Source: Digitimes Research, October 2018

Chart 11: Inventec shipments by client, 4Q17-4Q18 (k units)



Source: Digitimes Research, October 2018

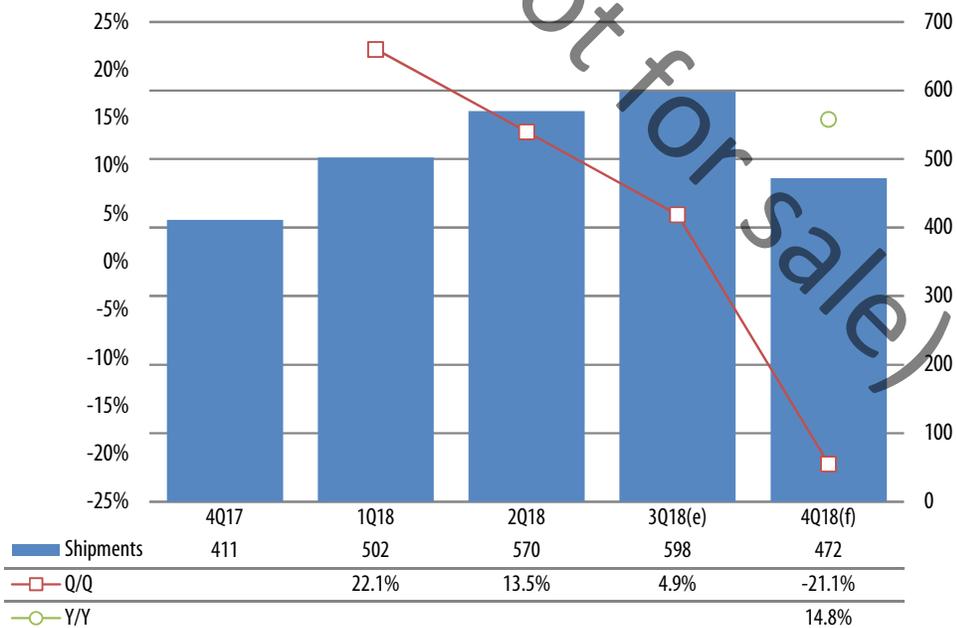
Chart 12: Inventec shipment share by client, 4Q17-4Q18



Source: Digitimes Research, October 2018

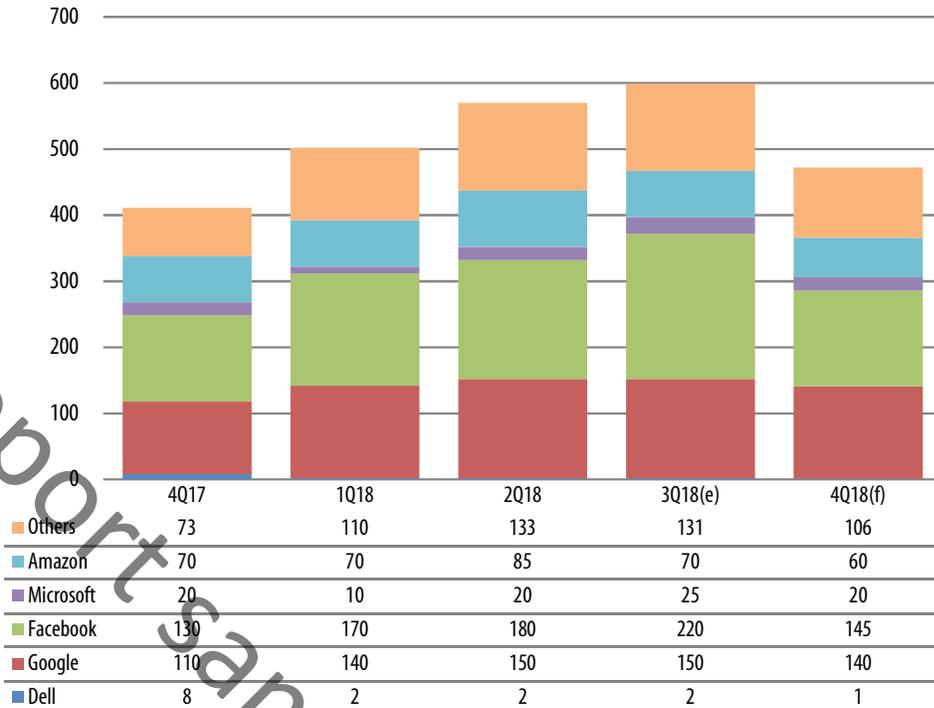
Quanta

Chart 13: Quanta server shipments, 4Q17-4Q18 (k units)



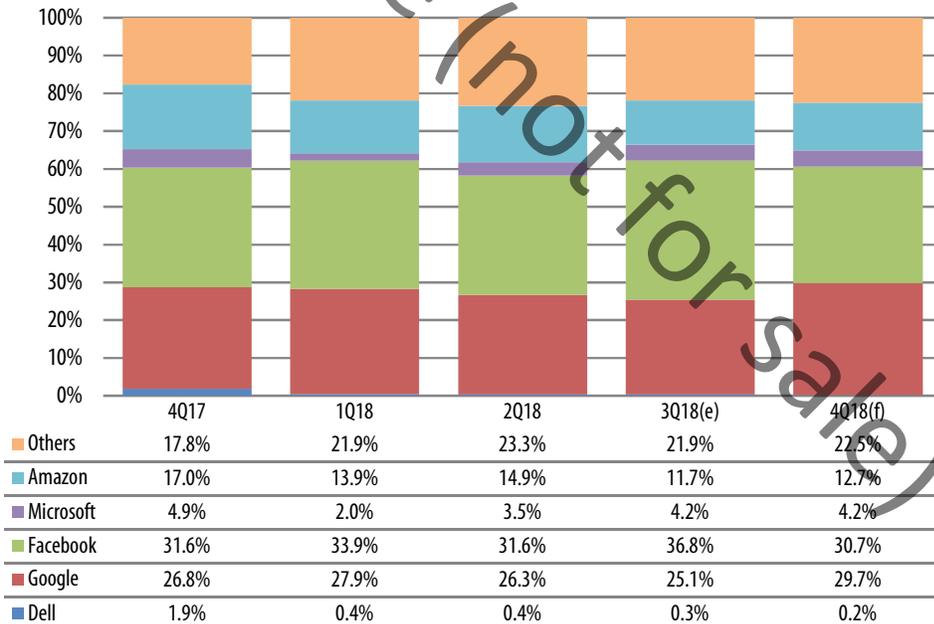
Source: Digitimes Research, October 2018

Chart 14: Quanta shipments by client, 4Q17-4Q18 (k units)



Source: Digitimes Research, October 2018

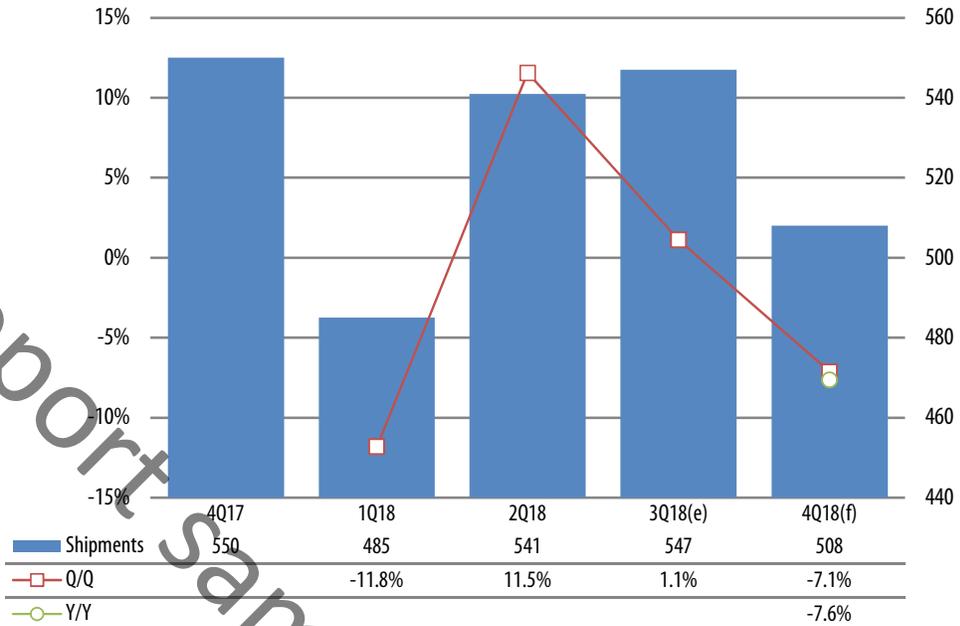
Chart 15: Quanta shipment share by client, 4Q17-4Q18



Source: Digitimes Research, October 2018

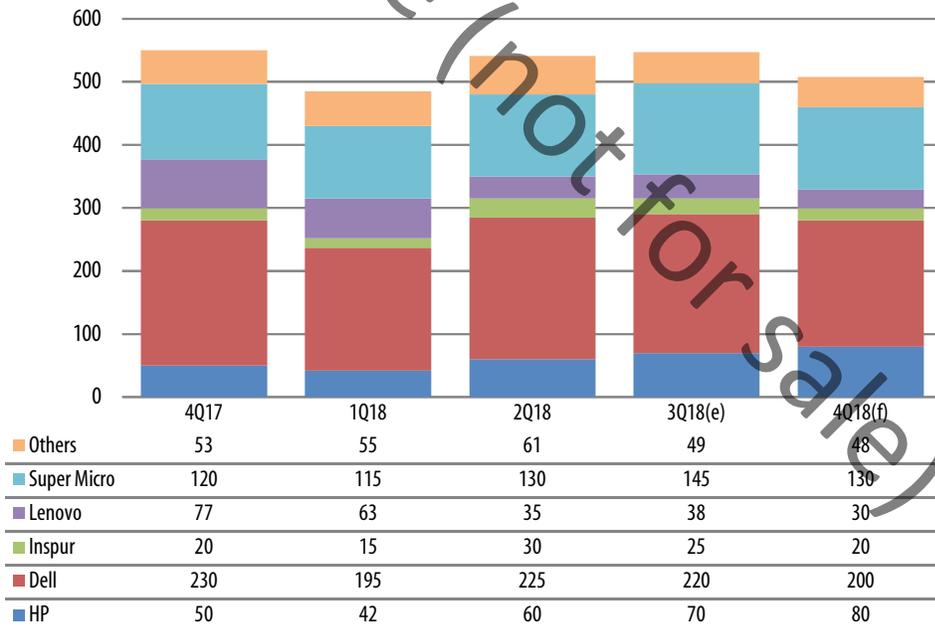
Wistron

Chart 16: Wistron server shipments, 4Q17-4Q18 (k units)



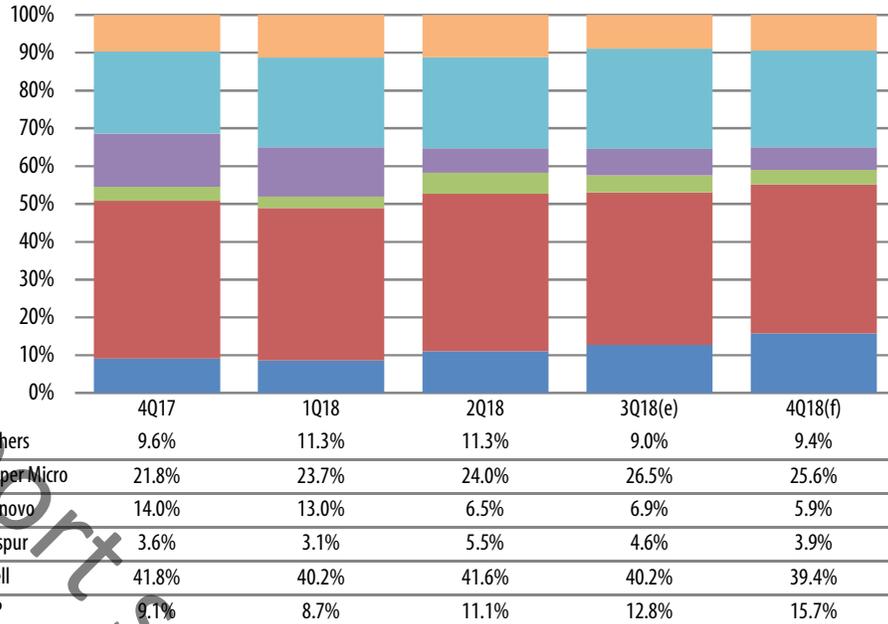
Source: Digitimes Research, October 2018

Chart 17: Wistron shipments by client, 4Q17-4Q18 (k units)



Source: Digitimes Research, October 2018

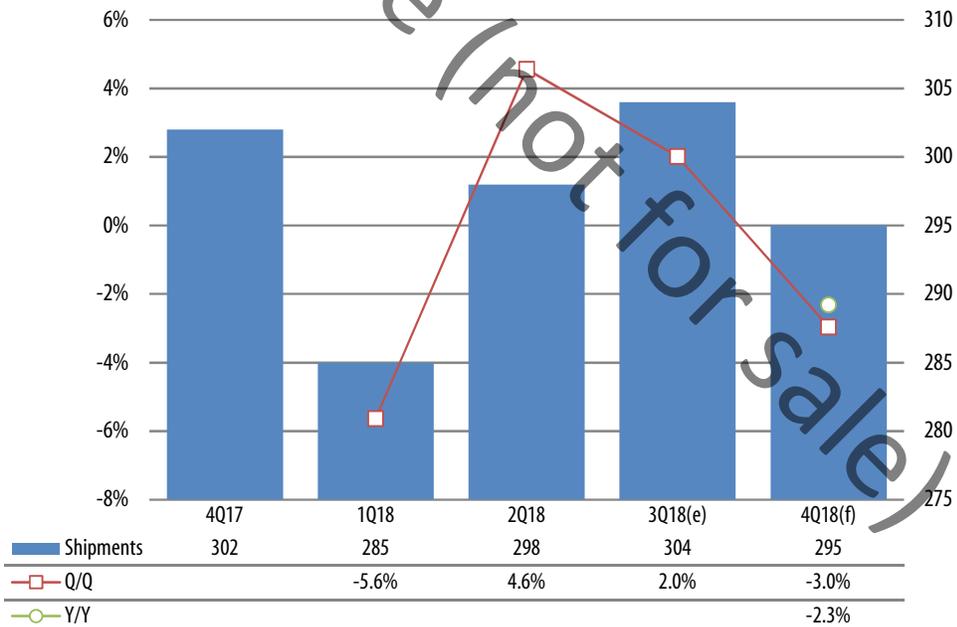
Chart 18: Wistron shipment share by client, 4Q17-4Q18



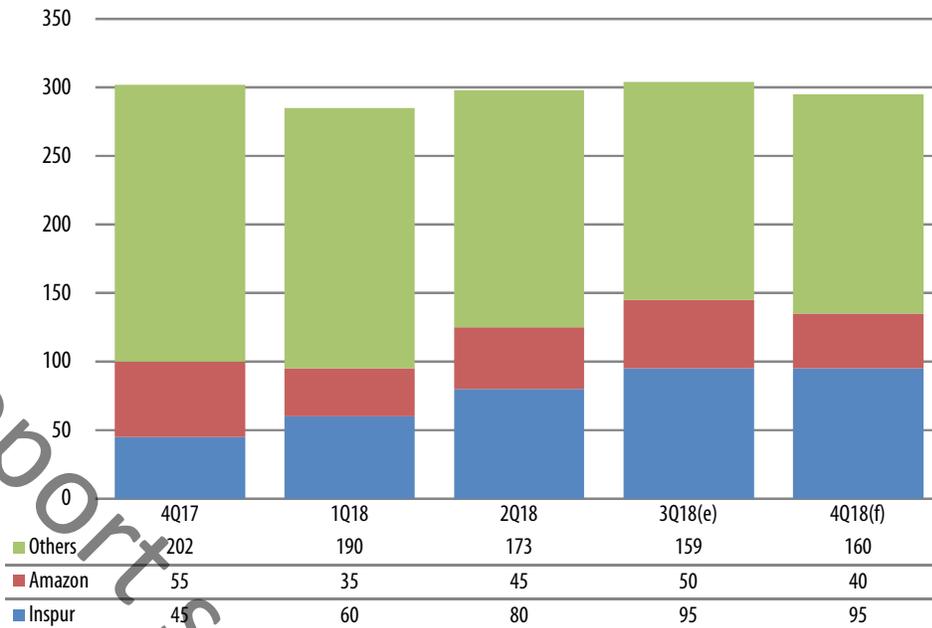
Source: Digitimes Research, October 2018

Mitac

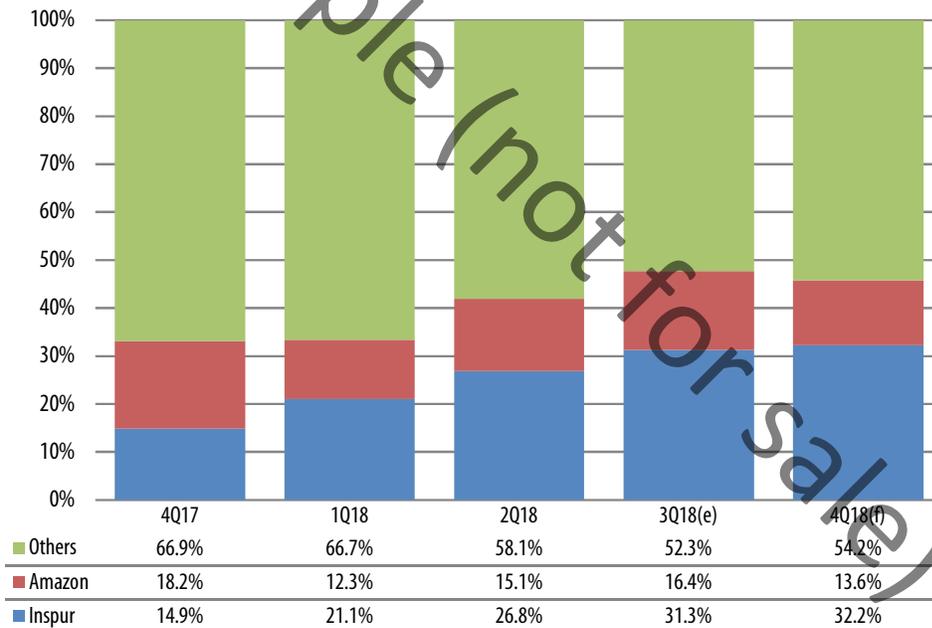
Chart 19: Mitac server shipments, 4Q17-4Q18 (k units)



Source: Digitimes Research, October 2018

Chart 20: Mitac shipments by client, 4Q17-4Q18 (k units)


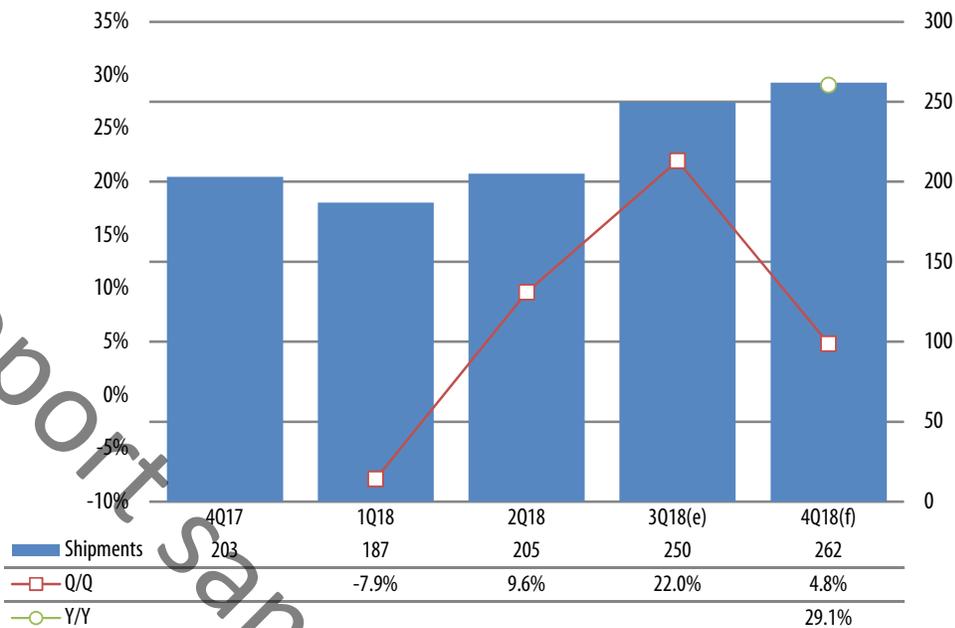
Source: Digitimes Research, October 2018

Chart 21: Mitac shipment share by client, 4Q17-4Q18


Source: Digitimes Research, October 2018

Wiwynn

Chart 22: Wiwynn server shipments, 4Q17-4Q18 (k units)



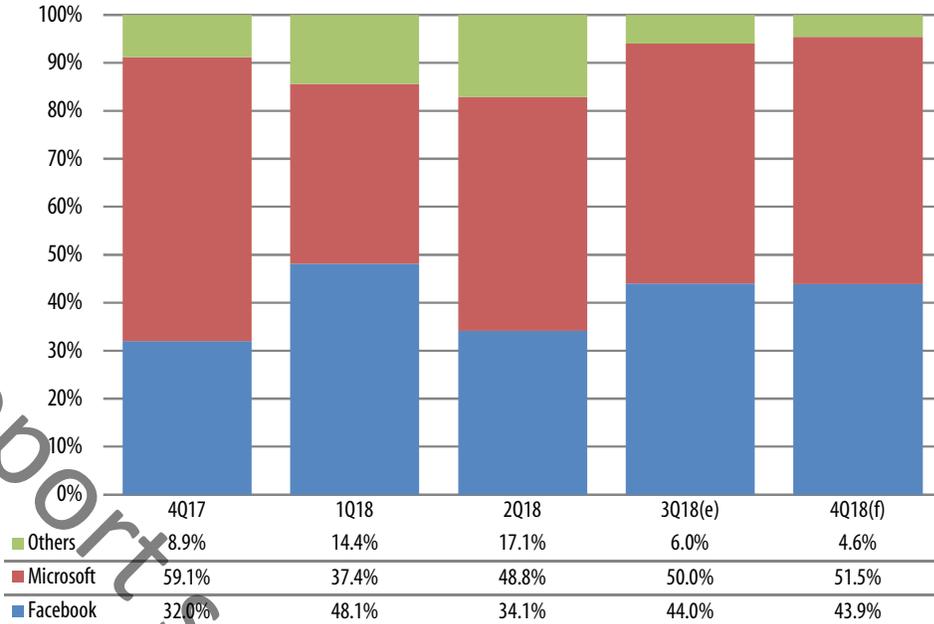
Source: Digitimes Research, October 2018

Chart 23: Wiwynn shipments by client, 4Q17-4Q18 (k units)



Source: Digitimes Research, October 2018

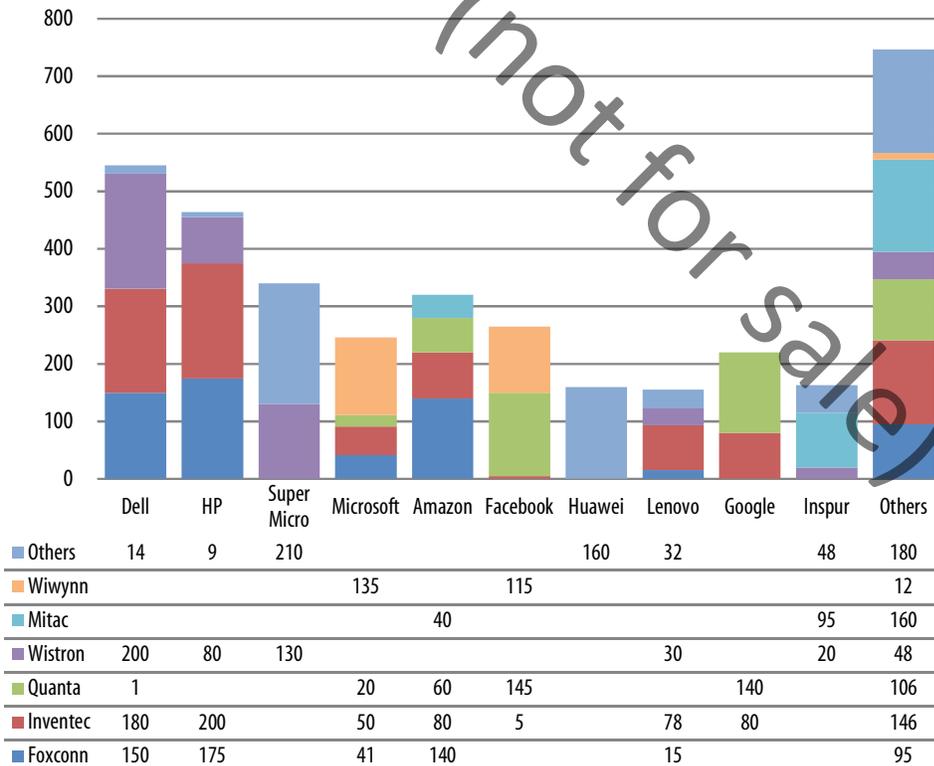
Chart 24: Wiwynn shipment share by client, 4Q17-4Q18



Source: Digitimes Research, October 2018

Client-maker server shipment matrix

Chart 25: Client-maker partnership matrix, 4Q18 (k units)



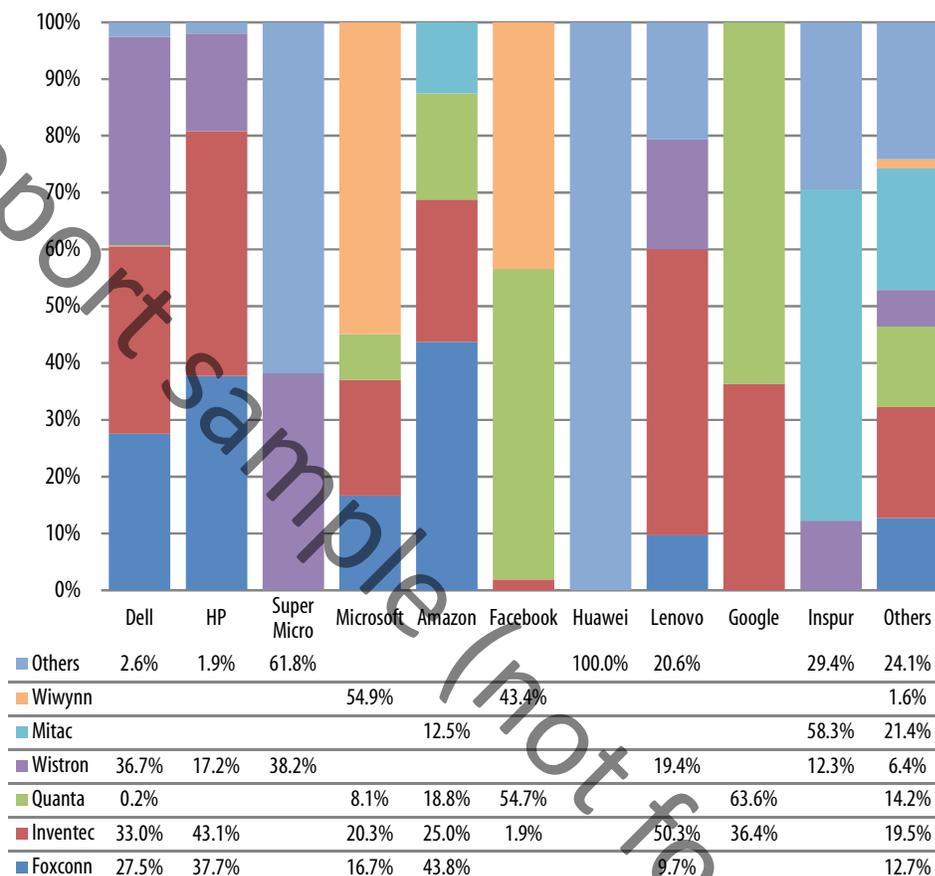
Source: Digitimes Research, October 2018

Facebook and Microsoft will continue to increase their ratios of ODM orders placed with Wywynn in fourth-quarter 2018.

Amazon's ratio of orders to Inventec will keep on increasing. Inventec can expect to get more orders from Amazon quarter over quarter while the other manufacturers will see less, buoying Inventec's share by 4.4pp on quarter.

Inspur's orders to Mitac will further increase to account for nearly 60%.

Chart 26: Client shipment share by maker, 4Q18



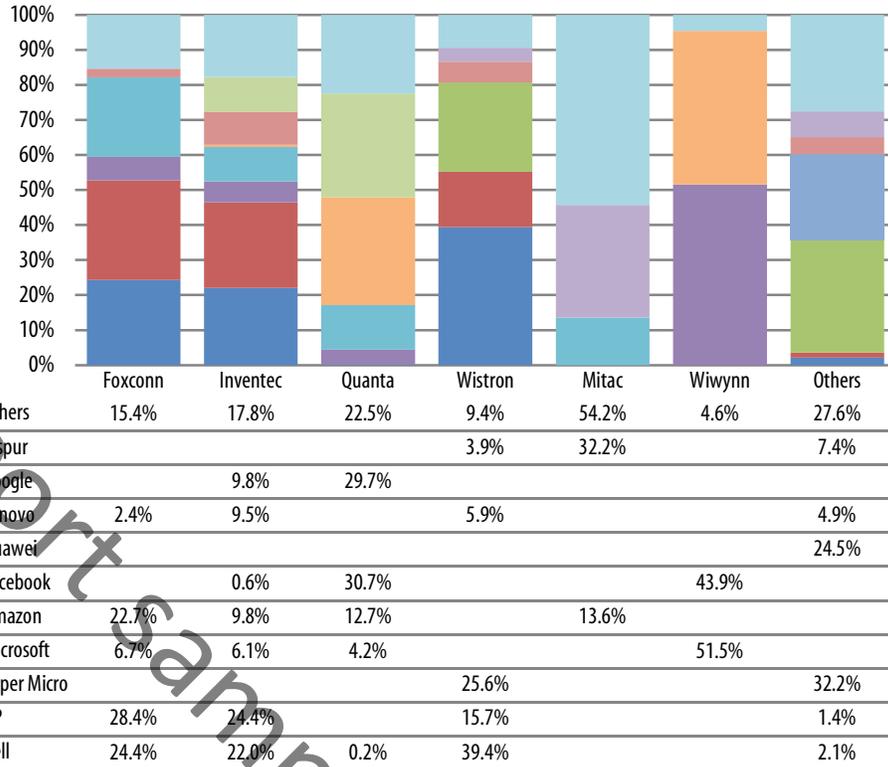
Source: Digitimes Research, October 2018

Looking forward into fourth-quarter 2018, Inventec will grow more dependent on several main customers. This is mainly because shipments to Google and BAT (Baidu, Alibaba and Tencent) will likely decline on quarter as their orders will show weak growth in the fourth quarter.

Wistron will grow more dependent on HPE. With shipments to major customers showing sequential decline, Wistron's shipments to HPE can maintain moderate growth while shipments by the other ODMs will exhibit flat growth.

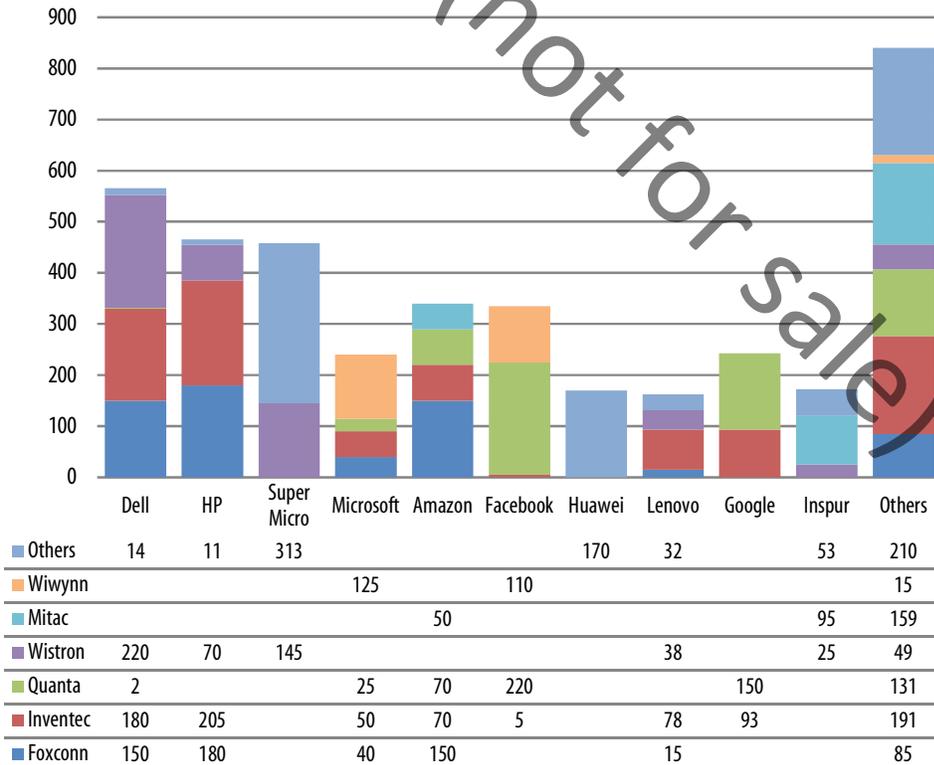
Quanta will become more dependent on Google and Amazon. This is because its shipments to the two customers will show a smaller decline compared to the average.

Chart 27: Maker shipment share by client, 4Q18



Source: Digitimes Research, October 2018

Chart 28: Client-maker partnership matrix, 3Q18 (k units)



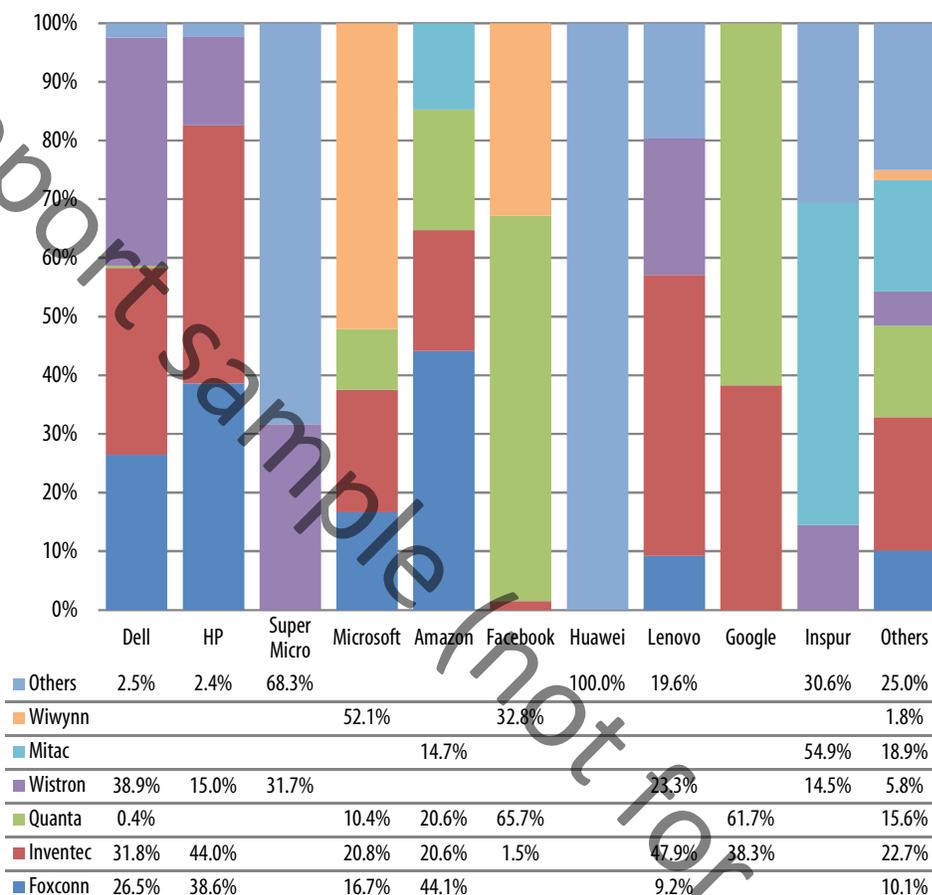
Source: Digitimes Research, October 2018

As to order distributions in third-quarter 2018, Facebook and Microsoft both increased their ratios of ODM orders placed with Wywinn. Wywinn is receiving sequentially increasing orders from Facebook and Microsoft, buoying their shares among Wywinn's shipments, with Microsoft's exceeding half.

The ratio of HPE's ODM orders to Foxconn and Wistron rose 2pp and 3pp respectively from the prior quarter, resulting in a lower ratio of orders to Inventec.

Inspur's orders to Mitac already exceeded half.

Chart 29: Client shipment share by maker, 3Q18



Source: Digitimes Research, October 2018

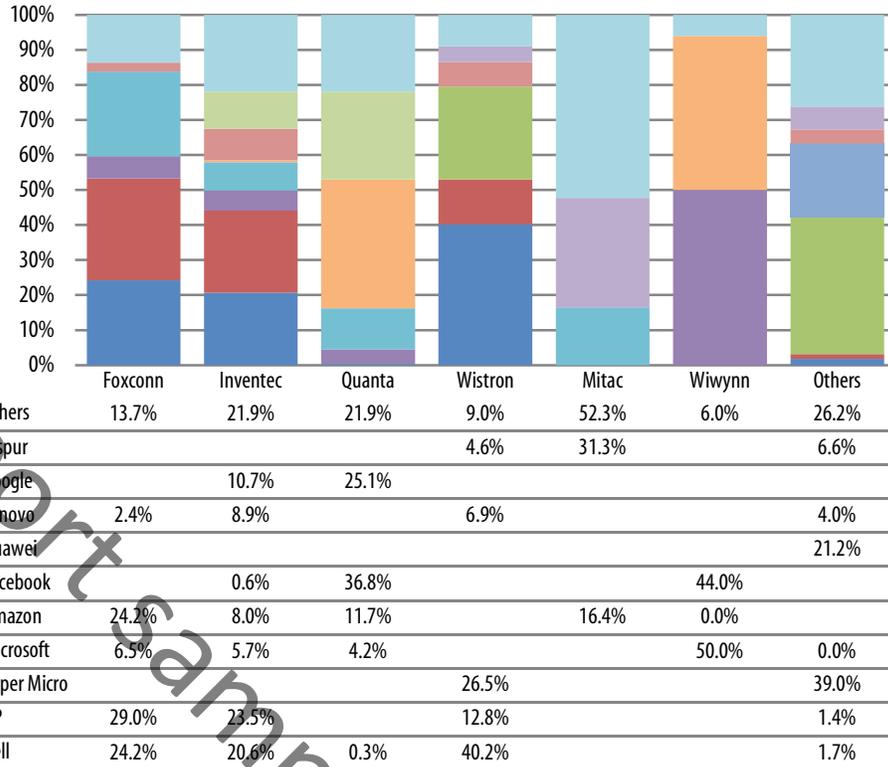
With HPE increasing ODM orders to Wistron and decreasing those to Inventec in third-quarter 2018, Wistron grew more dependent on HPE.

Inventec's shipments to Lenovo and Amazon showed more significant sequential growth. Therefore, the shares of Inventec's shipments contributed by the two customers rose to 8-9%.

Wywinn counts on Microsoft to contribute half of its shipment performance and Facebook 44%.

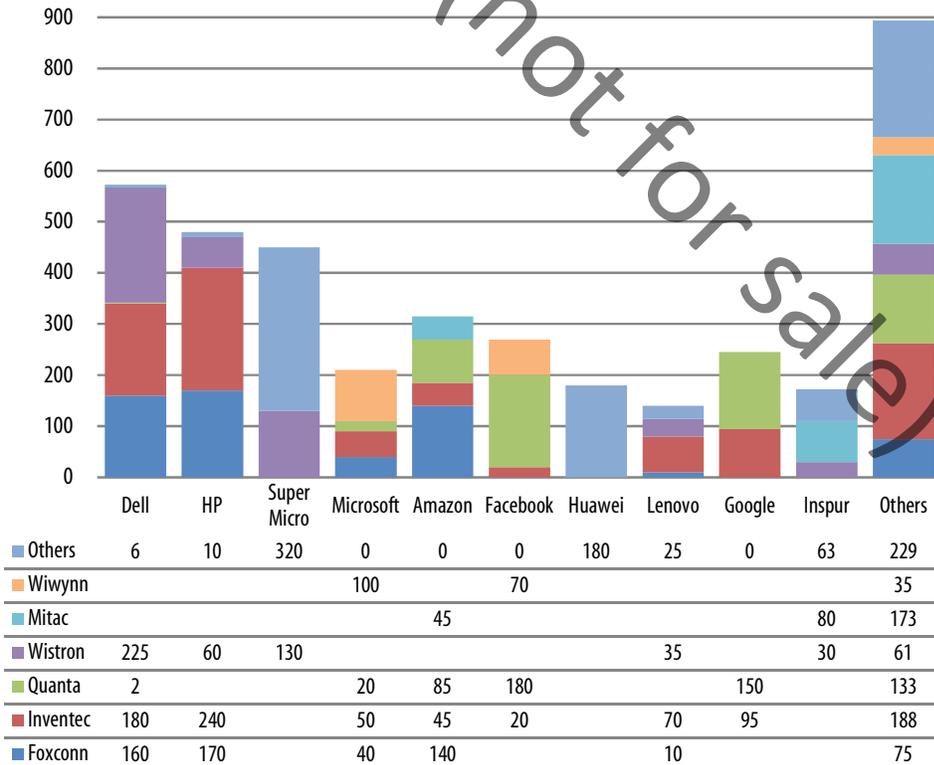
Quanta's No. 1 customer Facebook made increasing contribution to its shipments, up 5.2pp to 36.8%.

Chart 30: Maker shipment share by client, 3Q18



Source: Digitimes Research, October 2018

Chart 31: Client-maker partnership matrix, 2018 (k units)

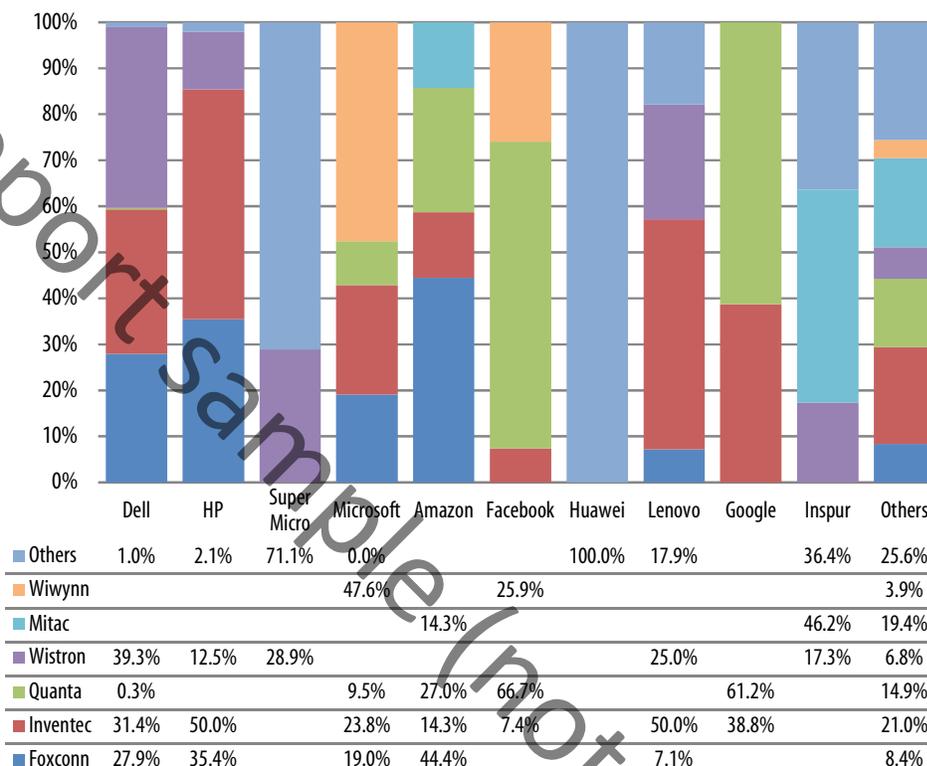


Source: Digitimes Research, October 2018

There are some revisions to the second-quarter 2018 order distributions in this latest report with Wywinn's shipments to Facebook and Microsoft, and Quanta's shipments to Google all having been revised upward.

As a result of the revisions, Wywinn's shares of total orders placed by Facebook and Microsoft are 25.9% and 47.6% respectively, up by 2.8pp and 14.6pp compared to the percentages as stated in Digitimes Research's previous report released in August 2018. Quanta's share of Google's orders is revised upward by 8.7pp to 61.2%.

Chart 32: Client shipment share by maker, 2Q18

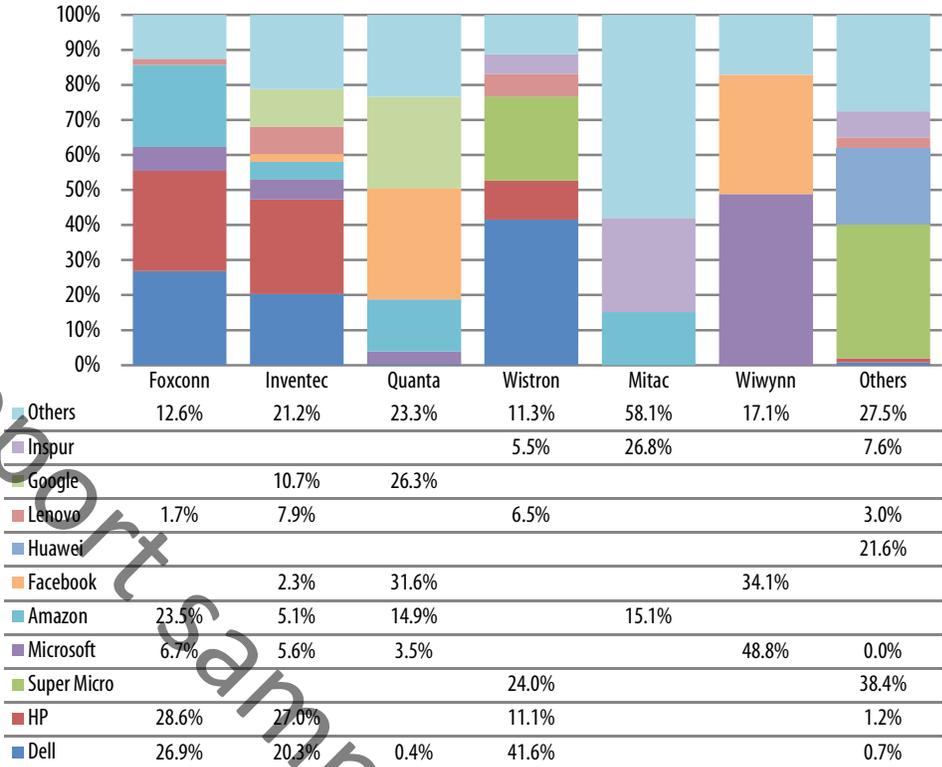


Source: Digitimes Research, October 2018

The previous report underestimated Wywinn's shipments to the two customers and the shares were adjusted after revisions, which result in a much bigger share for Microsoft for second-quarter 2018. In this latest report, Facebook's share is 34.1%, compared to the previously reported 36.4%, while Microsoft's is revised upward from 42.4% to 48.8%.

In this report, Foxconn's shipments to Microsoft are revised downward so Foxconn's ratios of shipments to major customers are adjusted accordingly. The ratio of shipments to Microsoft is revised downward from 10.1% to 6.7%.

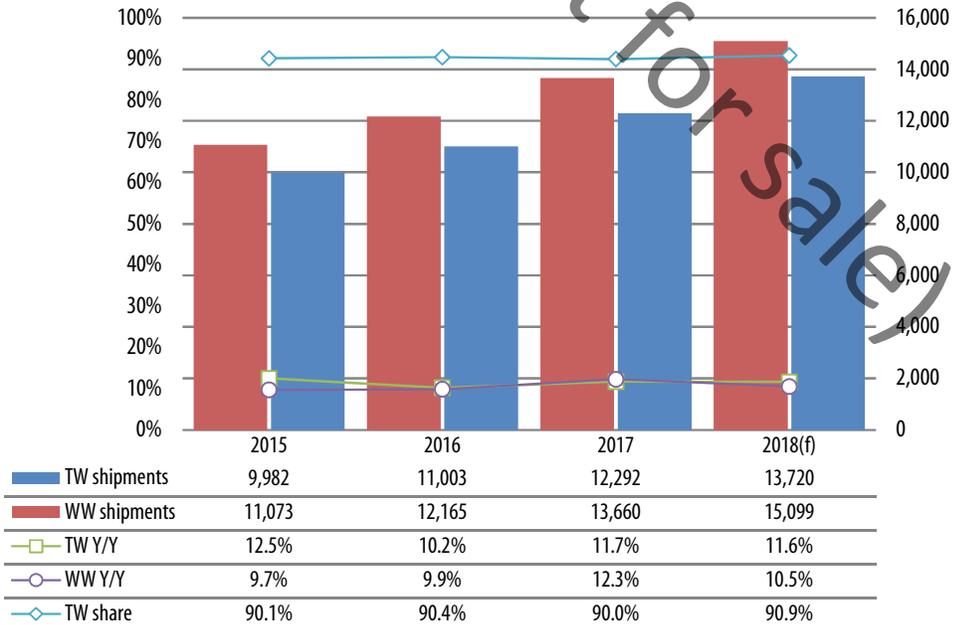
Chart 33: Maker shipment share by client, 2018



Source: Digitimes Research, October 2018

Annual shipments

Chart 34: Taiwan and global server shipments, 2015-2018 (k units)



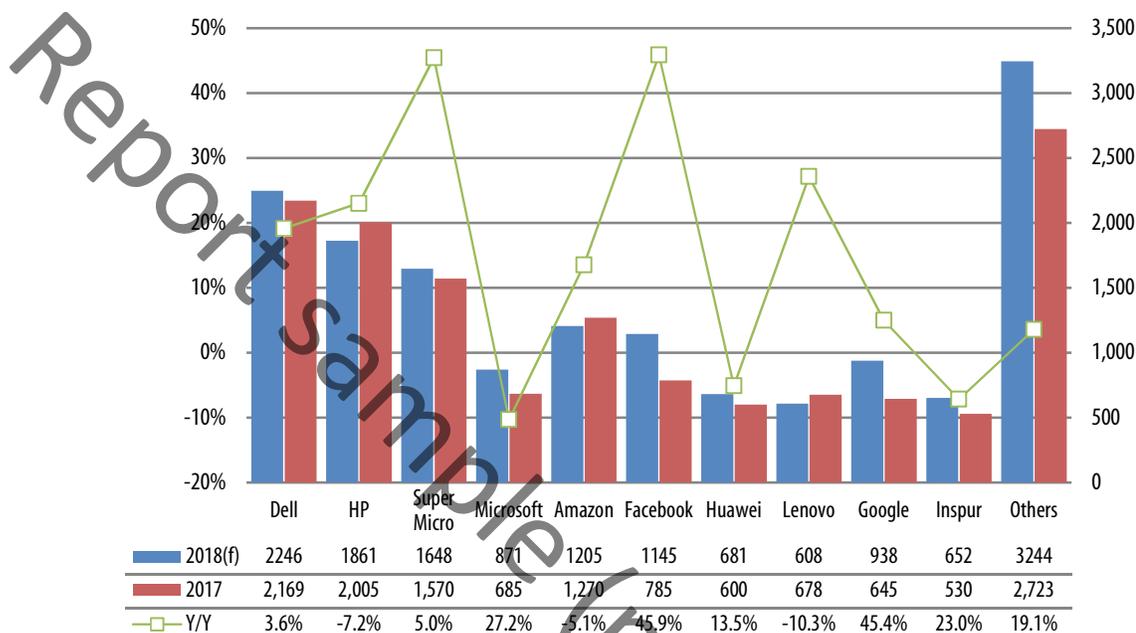
Source: Digitimes Research, October 2018

Digitimes Research previously estimated that 2018 global server shipments would soar 16-18% to exceed 16 million units. However, due to factors including the rising wave of platform upgrades and fast escalating US-China trade tension, third-quarter shipments are revised downward and thus whole-year shipments will only increase 10.5% to come to 15 million units.

Demand from large-scale data centers is showing above-average growth to reach 23%.

The share of white-box shipments continues on an upward trend, from 25% in 2017 to 28% in 2018.

Chart 35: Global server shipments by top-10 player, 2017-2018 (k units)



Source: Digitimes Research, October 2018

Server demand from large-scale data centers including Facebook, Google and Microsoft as well as China-based vendors including Inspur and Huawei will exhibit stronger growth momentum in 2018.

Demand in the China market mainly comes from cloud service providers and e-commerce operators BATJ (Baidu, Alibaba, Tencent and JD.com) as well as enterprises building their own server infrastructure.

One of the two leading server brands will deliver growth while the other will exhibit decline. Dell will enjoy rising shipments but HPE will experience a drop in sales.

Dell's performance can be attributed to effects of the merger with EMC. HPE, on the other hand, sustains impact from white-box vendors eroding its market share.