DIGITIMES Research: Global Server Tracker – 1Q 2021

Global server market

Introduction

Global server shipments are expected to slip by only 1.6% sequentially in the first quarter of 2021 despite the quarter being a traditional slow season.

After experiencing a slowdown in server order pull-ins in the second half of 2020, demand from several datacenter operators began to resume in the first quarter of 2021, as shortages of ICs and components remained fierce.

Server shipments are expected to grow around 14% sequentially in the second quarter of 2021 thanks to increasing orders from cloud computing service providers, e-commerce platforms and enterprises, as well as the replacement trend stimulated by the releases of Intel's new-generation server CPUs, Digitimes Research's numbers show.

In the second quarter, Amazon and Google will both need to install more servers to satisfy their e-commence and cloud computing services, while Dell and HP Enterprise (HPE) are seeing increasing server orders from traditional enterprises.

Supermicro's shipments will pick up in the second quarter as it has obtained server system projects from its US-based datacenter clients.

Because of concerns over IC and component shortages and possible prolonged delivery schedules, datacenter operators and server brands have advanced some of their orders with their manufacturing partners.

Global server shipments are expected to reach 8.09 million units in the first half of 2021, remaining flat from the same period a year ago.

(Note: Shipments in server tracker reports refer to the number of motherboards shipped. A server motherboard supporting multiple CPUs is still considering one unit. A rack server that is equipped with multiple motherboards is counted based on the number of its motherboards. Shipments of other networking devices such as switches, routers and storages, are not included in the figures.)

Key factors affecting the global server market

Table 1: Key factors affecting 2Q21 global server shipments

Factor	Item	Analysis	Effect
Supply	CPU platform	Intel and AMD have begun volume production of new CPU platforms	A replacement trend is expected to start among datacenters and server brands
	Component shortages	Server vendors facing IC and passive component shortages	Longer lead time for component supply will delay production and shipment schedule for server systems
Demand	Large cloud computing datacenters	Large US-based datacenter operators exhibiting stronger demand	Combined orders from Amazon and Google are expected to soar 18% sequentially
		China-based datacenters and enterprises see increasing demand with COVID-19 under control in China	Orders from Inspur are estimated to increase 15% sequentially
	Server brands	The global economy is expected to resume growth with the COVID-19 easing. Server brands also begin placing orders for servers based on new CPUs	Shipments of Dell and HPE to show high single-digit sequential growth

Source: Digitimes Research, April 2021

Next-generation server CPU platforms including Intel's Whitley and AMD's third-generation EPYC processors will start to fuel shipments of new server models to cloud datacenters and server brands in second-quarter 2021.

Shortages of power management ICs, circuit control components and passive components will result in two to three times longer lead time for server to be delivered to datacenters and server brands while delaying the production schedule of server motherboards and the shipment schedule of whole rack server systems.

Demand from US-based datacenter operators will rebound in second-quarter 2021. In particular, combined server orders from Amazon and Google will climb 18% sequentially as they try to meet growing cloud service and e-commerce demand and new CPU platforms spur upgrade demand.

With COVID-19 effectively contained in China, economic activities are recovering. On top of that, state policies supporting datacenter infrastructure build-up drives server demand from cloud datacenters and enterprises. As such, server orders from Inspur are expected to grow nearly 15% sequentially.

Dell and HPE will begin to place OEM orders for servers based on new CPU platforms. With server demand from their enterprise customers on the rebound, second-quarter 2021 shipments by the two server brands are expected to increase 8% to 9% quarter-over-quarter.

Chart 1: Global server shipments, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Shipments	3,595	4,565	4,252	3,843	3,782	4,308
Q/Q	-18.2%	27.0%	-6.9%	-9.6%	-1.6%	13.9%
Y/Y	11.4%	28.1%	9.8%	-12.6%	5.2%	-5.6%
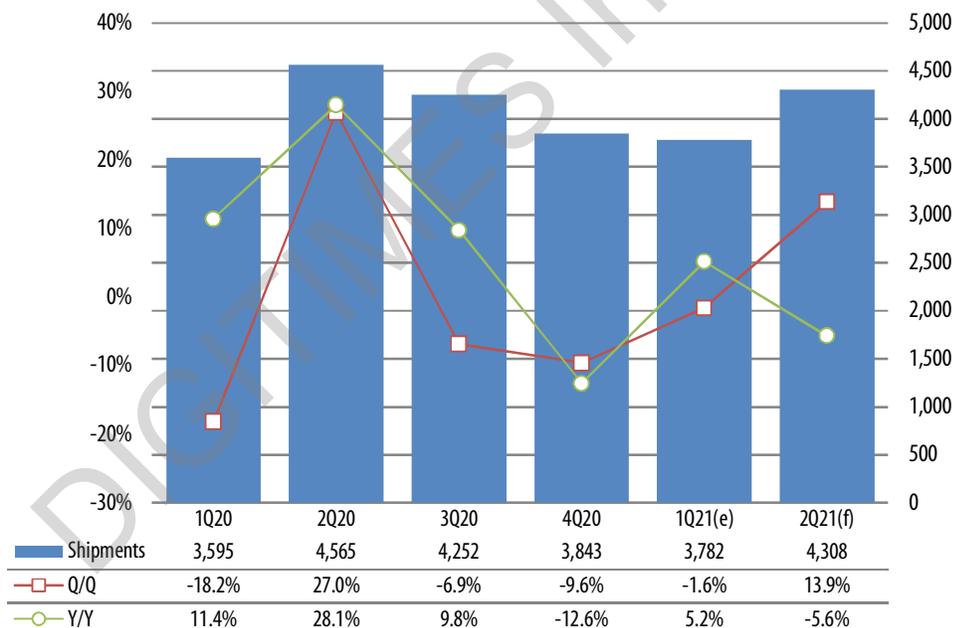
Source: Digitimes Research, April 2021

First-quarter 2021 global server shipments amounted to 3.78 million units, down only 1.6% quarter-over-quarter and up 5.2% year-over-year.

Supply disruption arising from the COVID-19 outbreak in early 2020 resulted in a low first-quarter 2020 base period.

The supply chain resumed normal operation starting in second-quarter 2020. Shipment momentum then slowed down in second-half 2020 with fourth-quarter 2020 shipments showing a 10% sequential decline. Demand from cloud datacenters began to rebound in first-quarter 2021, helping global server shipments beat slow season.

According to Digitimes Research's estimates, second-quarter 2021 global server shipments will show a sequential increase of 14% to come to 4.31 million units as datacenter operators and server brands aggressively ramp up orders out of concerns over component shortage and new CPU platforms begin to spur some upgrade demand.

However, second-quarter 2021 global server shipments will decline 5.6% on a year-over-year basis due to a high second-quarter 2020 base period.

Shipments breakdown

Chart 2: Global shipments by top-10 player, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Others	663	1082	1030	831	844	1013
Inspur	208	300	271	243	228	263
Lenovo	202	204	212	190	186	189
Huawei	270	280	170	140	131	146
Google	196	257	268	242	248	294
Facebook	497	580	640	604	520	571
Amazon	228	272	290	309	345	408
Microsoft	172	252	193	192	156	162
Supermicro	302	360	290	291	358	425
HPE	372	424	391	339	326	354
Dell	485	554	497	462	440	483
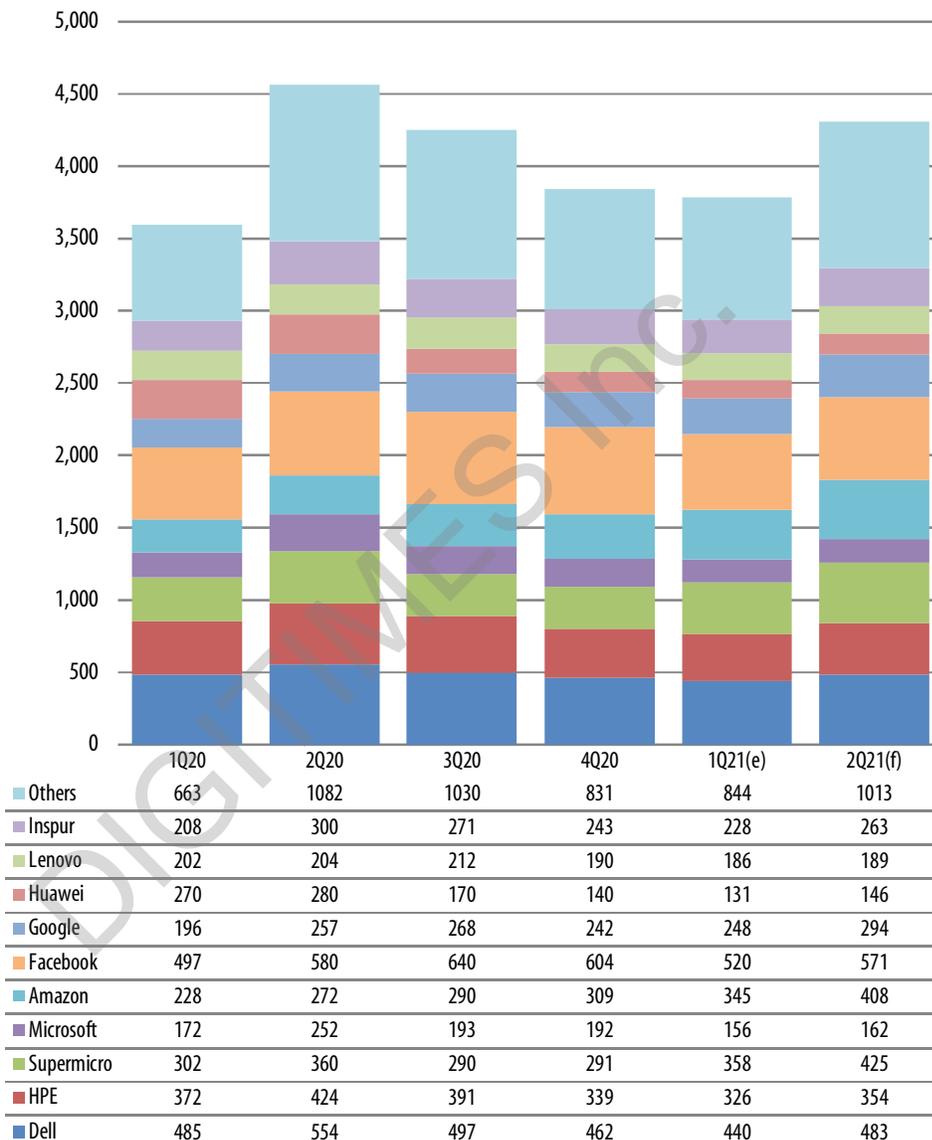
Source: Digitimes Research, April 2021

The shares of server shipments to Amazon, Google, Supermicro (SMC) and Inspur among the global total are estimated to grow in second-quarter 2021.

Amazon's share is set to edge upward 0.4pp to 9.5%, buoyed by demand from its cloud services and e-commerce platform as well as new CPUs being introduced to datacenter infrastructure.

Google's share is expected to increase 0.2pp to 6.8%, driven by cloud service demand and new server models.

Supermicro's share will further expand 0.4pp to come close to 10%, thanks to demand from US-based enterprises and datacenter projects (including LinkedIn and Intel).

Inspur's share is poised to slightly increase 0.1pp to 6.1%, contributed by rebounding demand from China-based datacenters and enterprises.

Due to a late start in adopting servers with next-generation CPUs, Microsoft's share is expected to fall below 4% in second-quarter 2021. Server shipments to Microsoft will begin to ramp up in third-quarter 2021.

Facebook mostly places orders for custom-made servers which need to undergo specific safety certification and data management processes for deployment in its datacenters throughout the world. As such, Facebook's order momentum will not be as strong as that of Amazon and Google, causing its share to lower to 13.3% in second-quarter 2021.

Demand from server brands including Dell, HPE and Lenovo will rebound but will only show single-digit sequential growth in second-quarter 2021 so their shares will fall about 0.4-0.5pp.

Chart 3: Global shipment share by top-10 player, 1Q20-2Q21

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Others	18.4%	23.7%	24.2%	21.6%	22.3%	23.5%
Inspur	5.8%	6.6%	6.4%	6.3%	6.0%	6.1%
Lenovo	5.6%	4.5%	5.0%	4.9%	4.9%	4.4%
Huawei	7.5%	6.1%	4.0%	3.6%	3.5%	3.4%
Google	5.5%	5.6%	6.3%	6.3%	6.6%	6.8%
Facebook	13.8%	12.7%	15.1%	15.7%	13.7%	13.3%
Amazon	6.3%	6.0%	6.8%	8.0%	9.1%	9.5%
Microsoft	4.8%	5.5%	4.5%	5.0%	4.1%	3.8%
Supermicro	8.4%	7.9%	6.8%	7.6%	9.5%	9.9%
HPE	10.3%	9.3%	9.2%	8.8%	8.6%	8.2%
Dell	13.5%	12.1%	11.7%	12.0%	11.6%	11.2%
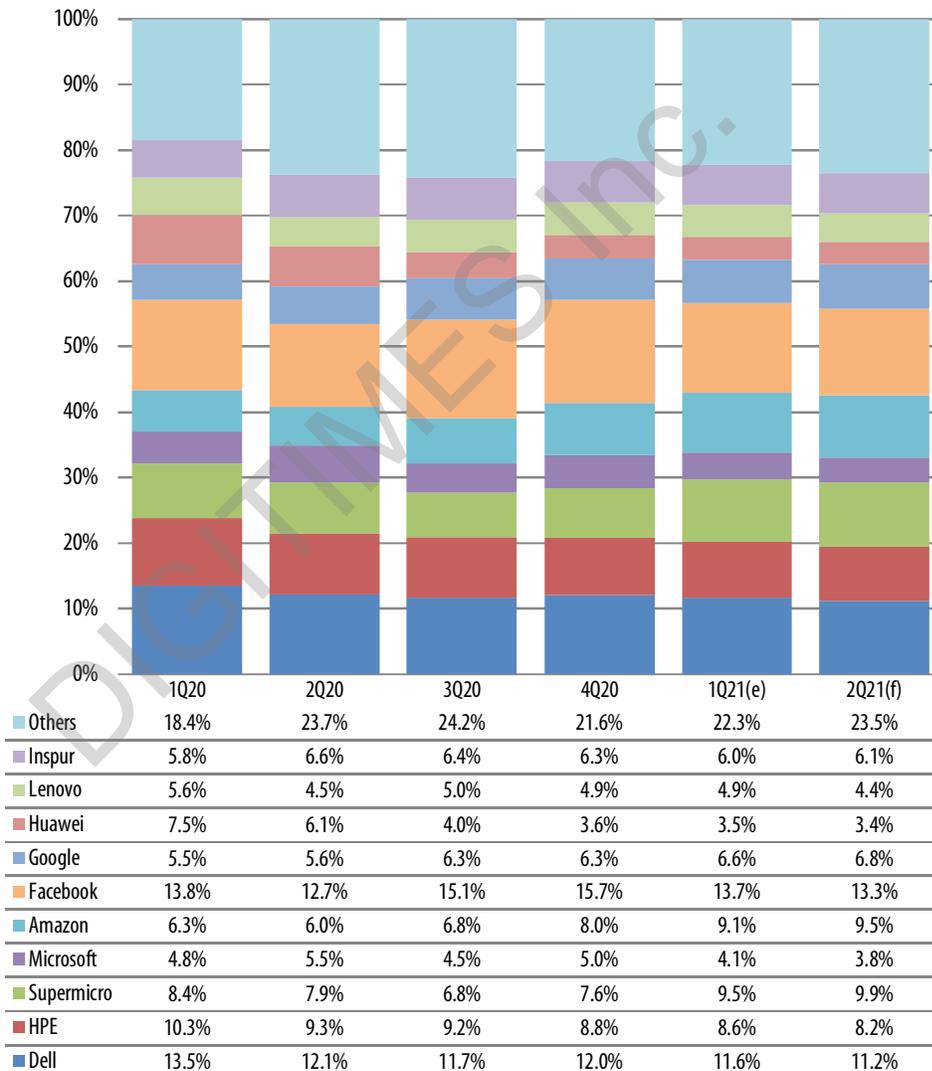
Source: Digitimes Research, April 2021

Shipments from Taiwan makers

Chart 4: Taiwan server shipments and global share, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Shipments	3,150	4,045	3,906	3,564	3,473	3,968
Q/Q	-18.9%	28.4%	-3.4%	-8.8%	-2.6%	14.3%
Y/Y	7.3%	23.1%	9.8%	-8.2%	10.3%	-1.9%
Global share	87.6%	88.6%	91.9%	92.7%	91.8%	92.1%
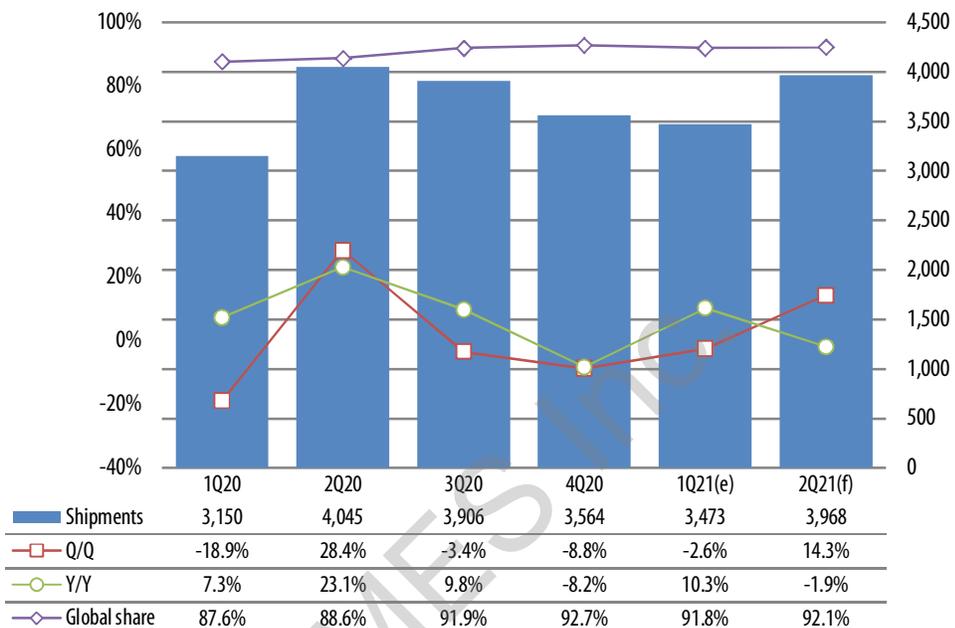
Source: Digitimes Research, April 2021

Shipment momentum of the Wistron Group, which consists of Wistron and Wiwynn, slowed down due to shortages of some components in first-quarter 2021. On top of that, its server brand customers showed relatively weaker demand. As a result, its shipments plunged nearly 20% sequentially, much worse than the global average. This also caused the shipment share of Taiwan-based server manufacturers among the global total to dip 0.9pp to 91.8%.

Going into second-quarter 2021, large US-based and China-based datacenter operators will ramp up orders. Among them, Amazon and Google, which mainly place orders with Taiwan-based server manufacturers, will especially have stronger demand.

Amazon and Google's combined orders are estimated to climb 18% sequentially, growing by a larger extent than those of Huawei, which fully produce servers in house, and Lenovo, which has about 19% of its servers made in house. The share of server shipments by Taiwan-based server manufacturers among the global total is therefore expected to edge upward 0.3pp to 92.1%.

Supermicro's shipment momentum weakened in second-half 2020 but it started to see rebounding demand in first-quarter 2021. Going into second-quarter 2021, its shipments are estimated to soar 19% sequentially, boosted by demand from US-based datacenter projects. The growth will outperform the global average. This will prompt Supermicro to hike the share of its orders to Wistron by nearly 10pp to 32%.

Chart 5: Taiwan shipments by top maker, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Others	270	354	332	246	264	394
OSE	78	91	75	80	98	86
USI	111	111	93	84	116	110
Wiwynn	288	380	345	363	276	308
Mitac	209	270	301	261	265	299
Wistron	455	610	544	535	451	494
Quanta	532	674	677	576	608	678
Inventec	687	890	926	839	806	911
Foxconn	520	665	613	580	589	688
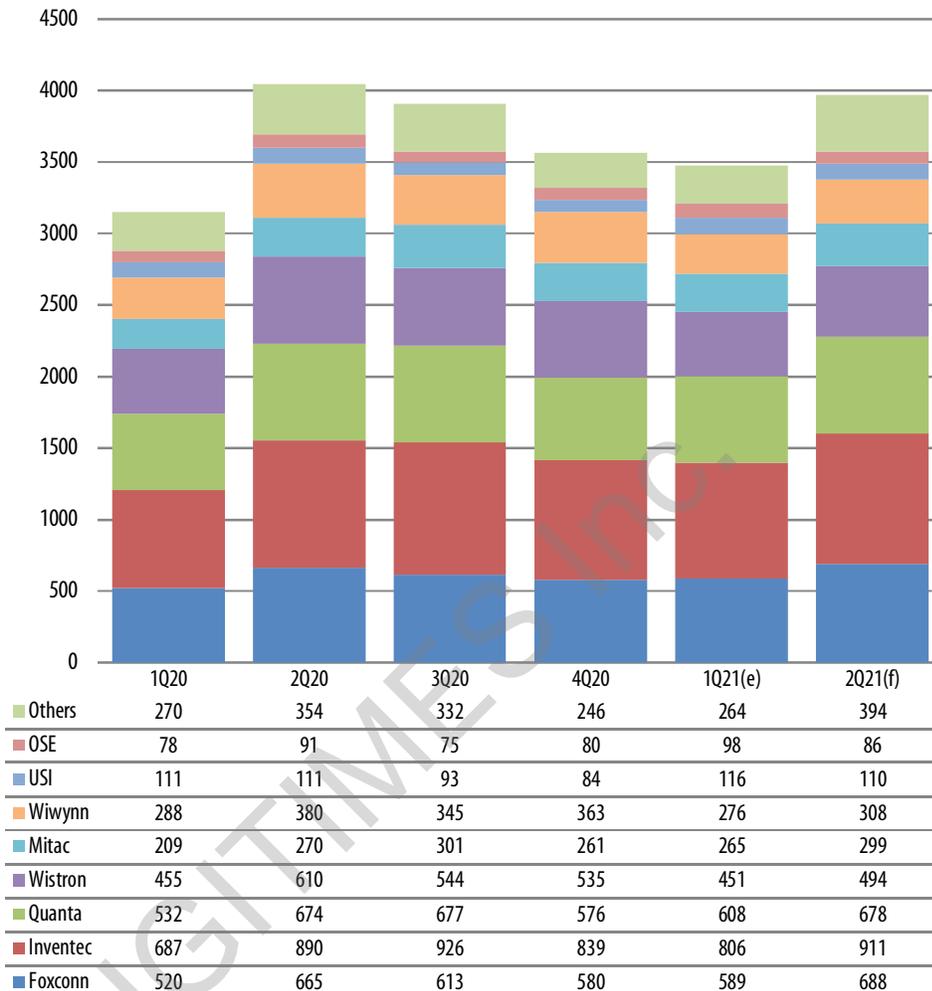
Source: Digitimes Research, April 2021

The rankings among Taiwan-based manufacturers in terms of server shipments showed some changes between fourth-quarter 2020 and first-quarter 2021. Quanta overtook Foxconn to become No. 2.

Quanta benefited from Amazon and Google hiking their orders was able to deliver a 5.6% sequential shipment growth in contrast to the decline in global server shipments.

Despite seeing a sequential growth in shipments to Amazon, Foxconn had weak shipments to its US-based customers including Dell, HPE and Microsoft, which resulted in only a 1.6% sequential increase in Foxconn's overall shipments in the first quarter of 2020.

Wiwynn's first-quarter 2020 shipments are estimated to plunge 24% from the prior quarter and its share is expected to lower to 7.3% due to slowing order momentum from its major customers Microsoft and Facebook as well as IC shortages disrupting its delivery schedule for some server models.

Going into second-quarter 2021, Foxconn will enjoy rebounding demand from customers so its share will further expand, allowing it to surpass Quanta again.

Foxconn's share will rise 0.4pp to 16%, buoyed by Amazon's stronger order momentum on top of rebounding demand from China-based datacenters and US-based customers including Dell and HPE.

Wistron, which mainly supplies products to server brands, will see its shipments climb 9% sequentially in second-quarter 2021 thanks to rebounding customer demand. However, its growth will come short of that in global server shipments so Wistron's share may again fall 0.4pp to 11.5%.

Chart 6: Taiwan shipment share by top maker, 1Q20-2Q21

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Others	8.6%	8.8%	8.5%	6.9%	7.6%	9.9%
OSE	2.5%	2.2%	1.9%	2.2%	2.8%	2.2%
USI	3.5%	2.7%	2.4%	2.4%	3.3%	2.8%
Wiwynn	9.1%	9.4%	8.8%	10.2%	7.9%	7.8%
Mitac	6.6%	6.7%	7.7%	7.3%	7.6%	7.5%
Wistron	14.4%	15.1%	13.9%	15.0%	13.0%	12.4%
Quanta	16.9%	16.7%	17.3%	16.2%	17.5%	17.1%
Inventec	21.8%	22.0%	23.7%	23.5%	23.2%	23.0%
Foxconn	16.5%	16.4%	15.7%	16.3%	17.0%	17.3%
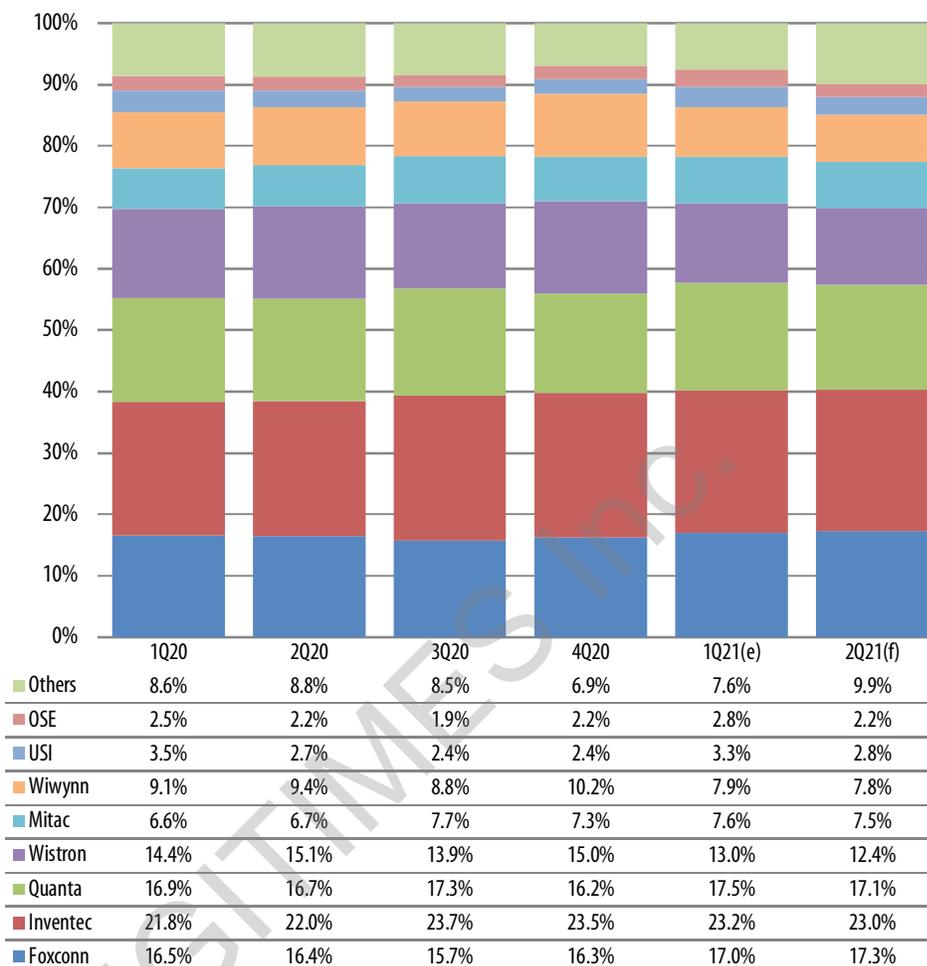
Source: Digitimes Research, April 2021

Foxconn

Chart 7: Foxconn server shipments, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Shipments	520	665	613	580	589	688
Q/Q	-16.9%	27.9%	-7.8%	-5.4%	1.6%	16.8%
Y/Y	-6.3%	19.4%	13.5%	-7.3%	13.3%	3.5%
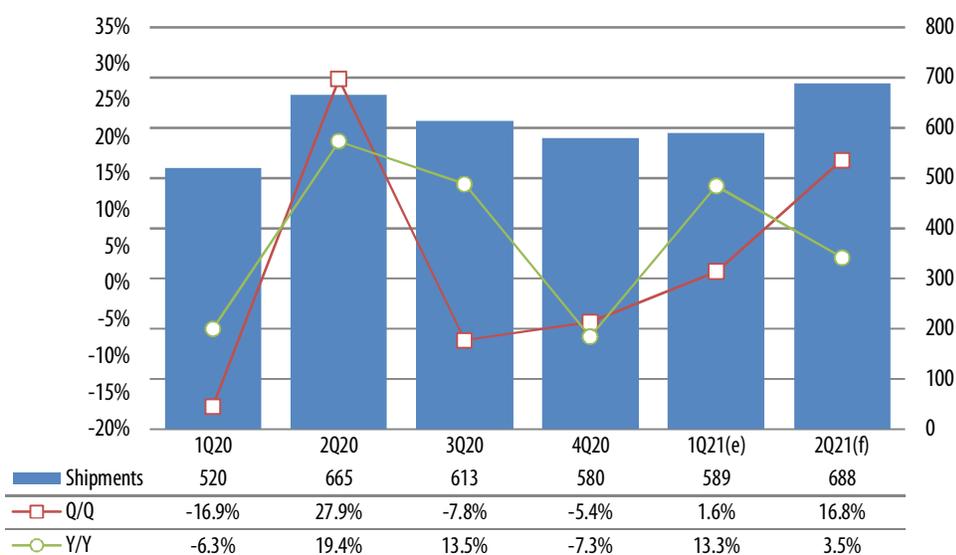
Source: Digitimes Research, April 2021

Chart 8: Foxconn shipments by client, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
■ Others	103	182	157	145	149	186
■ Amazon	114	140	143	157	175	213
■ Microsoft	33	50	39	40	36	39
■ HPE	136	143	139	121	117	124
■ Dell	134	150	135	117	112	126
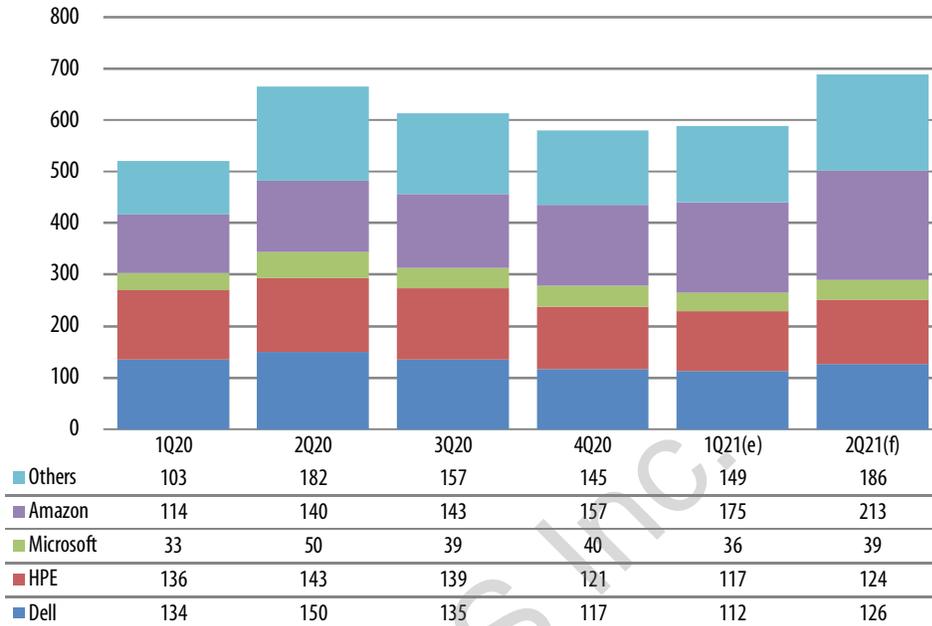
Source: Digitimes Research, April 2021

Chart 9: Foxconn shipment share by client, 1Q20-2Q21

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
■ Others	19.8%	27.4%	25.6%	25.0%	25.3%	27.0%
■ Amazon	21.9%	21.1%	23.3%	27.1%	29.7%	31.0%
■ Microsoft	6.3%	7.5%	6.4%	6.9%	6.1%	5.7%
■ HPE	26.2%	21.5%	22.7%	20.9%	19.9%	18.0%
■ Dell	25.8%	22.6%	22.0%	20.2%	19.0%	18.3%
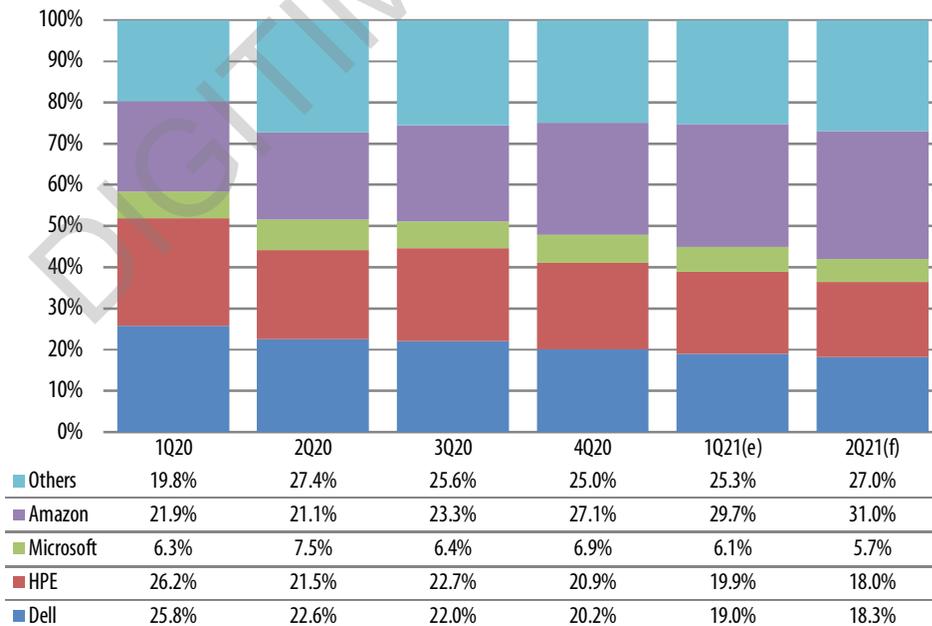
Source: Digitimes Research, April 2021

Inventec

Chart 10: Inventec server shipments, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Shipments	687	890	926	839	806	911
Q/Q	-15.4%	29.5%	4.0%	-9.4%	-3.9%	13.0%
Y/Y	8.2%	25.4%	19.6%	3.3%	17.3%	2.4%
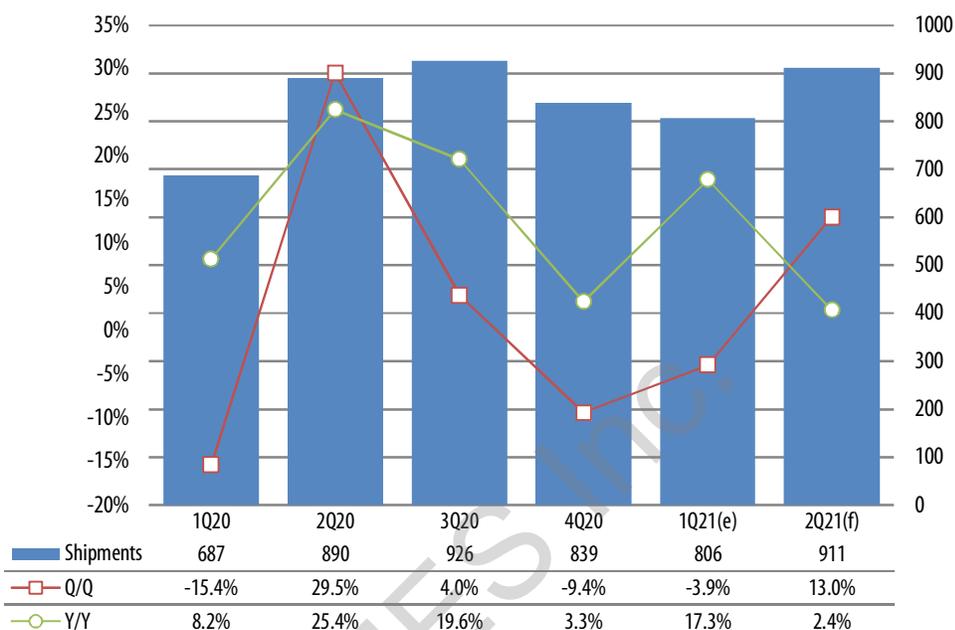
Source: Digitimes Research, April 2021

Chart 11: Inventec shipments by client, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Others	108	217	286	222	199	243
Google	90	105	110	101	102	126
Lenovo	52	61	65	60	58	59
Facebook	2	5	2	2	2	2
Amazon	65	70	64	72	81	95
Microsoft	53	68	57	58	50	50
HPE	165	189	178	154	151	163
Dell	152	175	164	170	163	173
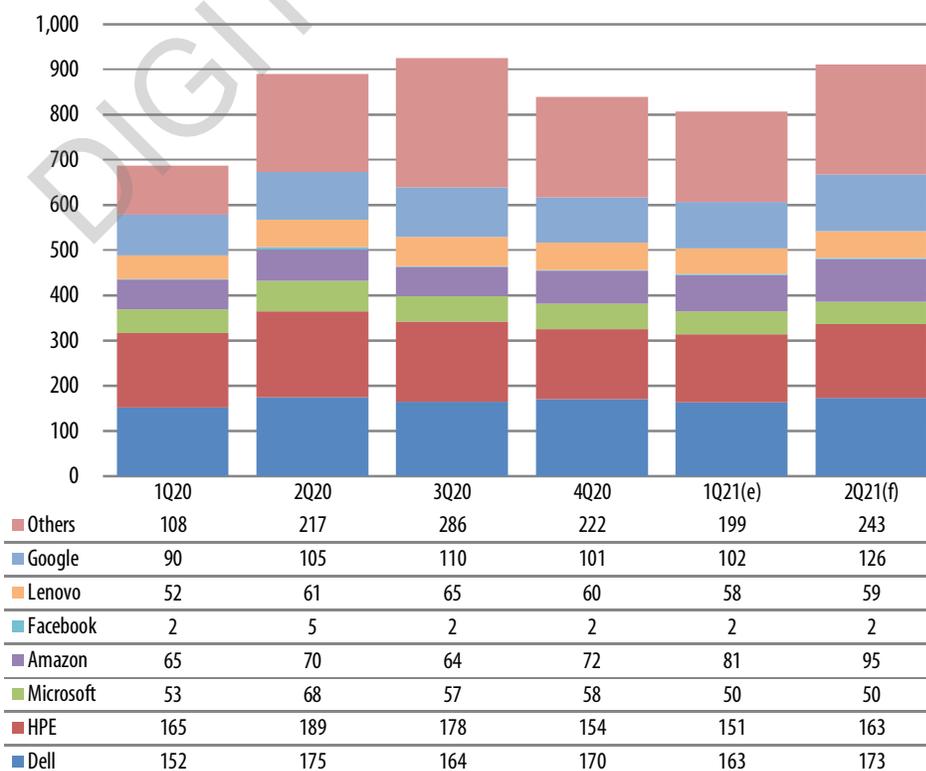
Source: Digitimes Research, April 2021

Chart 12: Inventec shipment share by client, 1Q20-2Q21

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Others	15.7%	24.4%	30.9%	26.5%	24.7%	26.7%
Google	13.1%	11.8%	11.9%	12.0%	12.7%	13.8%
Lenovo	7.6%	6.9%	7.0%	7.2%	7.2%	6.5%
Facebook	0.3%	0.6%	0.2%	0.2%	0.2%	0.2%
Amazon	9.5%	7.9%	6.9%	8.6%	10.0%	10.4%
Microsoft	7.7%	7.6%	6.2%	6.9%	6.2%	5.5%
HPE	24.0%	21.2%	19.2%	18.4%	18.7%	17.9%
Dell	22.1%	19.7%	17.7%	20.3%	20.2%	19.0%
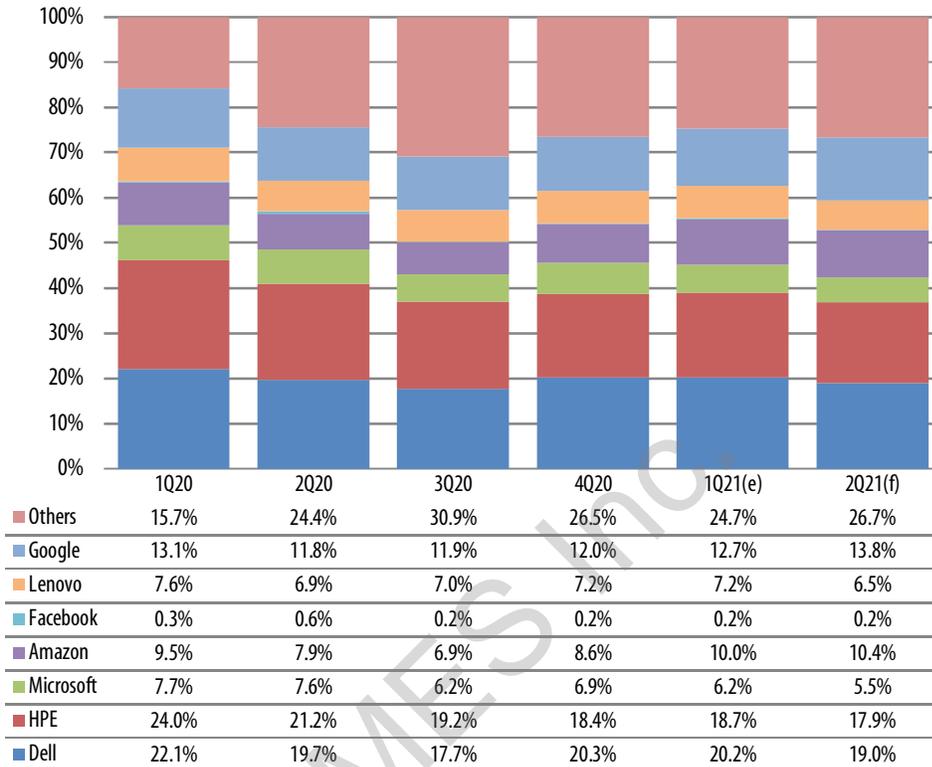
Source: Digitimes Research, April 2021

Quanta

Chart 13: Quanta server shipments, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Shipments	532	674	677	576	608	678
Q/Q	-19.3%	26.7%	0.4%	-14.9%	5.6%	11.5%
Y/Y	26.4%	35.3%	13.2%	-12.6%	14.3%	0.6%
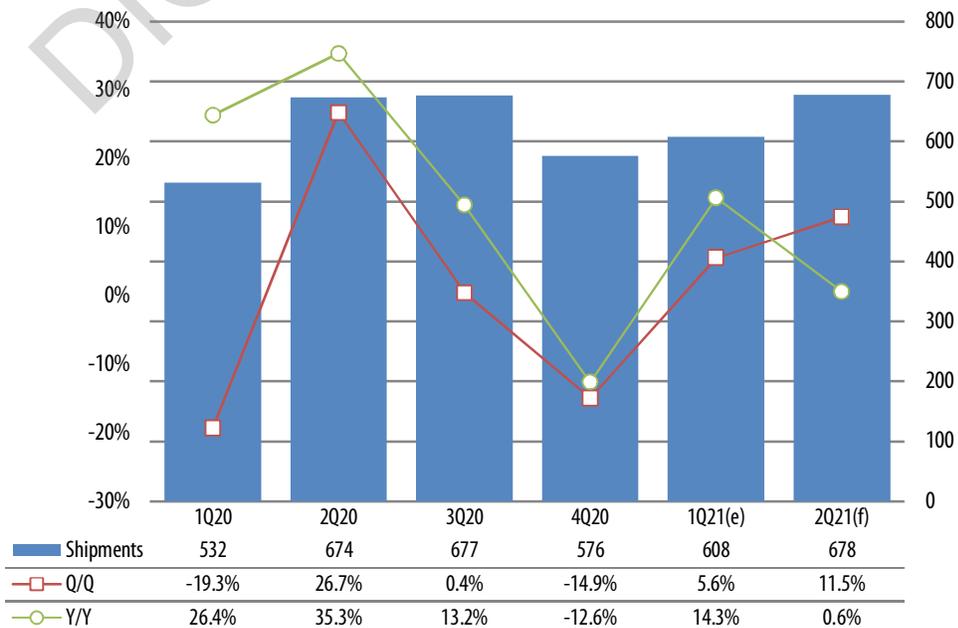
Source: Digitimes Research, April 2021

Chart 14: Quanta shipments by client, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Others	110	150	86	55	100	113
Amazon	12	20	25	32	38	44
Microsoft	18	24	17	11	9	10
Facebook	285	325	389	336	312	336
Google	106	152	158	141	146	168
Dell	1	3	2	1	3	7
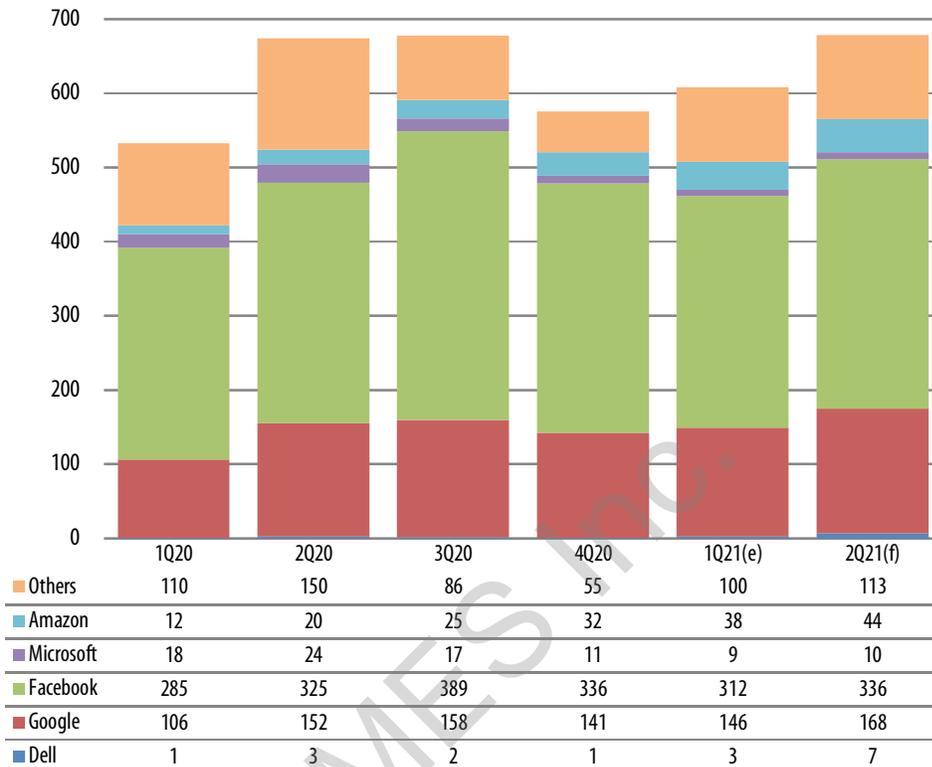
Source: Digitimes Research, April 2021

Chart 15: Quanta shipment share by client, 1Q20-2Q21

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Others	20.7%	22.3%	12.7%	9.5%	16.4%	16.7%
Amazon	2.3%	3.0%	3.7%	5.6%	6.3%	6.5%
Microsoft	3.4%	3.6%	2.5%	1.9%	1.5%	1.5%
Facebook	53.6%	48.2%	57.5%	58.3%	51.3%	49.6%
Google	19.9%	22.6%	23.3%	24.5%	24.0%	24.8%
Dell	0.2%	0.4%	0.3%	0.2%	0.5%	1.0%
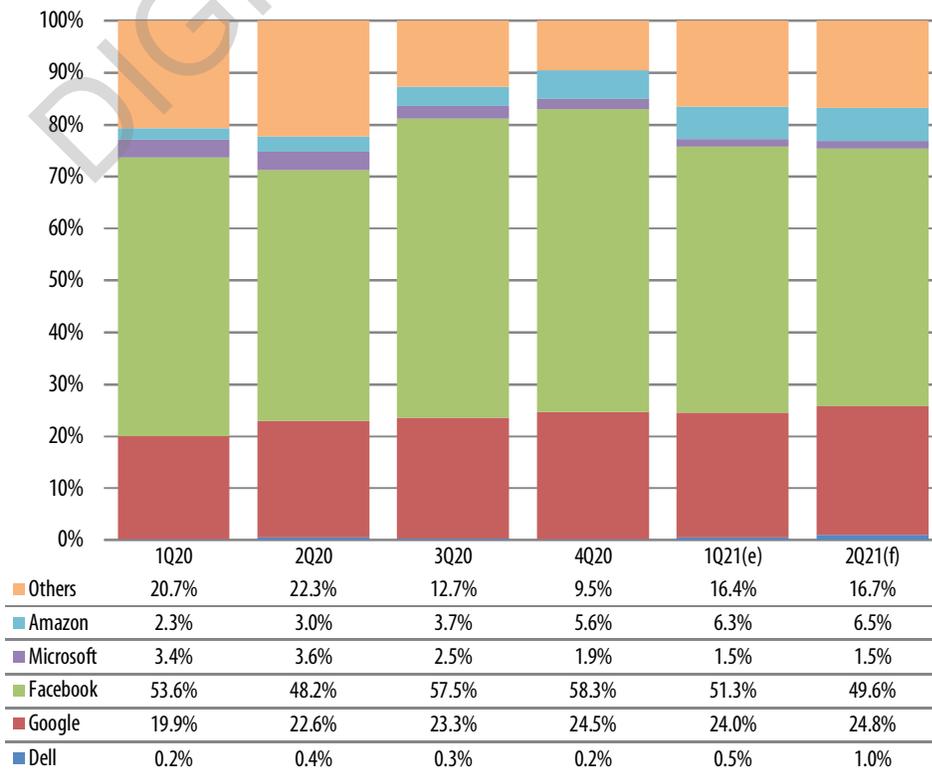
Source: Digitimes Research, April 2021

Wistron

Chart 16: Wistron server shipments, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Shipments	455	610	544	535	451	494
Q/Q	-26.0%	34.1%	-10.8%	-1.7%	-15.7%	9.5%
Y/Y	-4.2%	17.5%	0.7%	-13.0%	-0.9%	-19.0%
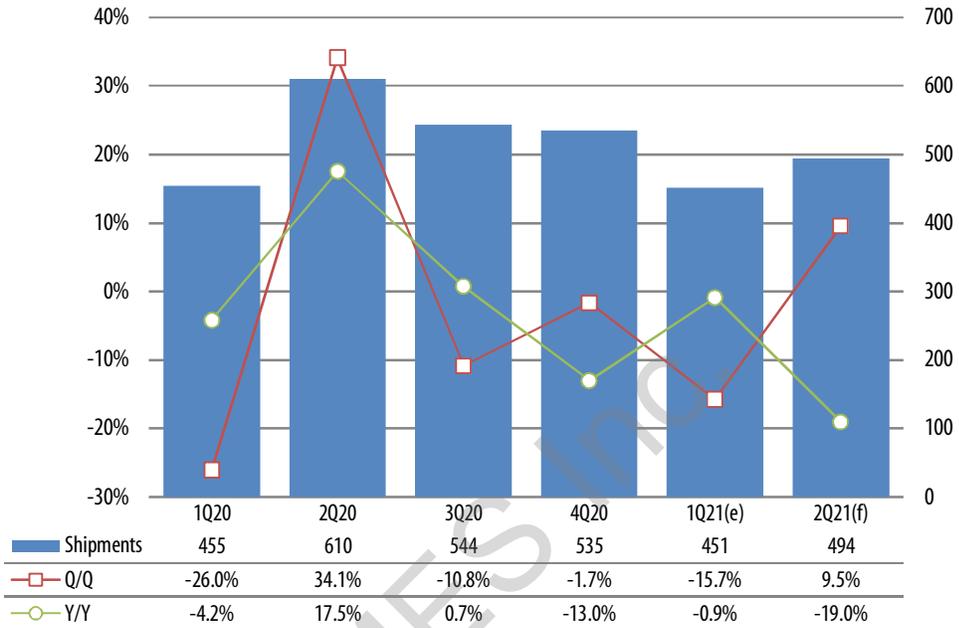
Source: Digitimes Research, April 2021

Chart 17: Wistron shipments by client, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Others	79	177	179	181	116	76
Supermicro	81	78	65	65	79	137
Lenovo	50	60	53	48	44	49
Inspur	35	50	45	52	45	50
Dell	145	165	137	130	113	122
HPE	65	80	65	59	54	60
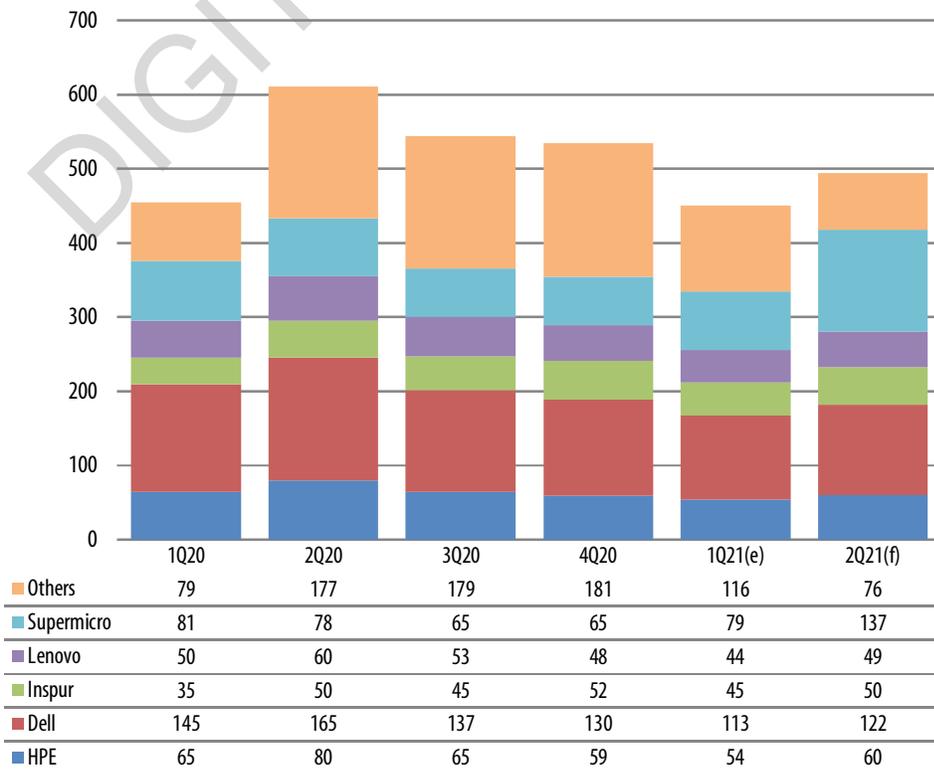
Source: Digitimes Research, April 2021

Chart 18: Wistron shipment share by client, 1Q20-2Q21

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Others	17.4%	29.0%	32.9%	33.8%	25.7%	15.4%
Supermicro	17.8%	12.8%	11.9%	12.1%	17.5%	27.7%
Lenovo	11.0%	9.8%	9.7%	9.0%	9.8%	9.9%
Inspur	7.7%	8.2%	8.3%	9.7%	10.0%	10.1%
Dell	31.9%	27.0%	25.2%	24.3%	25.1%	24.7%
HPE	14.3%	13.1%	11.9%	11.0%	12.0%	12.1%
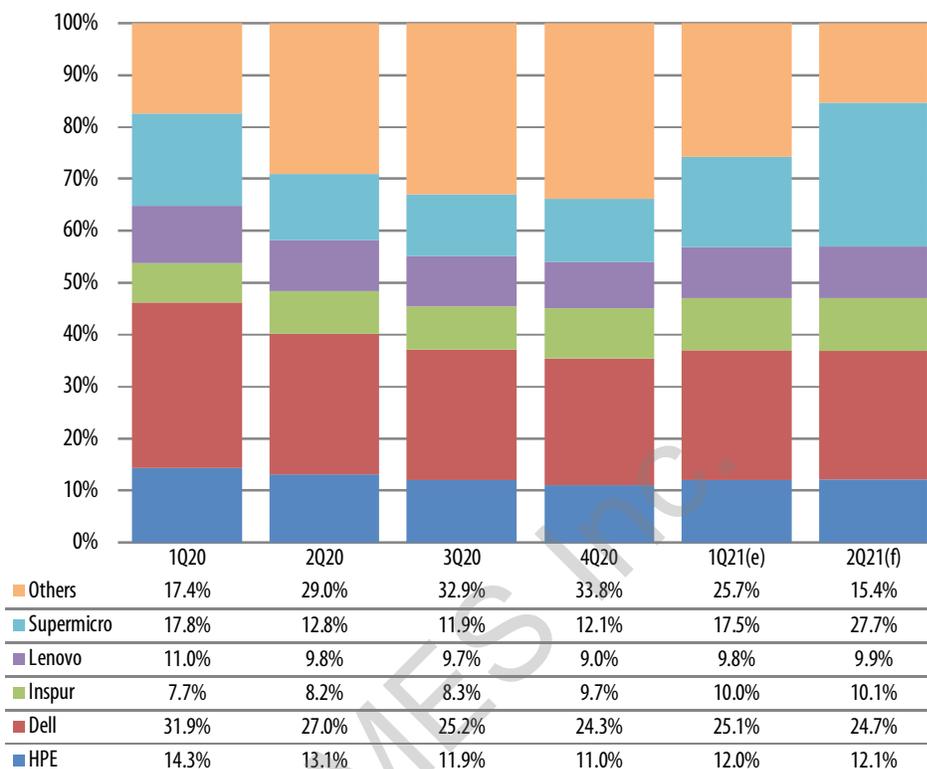
Source: Digitimes Research, April 2021

Mitac

Chart 19: Mitac server shipments, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Shipments	209	270	301	261	265	299
Q/Q	-19.3%	29.2%	11.5%	-13.3%	1.5%	12.8%
Y/Y	7.7%	5.1%	9.5%	0.8%	26.8%	10.7%
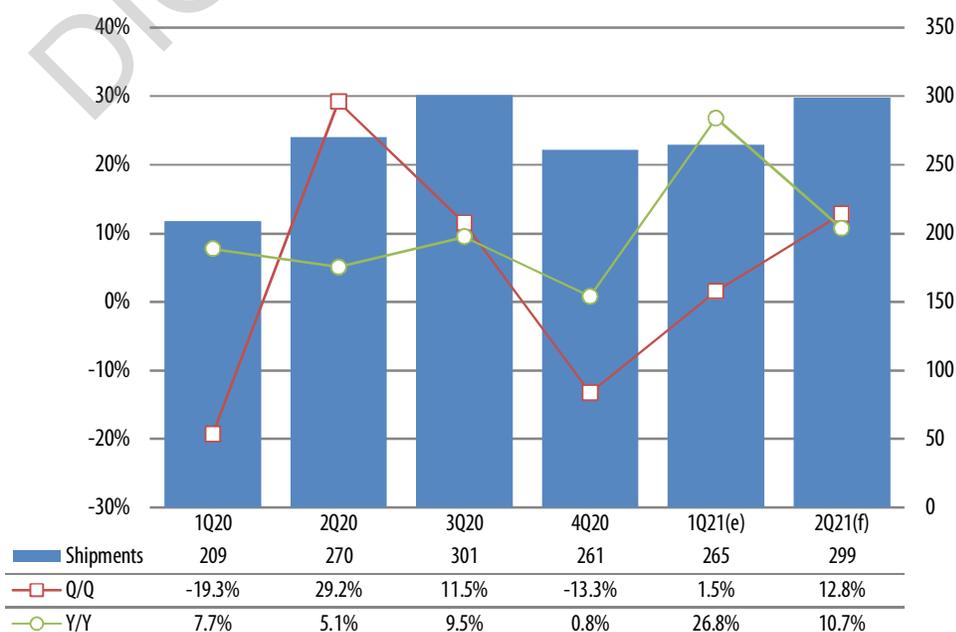
Source: Digitimes Research, April 2021

Chart 20: Mitac shipments by client, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
■ Others	41	54	93	87	91	94
■ Amazon	32	36	22	24	28	35
■ Inspur	136	180	177	145	139	165
■ Dell			9	5	7	5
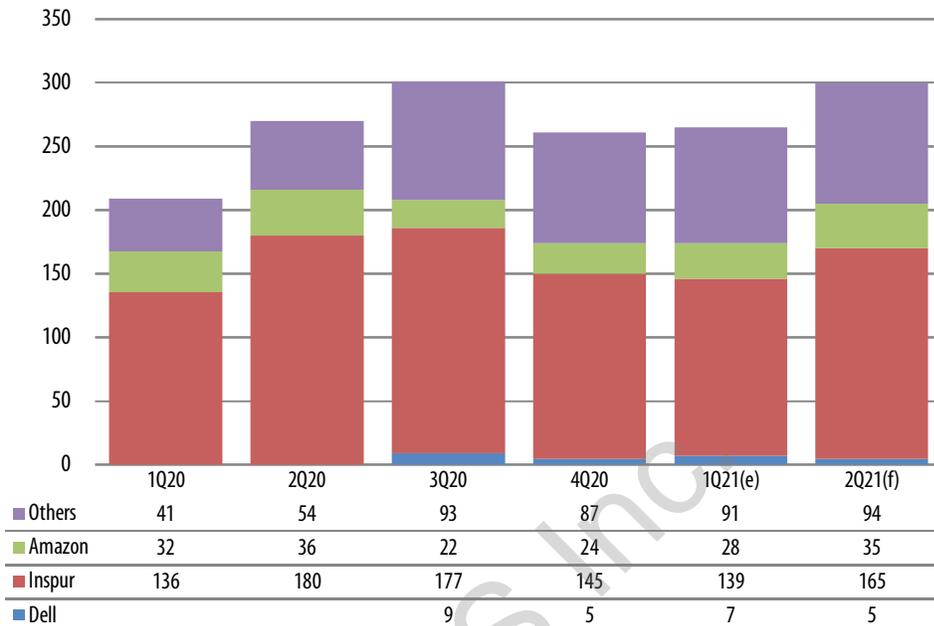
Source: Digitimes Research, April 2021

Chart 21: Mitac shipment share by client, 1Q20-2Q21

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
■ Others	19.6%	20.0%	30.9%	33.3%	34.3%	31.4%
■ Amazon	15.3%	13.3%	7.3%	9.2%	10.6%	11.7%
■ Inspur	65.1%	66.7%	58.8%	55.6%	52.5%	55.2%
■ Dell			3.0%	1.9%	2.6%	1.7%
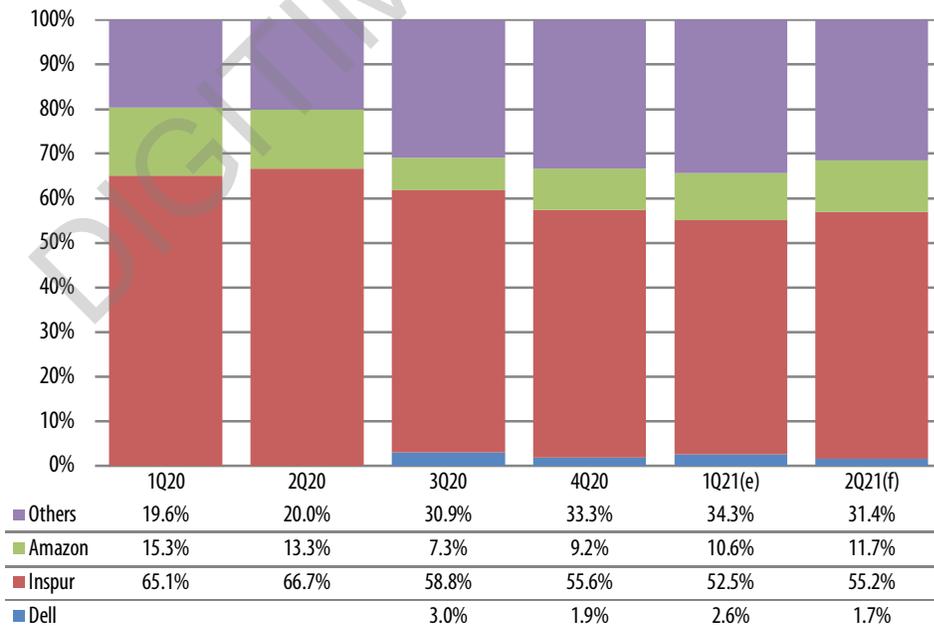
Source: Digitimes Research, April 2021

Wiwynn

Chart 22: Wiwynn server shipments, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Shipments	288	380	345	363	276	308
Q/Q	-28.9%	31.9%	-9.2%	5.2%	-24.0%	11.6%
Y/Y	29.1%	50.2%	35.8%	-10.4%	-4.2%	-18.9%
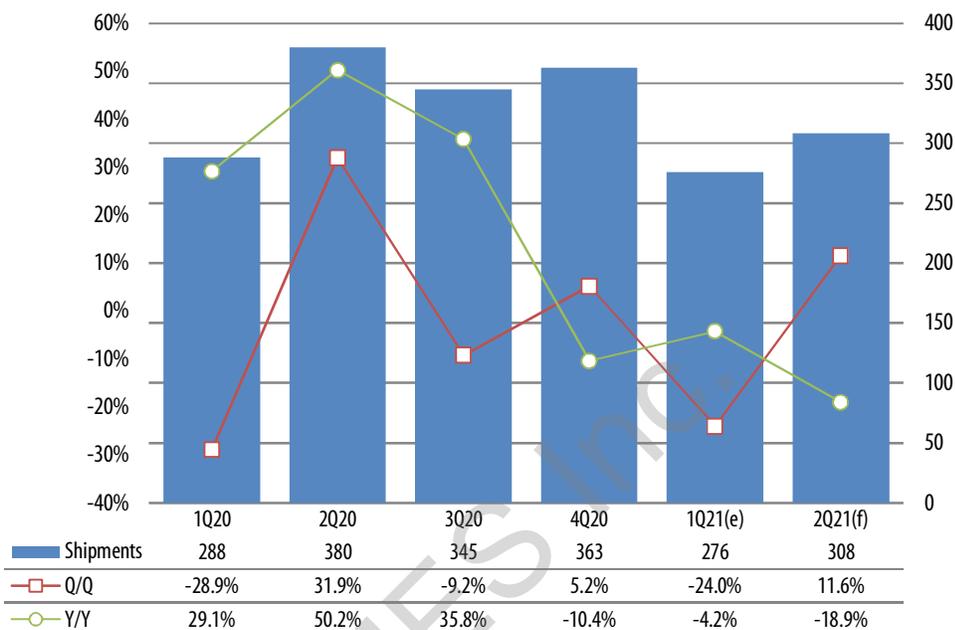
Source: Digitimes Research, April 2021

Chart 23: Wiwynn shipments by client, 1Q20-2Q21 (k units)

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
Others	10	20	13	11	7	10
Amazon	0	0	3	3	2	2
Microsoft	68	110	80	83	61	63
Facebook	210	250	249	266	206	233
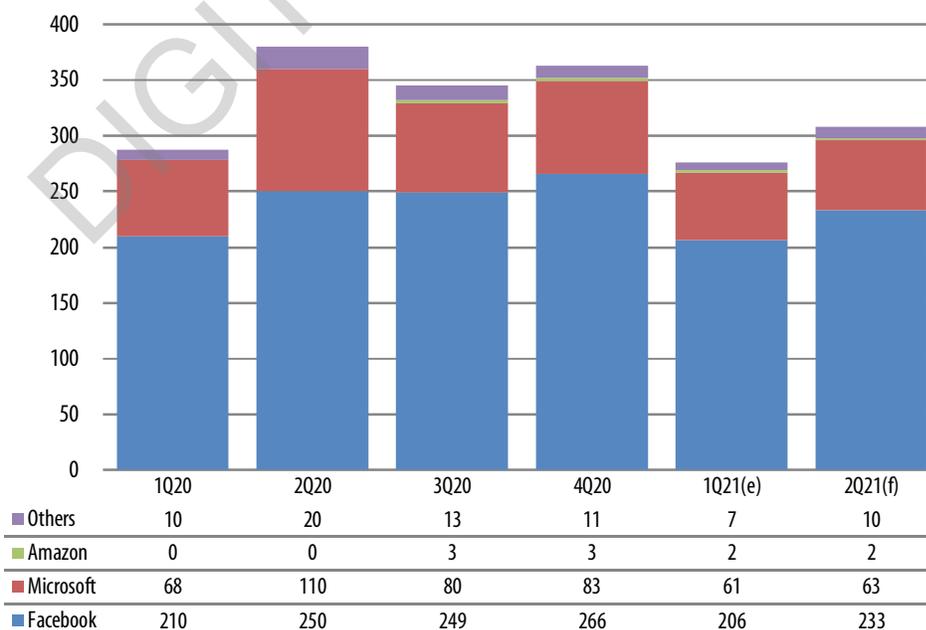
Source: Digitimes Research, April 2021

Chart 24: Wiwynn shipment share by client, 1Q20-2Q21

	1Q20	2Q20	3Q20	4Q20	1Q21(e)	2Q21(f)
■ Others	3.5%	5.3%	3.8%	3.0%	2.5%	3.2%
■ Amazon	0.0%	0.0%	0.9%	0.8%	0.7%	0.6%
■ Microsoft	23.6%	28.9%	23.2%	22.9%	22.1%	20.5%
■ Facebook	72.9%	65.8%	72.2%	73.3%	74.6%	75.6%
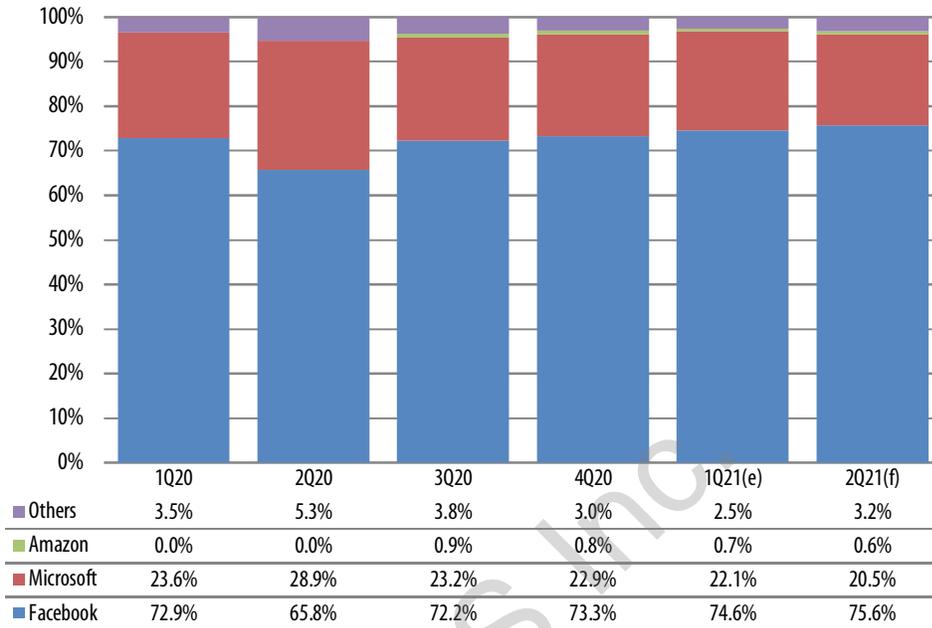
Source: Digitimes Research, April 2021

Client-maker server shipment matrix

Chart 25: Client-maker partnership matrix, 2Q21 (k units)

	Dell	HPE	Supermicro	Microsoft	Amazon	Facebook	Google	Huawei	Lenovo	Inspur	Others
■ Others	50	7	288		19			146	81	48	291
■ Wiwynn				63	2	233					10
■ Mitac	5				35					165	94
■ Wistron	122	60	137						49	50	76
■ Quanta	7			10	44	336	168				113
■ Inventec	173	163		50	95	2	126		59		243
■ Foxconn	126	124		39	213						186
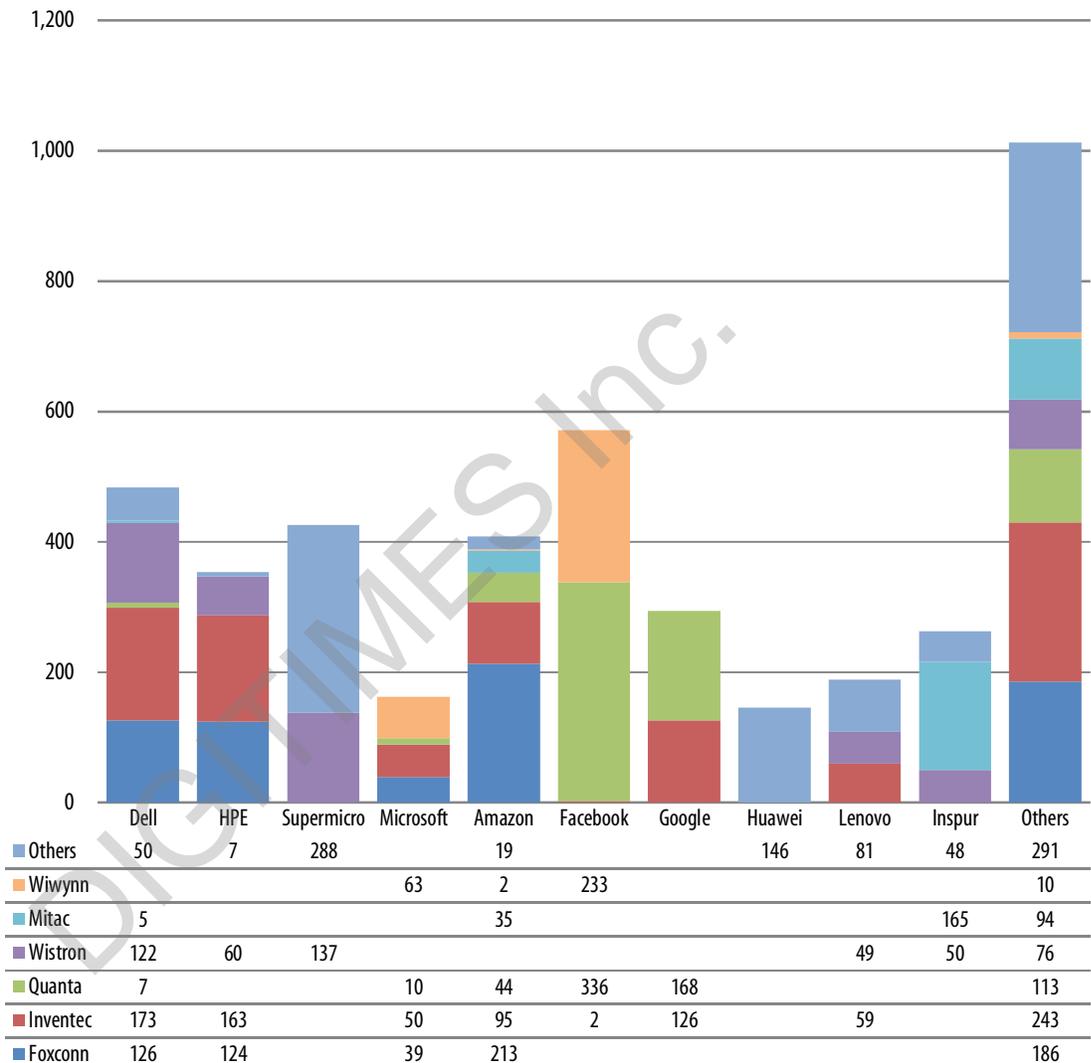
Source: Digitimes Research, April 2021

Inspur will increase its share of orders to Mitac by 1.8pp from a quarter ago to nearly 63 % in second-quarter 2021 as it enjoys rebounding demand from China-based cloud datacenters and enterprise customers while further strengthening its long-term close partnership with Mitac.

Google will boost its share of orders to Inventec by 1.7pp to come close to 43 % in second-quarter 2021, driven by cloud service and next-generation storage server demand.

Facebook will have stronger demand for large-capacity storage servers to meet online media platform needs in second-quarter 2021. Its total sever demand is expected to climb nearly 10 % sequentially, prompting it to hike its share of orders to Wiwynn by 1.2pp to go above 40 % again.

Amazon's server demand will soar 18 % quarter-over-quarter as it tries to meet cloud service and e-commerce platform demand while starting to order servers based on new CPUs. Its share of orders to Foxconn, which secures an advantageous position in global critical component supply, will expand 1.5pp to exceed 52 %.

Chart 26: Client shipment share by maker, 2Q21

	Dell	HPE	Supermicro	Microsoft	Amazon	Facebook	Google	Huawei	Lenovo	Inspur	Others
Others	10.4%	2.0%	67.8%		4.7%			100.0%	42.9%	18.3%	28.7%
Wiwynn				38.9%	0.5%	40.8%					1.0%
Mitac	1.0%				8.6%					62.7%	9.3%
Wistron	25.3%	16.9%	32.2%						25.9%	19.0%	7.5%
Quanta	1.4%			6.2%	10.8%	58.8%	57.1%				11.2%
Inventec	35.8%	46.0%		30.9%	23.3%	0.4%	42.9%		31.2%		24.0%
Foxconn	26.1%	35.0%		24.1%	52.2%						18.4%
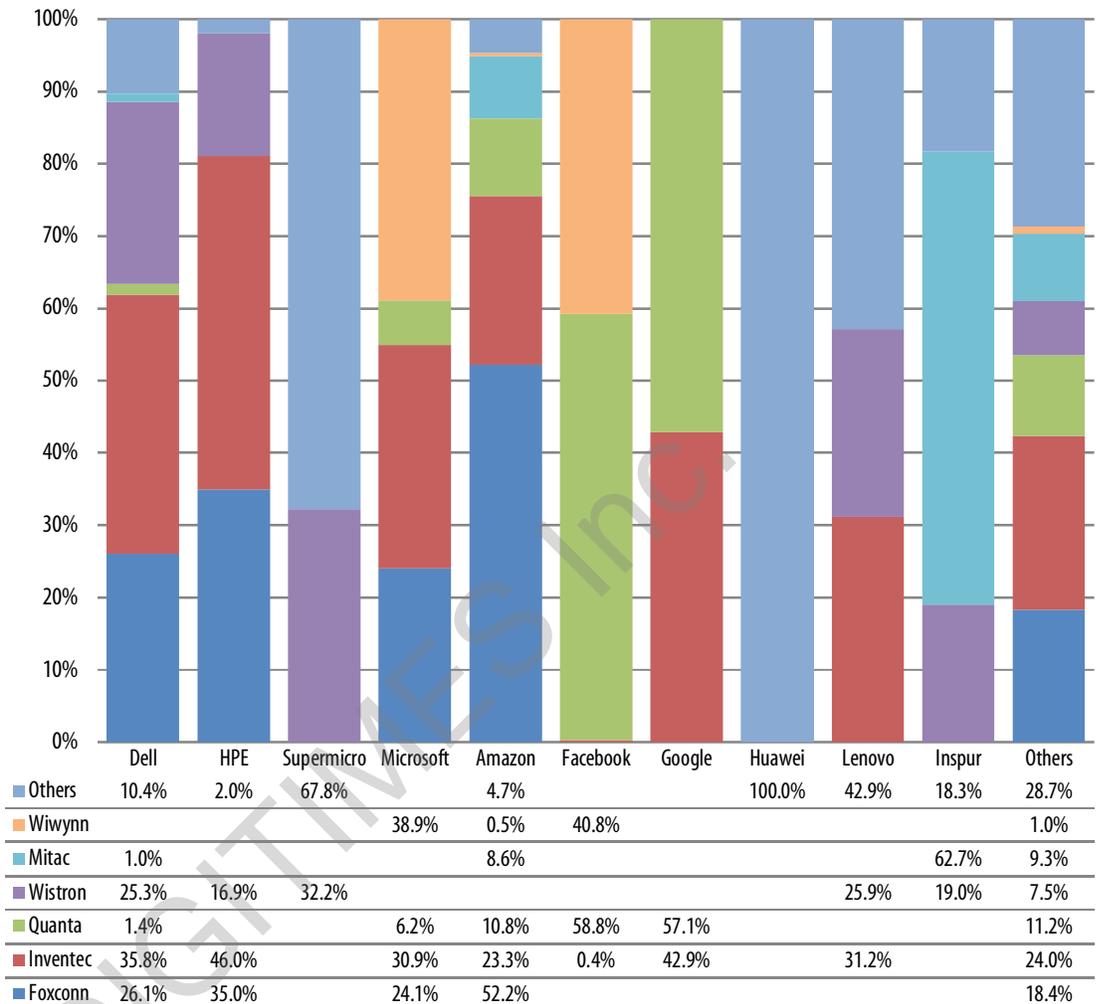
Source: Digitimes Research, April 2021

Inventec's dependency on Google is estimated to rise 1.2pp to nearly 14% in second-quarter 2021.

The increase in Inventec's dependency on Google is due to Google's growing demand for cloud service and storage servers.

With COVID-19 getting contained throughout China and state policies supporting datacenter infrastructure build-up spurring server demand, Inventec's and Foxconn's dependency on vendors in the "others" category will each climb nearly 2pp.

Inspur, mainly supplying servers to China-based datacenters and enterprise customers, will see its server orders grow 15% sequentially in second-quarter 2021, buoying Mitac's dependency on Inspur up 2.7pp to 55%.

Demand from US-based datacenter projects will start to ramp up in second-quarter 2021 so Supermicro's server orders are expected to surge 19% sequentially. It will raise its orders for entry-level servers to Wistron while lowering those to OSE and USI. As a result, Wistron's dependency on Supermicro will jump 10.2pp to come close to 28%.

Amazon's orders to Taiwan-based manufacturers are poised to climb 18% in second-quarter 2021, buoyed by cloud service and e-commerce platform demand as well as next-generation CPU spurring a replacement trend. This will drive Mitac's and Foxconn's dependency on Amazon up 1-2pp.

Chart 27: Maker shipment share by client, 2Q21

	Foxconn	Inventec	Quanta	Wistron	Mitac	Wiwynn
■ Others	27.0%	26.7%	16.7%	15.4%	31.4%	3.2%
■ Inspur				10.1%	55.2%	
■ Lenovo		6.5%		9.9%		
■ Google		13.8%	24.8%			
■ Facebook		0.2%	49.6%			75.6%
■ Amazon	31.0%	10.4%	6.5%		11.7%	0.6%
■ Microsoft	5.7%	5.5%	1.5%			20.5%
■ Supermicro				27.7%		
■ HPE	18.0%	17.9%		12.1%		
■ Dell	18.3%	19.0%	1.0%	24.7%	1.7%	
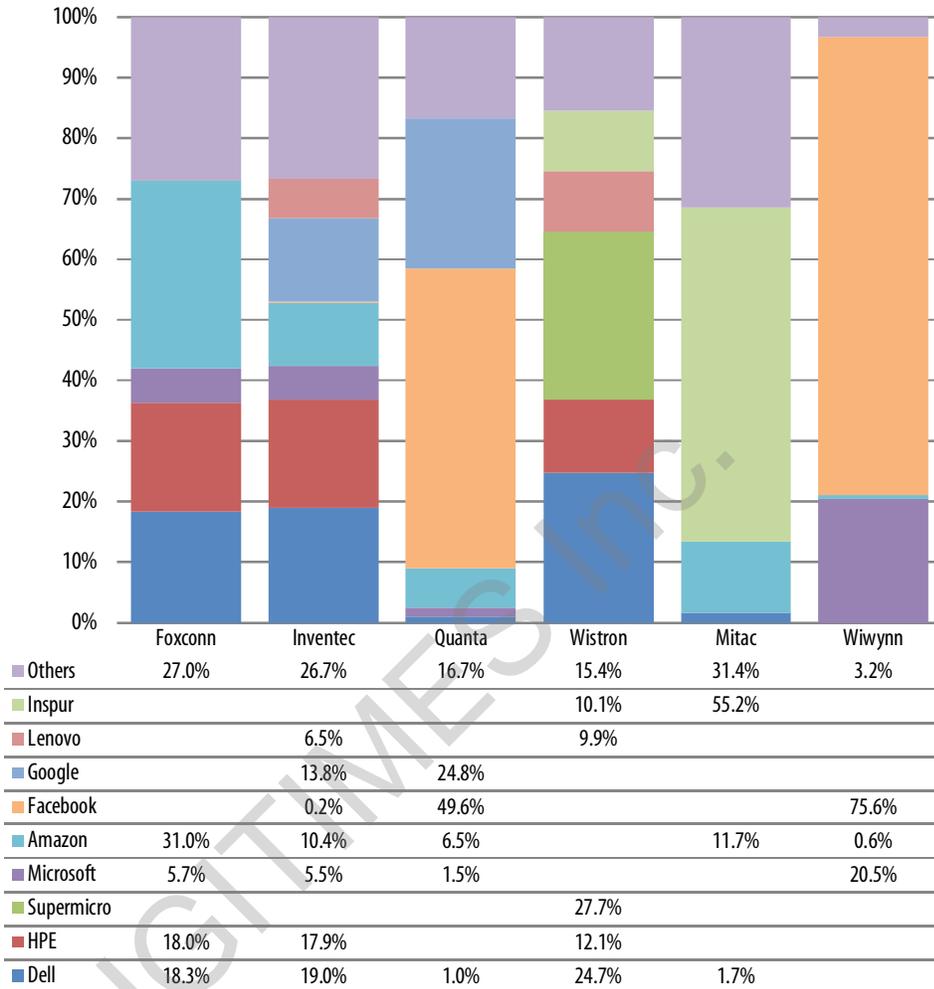
Source: Digitimes Research, April 2021

Chart 28: Client-maker partnership matrix, 1Q21 (k units)

	Dell	HPE	Supermicro	Microsoft	Amazon	Facebook	Google	Huawei	Lenovo	Inspur	Others
■ Others	42	4	279		21			131	84	44	182
■ Wiwynn				61	2	206					7
■ Mitac	7				28					139	91
■ Wistron	113	54	79						44	45	116
■ Quanta	3			9	38	312	146				100
■ Inventec	163	151		50	81	2	102		58		199
■ Foxconn	112	117		36	175						149
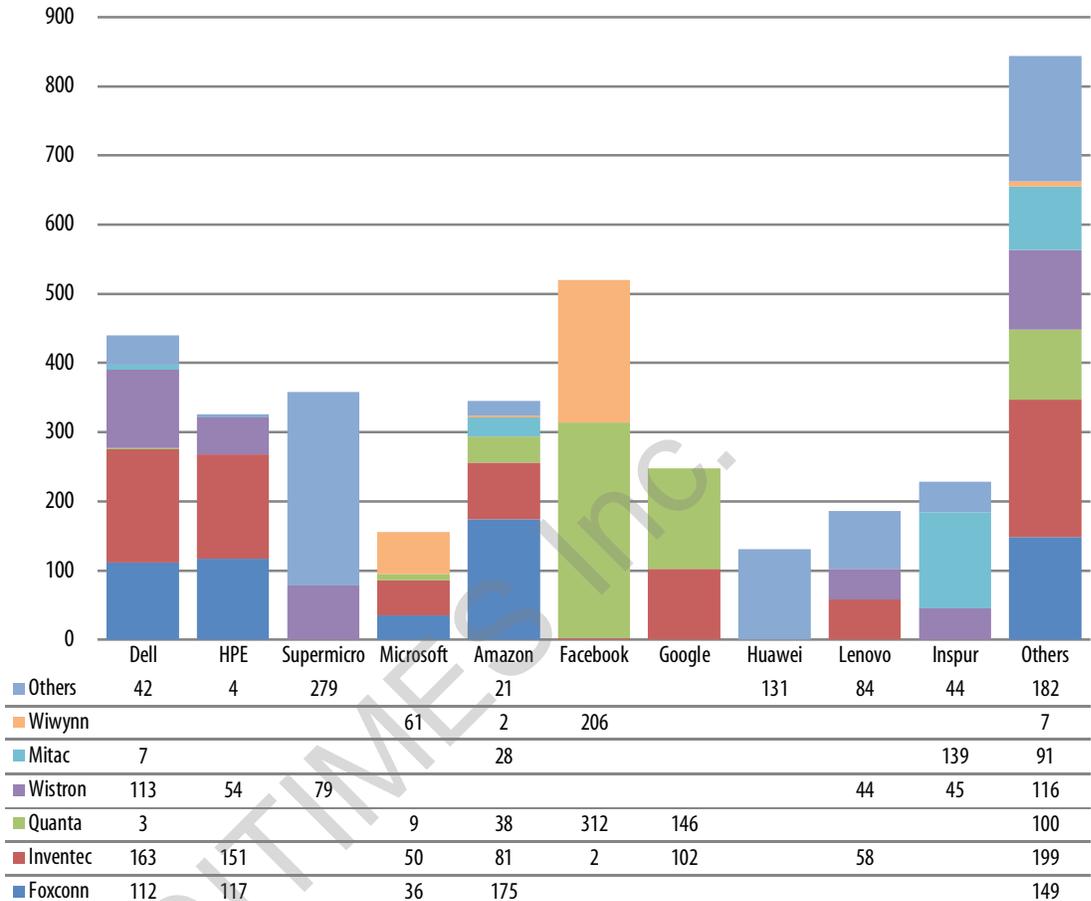
Source: Digitimes Research, April 2021

The share of Dell's orders to Compal (in the "others" category) rose 1.1pp sequentially in first-quarter 2021 to arrive at 9.3%.

Dell began to purchase servers based on new Intel CPUs in small volumes, which hiked its share of orders to Compal in late first-quarter 2021.

Inspur raised its share of orders to Mitac, which it has maintained long-term close R&D collaborations with, by 1.3pp in first-quarter 2021 due to growing server demand from China-based datacenters including Alibaba and Tencent.

Quanta was able to keep adequate inventory of IC chips for Facebook's specially customized models. As a result, Facebook's share of orders to Quanta climbed 4.4pp in first-quarter 2021.

Server demand from Microsoft's datacenters fell weak in first-quarter 2021 so its orders are estimated to decline 19% sequentially. On top of that, inadequate component inventory for some models resulted in disruption to Wiwynn's shipments. Consequently, Microsoft raised its share of orders to Inventec and Foxconn by 1.8 and 2.2pp respectively.

Chart 29: Client shipment share by maker, 1Q21

	Dell	HPE	Supermicro	Microsoft	Amazon	Facebook	Google	Huawei	Lenovo	Inspur	Others
■ Others	9.5%	1.2%	77.9%		6.1%			100.0%	45.2%	19.3%	21.6%
■ Wiwynn				39.1%	0.6%	39.6%					0.8%
■ Mitac	1.6%				8.1%					61.0%	10.8%
■ Wistron	25.7%	16.6%	22.1%						23.7%	19.7%	13.7%
■ Quanta	0.7%			5.8%	11.0%	60.0%	58.9%				11.8%
■ Inventec	37.0%	46.3%		32.1%	23.5%	0.4%	41.1%		31.2%		23.6%
■ Foxconn	25.5%	35.9%		23.1%	50.7%						17.7%
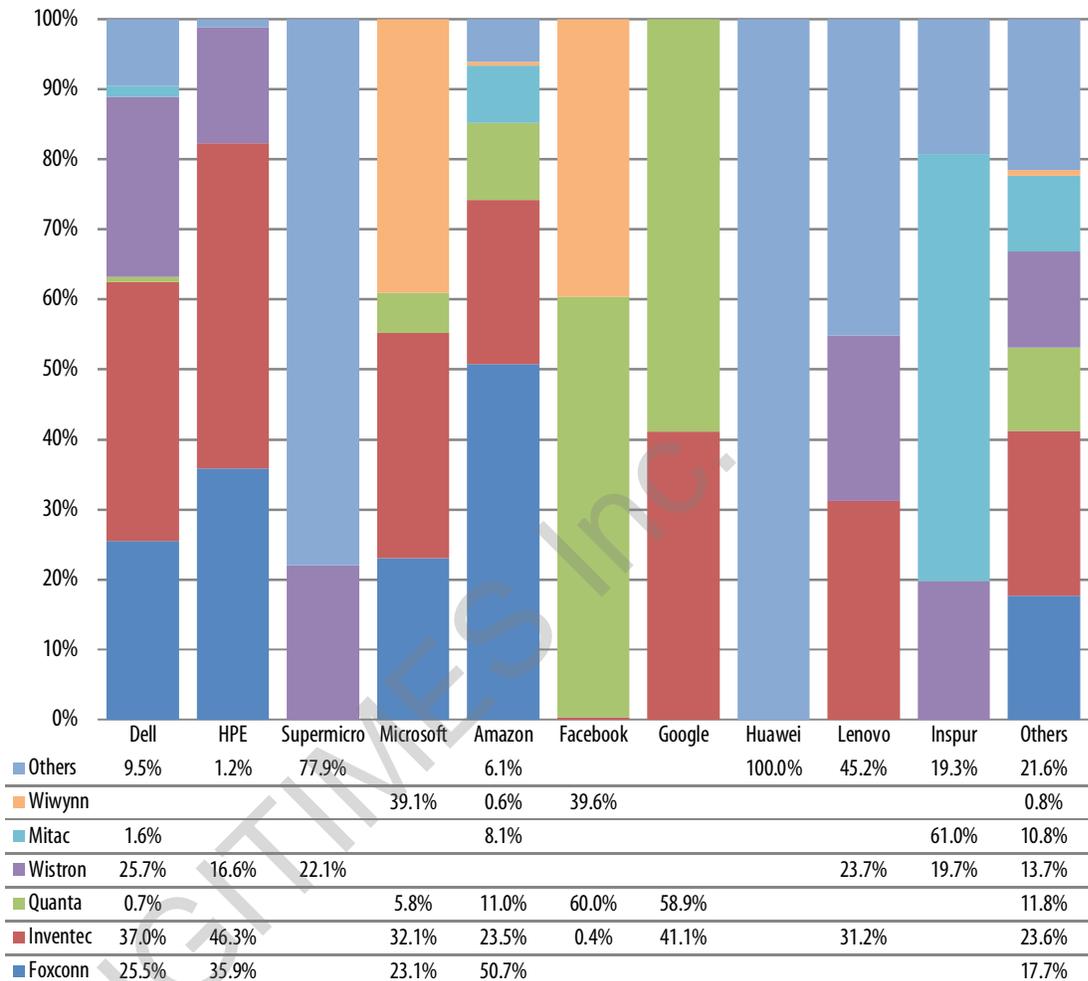
Source: Digitimes Research, April 2021

Outperforming the average, Amazon's server orders grew nearly 12% in first-quarter 2021 thanks to cloud service and e-commerce platform demand. As a result, Foxconn's, Inventec's and Mitac's dependency on Amazon rose 1.5, 2.6 and 1.4pp, respectively.

Wiwynn's dependency on Facebook climbed 1.4pp to 74.6% in first-quarter 2021.

Microsoft's server orders weakened and plunged nearly 19% sequentially, resulting in a decline in Wiwynn's dependency on Microsoft.

Supermicro's shipment momentum slowed down in second-half 2020. However, it started to see rebounding demand in first-quarter 2021 and with demand from US-based datacenter projects, Supermicro's first-quarter 2021 shipments surged 23% sequentially. In response, Supermicro raised its OEM orders to Wistron for entry-level servers, therefore buoying Wistron's dependency on Supermicro by 5.4pp to reach 17.5%.

Chart 30: Maker shipment share by client, 1Q21

	Foxconn	Inventec	Quanta	Wistron	Mitac	Wiwynn
Others	25.3%	24.7%	16.4%	25.7%	34.3%	2.5%
Inspur				10.0%	52.5%	
Lenovo		7.2%		9.8%		
Google		12.7%	24.0%			
Facebook		0.2%	51.3%			74.6%
Amazon	29.7%	10.0%	6.3%		10.6%	0.7%
Microsoft	6.1%	6.2%	1.5%			22.1%
Supermicro				17.5%		
HPE	19.9%	18.7%		12.0%		
Dell	19.0%	20.2%	0.5%	25.1%	2.6%	
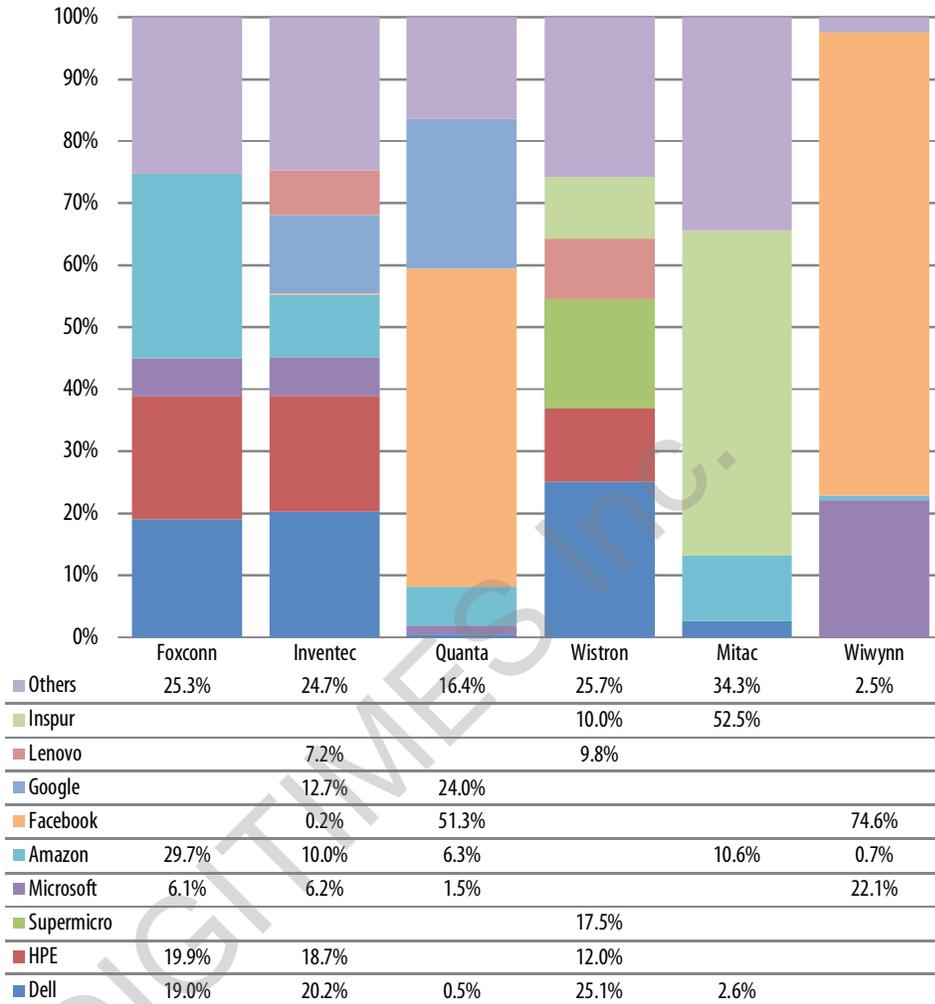
Source: Digitimes Research, April 2021

Chart 31: Client-maker partnership matrix, 4Q20 (k units)

	Dell	HPE	Supermicro	Microsoft	Amazon	Facebook	Google	Huawei	Lenovo	Inspur	Others
■ Others	39	5	226		21			140	82	46	130
■ Wiwynn				83	3	266					11
■ Mitac	5				24					145	87
■ Wistron	130	59	65						48	52	181
■ Quanta	1			11	32	336	141				55
■ Inventec	170	154		58	72	2	101		60		222
■ Foxconn	117	121		40	157						145
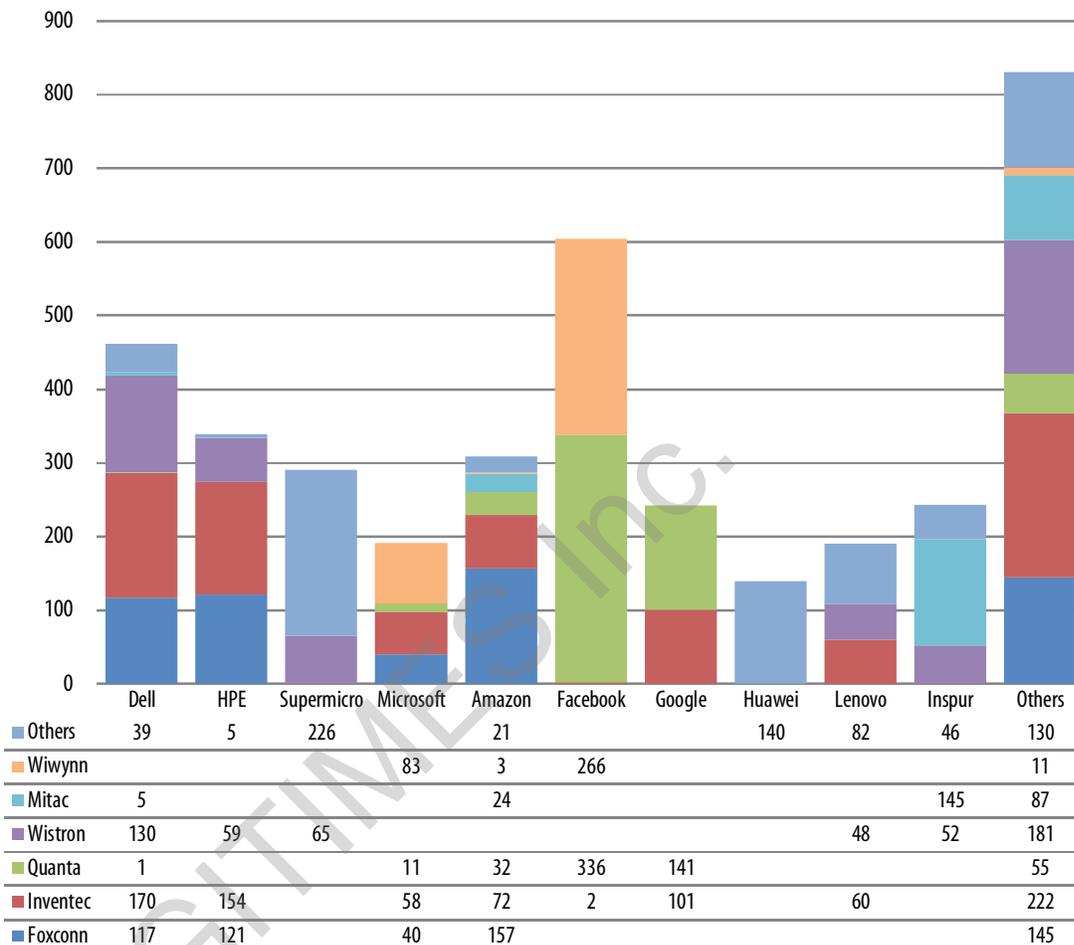
Source: Digitimes Research, April 2021

Chart 32: Client shipment share by maker, 4Q20

	Dell	HPE	Supermicro	Microsoft	Amazon	Facebook	Google	Huawei	Lenovo	Inspur	Others
▪ Others	8.4%	1.5%	77.7%		6.8%			100.0%	43.2%	18.9%	15.6%
▪ Wiwynn				43.2%	1.0%	44.0%					1.3%
▪ Mitac	1.1%				7.8%					59.7%	10.5%
▪ Wistron	28.1%	17.4%	22.3%						25.3%	21.4%	21.8%
▪ Quanta	0.2%			5.7%	10.4%	55.6%	58.3%				6.6%
▪ Inventec	36.8%	45.4%		30.2%	23.3%	0.3%	41.7%		31.6%		26.7%
▪ Foxconn	25.3%	35.7%		20.8%	50.8%						17.4%

Source: Digitimes Research, April 2021

Sample report (not for sale)
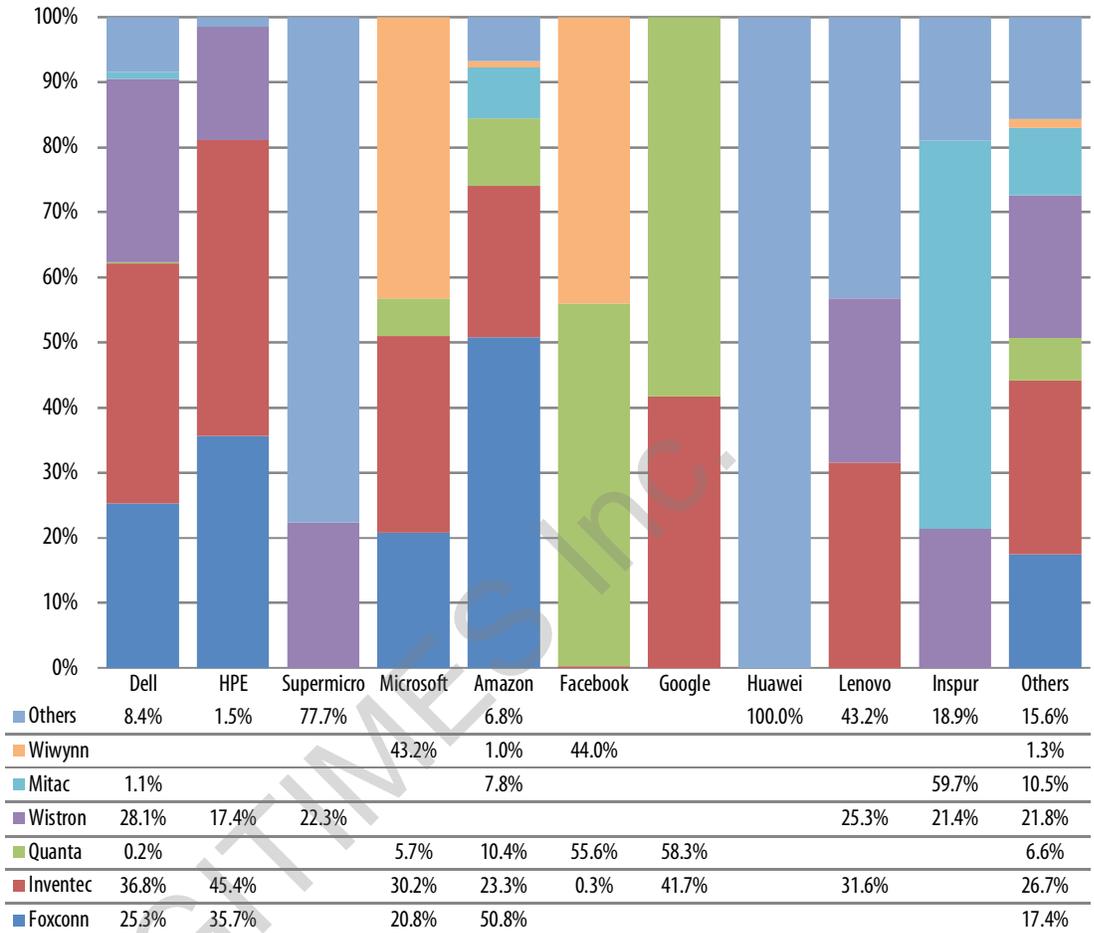
Chart 33: Maker shipment share by client, 4Q20

	Foxconn	Inventec	Quanta	Wistron	Mitac	Wiwynn
Others	25.0%	26.5%	9.5%	33.8%	33.3%	3.0%
Inspur				9.7%	55.6%	
Lenovo		7.2%		9.0%		
Google		12.0%	24.5%			
Facebook		0.2%	58.3%			73.3%
Amazon	27.1%	8.6%	5.6%		9.2%	0.8%
Microsoft	6.9%	6.9%	1.9%			22.9%
Supermicro				12.1%		
HPE	20.9%	18.4%		11.0%		
Dell	20.2%	20.3%	0.2%	24.3%	1.9%	

Source: Digitimes Research, April 2021

Sample report (not for sale)
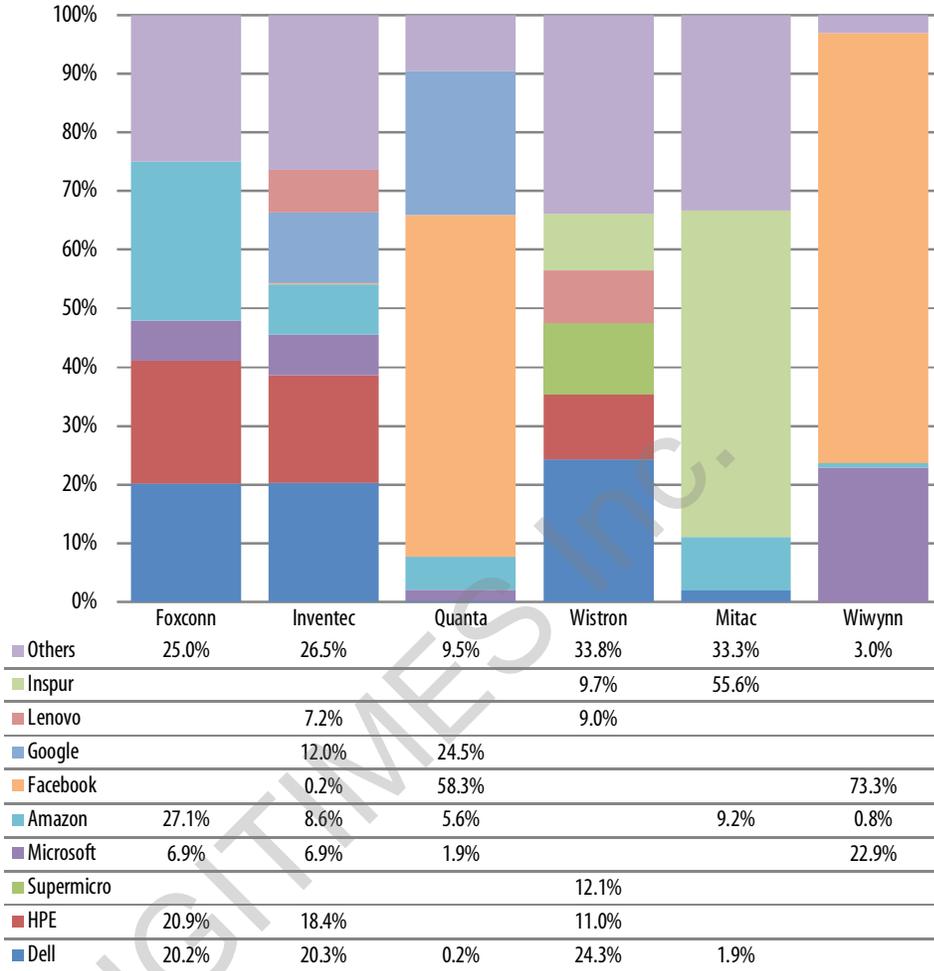
Annual shipments

Chart 34: Taiwan and global server shipments, 2016-2020 (k units)

	2016	2017	2018	2019	2020
TW shipments	11,003	12,619	13,983	13,662	14,665
WW shipments	12,165	13,910	15,238	15,060	16,255
TW Y/Y	10.2%	14.7%	10.8%	-2.3%	7.3%
WW Y/Y	9.9%	14.3%	9.5%	-1.2%	7.9%
TW share	90.4%	90.7%	91.8%	90.7%	90.2%
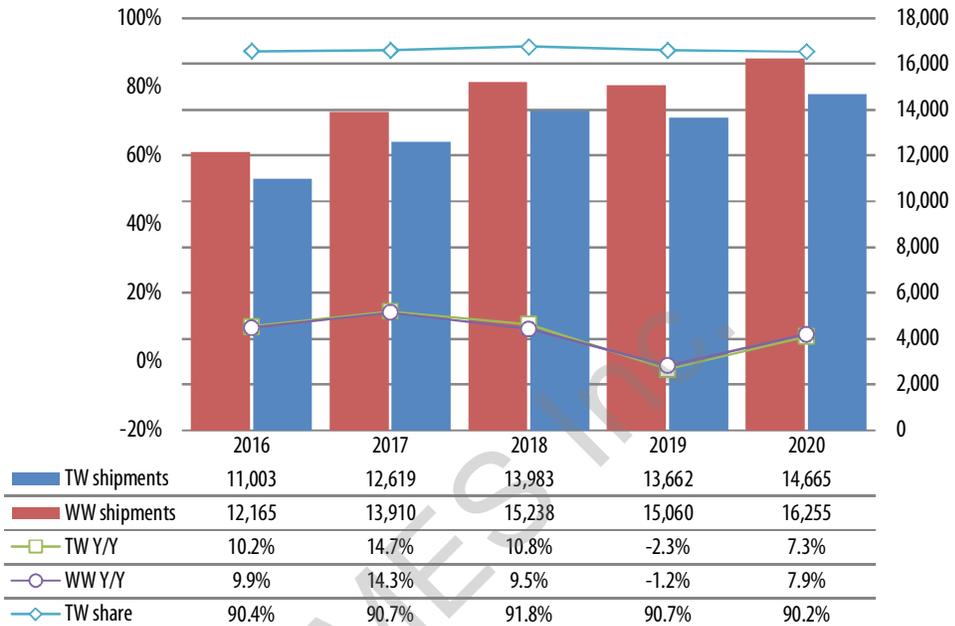
Source: Digitimes Research, April 2021

Chart 35: Global server shipments by top-10 player, 2019-2020 (k units)

	Dell	HPE	Supermicro	Microsoft	Amazon	Facebook	Google	Huawei	Lenovo	Inspur	Others
2020	1,998	1,526	1,243	809	1,099	2,321	963	860	808	1,022	3,606
2019	2,018	1,680	1,176	698	1,276	1,999	862	740	715	912	2,984
Y/Y	-1.0%	-9.2%	5.7%	15.9%	-13.9%	16.1%	11.7%	16.2%	13.0%	12.1%	20.8%
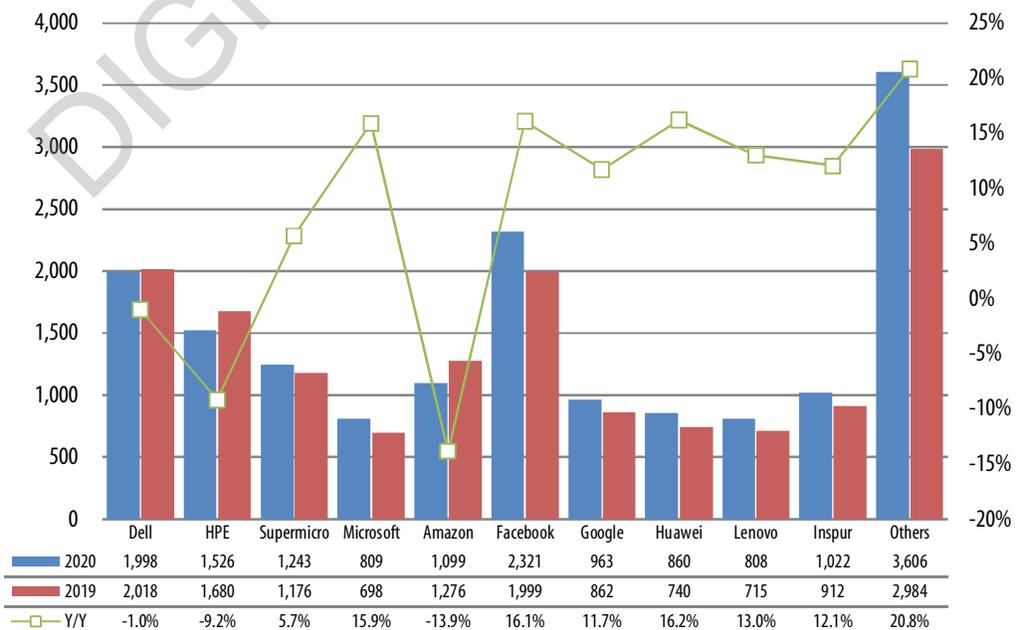
Source: Digitimes Research, April 2021

Chart 36: Taiwan server shipments by top maker, 2019-2020 (k units)

	Foxconn	Inventec	Quanta	Wistron	Mitac	Wiwynn	USI	OSE	Others
2020	2,378	3,342	2,459	2,144	1,041	1,376	399	324	1,202
2019	2,278	2,931	2,176	2,149	985	1,135	362	323	1,323
Y/Y	4.4%	14.0%	13.0%	-0.2%	5.7%	21.2%	10.2%	0.3%	-9.1%

Source: Digitimes Research, April 2021