Manufacturing Market

inside the contract manufacturing industry

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EMS Market Grows by 15 Percent in 2018

NVR, the parent company of *MMI*, recently finished its annual report on the worldwide EMS industry, *The Worldwide Electronics Manufacturing Services Market* – 2019 Edition. We are highlighting some of the key research findings of the report in this issue (see https://newventureresearch.com/wp-content/uploads/ems2019-RS.pdf for more details).

The worldwide contract manufacturing (CM) market experienced a significant increase in revenue—an estimated 15 percent—in 2018, which is the second year in a row that it experienced doubledigit growth. The industry reached an alltime high of \$542 billion in 2018, mainly led by EMS companies performing at a higher level of 18 percent growth since 2017 (ODM revenue increased by 4.9 percent; however, this was because Wistron was taken out of the ODM category and placed into the EMS column of revenue). EMS companies averaged the highest growth over the last five years, exhibiting a 9.5 percent CAGR, whereas ODMs experienced a negative 7.3 percent CAGR.

There were individual winners and losers among EMS and ODM companies in 2018, with the mid-tier companies showing the best performance. EMS firm SMTC, though struggling otherwise, posted the highest sales growth from 2017–2018 of any EMS company—55.3 percent—as a result of its acquisition of MC Assembly. PCI, Ltd. ranked second in year-to-year growth at 45.3 percent, via organic growth in the computer sector.

Another company with excellent organic growth since 2017 was **ATA IMS Berhad**, which achieved 35.6 percent revenue growth in 2018 and was new to our coverage.

The CM market was sustained by the strong demand for servers and enterprise storage systems that are allowing the spread of cloud computing, social networking, and video streaming. Capital spending in wireless infrastructure was driven by the building of the 5G wireless network in many areas in 2018.

Orders for tablets and desktop computers, once strong, are now expected to be flat for the next five years, in terms of unit and revenue growth by 2023. Notebook growth was still increasing and the computer industry as a whole (which includes servers and workstations) will see nominal growth. Some of the highest growth rates for electronics assembly products were found in commercial automotive and aerospace—mainly around safety, guidance and entertainment products.

Nearly all the high-mix/high-complexity products (medical, industrial, transportation) experienced strong growth, although defense/military spending was flat, as contractors attempted to determine if any new investment would be forthcoming from the US government.

For the ninth year in a row, the industry was profitable, at \$8.8 billion (for 42 EMS public companies and 17 ODM public companies), increasing by \$400 million from 2017. Foxconn accounted for nearly half of all the money made by the EMS industry in 2018, and EMS companies accounted for approximately 49 percent of the total. Only four EMS companies and one ODM company lost money in 2018. Yet, Delta Electronics ranked second in total earnings (\$639 million), followed by Wong's Electronics (\$526 million), and Quanta Computer (\$473 million).

Plant closures and openings were rare in 2018, as most companies appear to have right-sized their operations or closed facilities due to acquisition. Specific closures or openings are discussed on a country-by-country basis in the report. The openings are clearly related to new business opportunities, while the closures are being driven by economic decisions such as right-sizing the company.

Some new suppliers came under our examination (we target all CM companies with revenue of \$100 million or greater assuming they will report to us), including EMS firm ATA IMS Berhad and **Bitron Electronics Division**.

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We must estimate much of the ODM manufacturing services assembly work revenue versus private-label product revenue (sometimes referred to as original brand manufacturer, or OBM, revenue) for companies like Compal Electronics, Delta Electronics, Qisda, Quanta Computer, TPV, and others, and any corrections we make can and do distort normal growth rates. More and more ODMs are beginning to make their EMS operations separate and independent entities so as not to confuse customers with their own branded products.

The grouping of companies by size correlates to industry "tiers" as follows: Tier 1 EMS firms are companies with annual sales of \$5 billion or greater; Tier 2 firms are companies with revenues between \$500 million and \$5 billion; Tier 3 firms have revenues between \$50 million and \$500 million; and Tier 4 firms have annual revenue of less than \$50 million. The same definitions can be applied to ODMs, but have not been widely adopted by the industry to date.

Table 1: The Worldwide Assembly Market by Manufacturer Type and Industry Segment, 2018

Total Assembly (\$M)	EMS	ODM	ОЕМ	Total	Percent
Computer	104,666	70,211	124,909	299,785	23.2%
Communications	172,962	21,983	266,611	461,555	35.8%
Consumer	68,801	16,503	133,517	218,821	17.0%
Industrial	33,359	1,308	78,864	113,531	8.8%
Medical	21,469	207	21,598	43,274	3.4%
Automotive	14,599	1,418	72,791	88,808	6.9%
Aviation/Defense/ Other Tran	14,134	-	50,048	64,182	5.0%
Total	429,989	111,629	748,337	1,289,955	100.0%

445

102

4.072

For this year, NVR has profiled 102 large CM companies (\$100 million+ in revenue) dominated by the computer, communications, and consumer market segments, while medium and small CM companies excelled in the automotive, industrial, medical, and military/defense/other transportation industries.

The Internet of Things (IoT) is beginning to appear in so-called smart home devices such as the Amazon Alexa and Google Home. Most products involve wireless technologies, sensors, GPS, and voice recognition. The devices themselves consist of multichip modules that combine logic, memory, and sensor/wireless technologies.

Each market segment is developing its own applications. For example, the industrial sector is targeting the smart factory, or Industrial 4.0. The medical industry is developing narrow-bandwidth sensing and monitoring devices in remote health monitoring and emergency notification systems. Applications include blood pressure and heart rate monitoring,

851

1,494

1.305

		<u> </u>			
CM Company Size	No. of Facilities	Total EMS Revenue (\$M)	Total Employees	Sq. Feet of Capacity	Total SMT Lines
Small	3,351	27,632	193,232	40,936,509	5,629
Medium	623	59,444	393,668	69,851,867	1,471
Large	918	454,542	2,577,390	304,143,491	10,727
Total	4,892	541,618	3,164,290	414,931,868	17,826
CM Company Size	No. of Companies	Rev. (\$K)/ Company	Rev. (\$K)/ Employee	Rev. (\$)/Sq. Ft.	Rev. (\$M)/SMT Line
Small	3,525	7,839	143	675	4.9

133,582

4,456,295

133,010

151

180

171

Table 2: Key CM Statistics by Company Size, 2018

Table 3: The	e Worldwide Ass	embly Market f	or Electronics Pr	oducts by Manı	ufacturing Sourc	ce, 2013–2018	8
Revenue (\$M)	2013	2014	2015	2016	2017	2018	CAGR
OEM	822,831	922,932	897,647	966,594	1,025,947	748,337	-1.9%
ODM	163,327	98,036	97,476	95,935	106,423	111,629	-7.3%
EMS	273,392	338,747	332,606	329,217	371,779	429,989	9.5%
Total	1,259,550	1,359,715	1,327,729	1,391,745	1,504,148	1,289,955	0.5%

Medium

Large Total 40.4

42.4

30.4

specialized implants such as pacemakers, Fitbit electronic wristbands, and advanced semiconductor hearing aids. IoT for the auto industry will provide dynamic interaction between the components of a transport system that enables inter- and intravehicular communication, smart traffic

traffic control, smart parking, electronic toll collection systems, logistics and fleet management, vehicle control and guidance, and safety and road assistance.

Emerging aerospace IoT markets are being developed in connective transportation applications, surveillance, smart weapons and drones. Finally, there are several planned or ongoing large-scale deployments of the IoT to enable better management of cities and systems, including security and maintenance. Developments include smart home applications, retail sales, and real estate.

Healthy Start for North American Group

For a group of seven mid-tier and smaller EMS providers based in North America, combined Q1 sales grew from the year-earlier period. The group's revenue rose 16.2% year over year, as the group started on a positive note with strong growth on which to build in subsequent quarters. The US economy started on a stronger footing, too, which increased at an annual rate of 3.1 percent in the first quarter of 2019, according to the estimate released by the Bureau of Economic Analysis. Thus, this North American group as a whole outgrew the US economy by 1,310 basis points versus a year earlier, which could be a good sign.

If the group can continue to maintain this growth rate for the rest of the year, then it should see annual growth above what is projected for the economy; the **International Monetary Fund** is estimating 2.3% GDP growth for the US economy in 2019.

This North American group of seven mid-tier and smaller providers posted strong growth in a Q1 comparison with a cohort of large competitors. On a year-over-year basis, collective sales growth of the mid-tier and smaller providers in Q1 was 970 percentage points higher than that of the six largest US-traded EMS providers (Chart 1, p. 4). Overall, bigger was not better in this Q1 analysis. In a quarter-over-quarter comparison, the six US-traded EMS providers posted an inferior result, with

a sales decline of 8.2% versus an increase of 4.1% for the seven North American EMS providers.

Q1 revenue for the mid-tier and smaller group totaled \$740.9 million, compared with \$637.6 million in the same period a year ago. Year-on-year sales declines at two providers were essentially offset by increases at five providers. SMTC recorded by far the highest sales growth at 176.5%. IEC Electronics came in a distant second with 17.4% growth year over year. Nortech Systems posted the biggest decline at -6.6% and KeyTronic a slight decline at -0.4% (Table 4, below). Note: Sparton Corporation was acquired by Cerberus Capital Management, L.P. As a result of this acquisition, Sparton will operate as a privately held company and is thus excluded from our analysis.

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	Table 4:	Q1 and N	ine-Mo			orth Am			r and Sn	ialler EN	AS Provi	aers		
Company	1Q19 Sales	4Q18 Sales	Qtr.– Qtr. Chg.	1Q18 Sales	Yr.–Yr. Chg.	1Q19 Gross Marg.	4Q18 Gross Marg.	1Q18 Gross Marg.	1Q19 Oper. Marg.	4Q18 Oper. Marg.	1Q18 Oper. Marg.	1Q19 Net Inc.	4Q18 Net Inc.	1Q18 Net Inc.
					9	Stand-Alo	ne EMS P	roviders						
KeyTronic	108.0	123.0	-12.3	108.4	-0.4	6.3%	8.0%	7.5%	-0.1%	2.1%	0.7%	-12.0	1.4	0.6
SMTC	102.6	80.9	27.0	37.1	176.5	8.4%	10.3%	10.4%	1.9%	1.2%	0.9%	1.2	-1.2	0.0
SigmaTron	68.9	77.0	-10.6	65.7	4.7	8.0%	8.7%	9.0%	0.0%	1.1%	0.4%	-0.6	-0.7	0.1
IEC Electronics	37.3	35.4	5.2	31.8	17.4	12.3%	14.3%	15.1%	3.4%	4.8%	5.9%	0.6	1.1	1.6
Nortech Systems	26.4	25.6	3.4	28.3	-6.6	11.4%	8.4%	10.9%	-0.5%	-3.4%	-0.8%	-0.4	-2.2	0.0
Kimball Electronics	313.5	284.1	3.4	283.9	15.3	8.5%	7.2%	10.5%	4.6%	3.6%	3.9%	11.6	6.8	10.8
Subtotal/Avg.	656.7	626.1	4.9	555.2	18.3							0.5	5.1	13.1
	EMS Unit of Larger Public Company													
Ducommun**	84.2	85.3	-1.3	82.4	2.2									
Total/Avg.	740.9	711.4	4.1	637.6										

^{**}Financial Data for the Ducommun LaBarge Technologies (DLT) segment of Ducommun, Inc. has been included. Note: Cerberus acquired Sparton Corp. and it will now operate as a privately held company.

Chart 1: Q1 Sales Growth Year Over Year

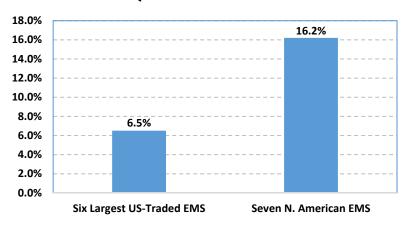
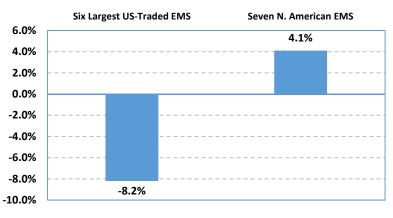


Chart 2: Q1 Sales Growth Quarter to Quarter



Versus the prior quarter, Q1 sales for the group of seven increased 4.1%. In this comparison, however, the large US-traded counterparts did much worse than the mid-tier and smaller providers, with sales sinking –8.2% sequentially (Chart 2). It appears that the larger providers, which have significant amounts of consumer and computing sales, are collectively more subject to seasonality than their smaller competitors.

Four out of the seven North American providers saw their Q1 sales increase from the prior quarter, with SMTC registering two-digit growth. The sequential increases at those four providers outweighed the declines at the other three players—SigmaTron, Ducommun, and KeyTronic (Table 4).

The group of seven mid-tier and smaller providers consists of six companies in the EMS space, all publicly traded, and one EMS unit, which is Ducommun LaBarge Technologies (DLT, a.k.a. the Electronic Systems division) within the larger publicly held corporation that is Ducommun.

For the six stand-alone providers, net income in Q1 amounted to \$0.5 million, down from a combined net income of \$5.1 million in the prior quarter and down from net income of \$13.1 million a year earlier. The year-over-year decrease in net income occurred in contrast to an 18.3% increase in sales versus a year ago. Q1 net margin came in at 0.08%, down 228 basis points year over year. Two of six providers reported an increase in net income compared to a year ago.

A Brief Look at Each Provider

KeyTronic Corporation (NASDAQ: KTCC). For the third quarter of fiscal year 2019, KeyTronic reported total revenue of \$108.0 million, compared to \$108.4 million in the same period of fiscal year 2018. For the first nine months of fiscal year 2019, total revenue was \$358.5 million, up 9% from \$329.3 million in the same period of fiscal year 2018.

As previously reported, the company's revenue in the third quarter of fiscal 2019 was adversely impacted by reduced orders from two large, longstanding customers. One of these customers needed to lower its inventory in the third quarter, but expects a rebound in demand in the fourth quarter; the other large customer is managing inventory as it is transitioning its production from KeyTronic's China facilities to KeyTronic's Mexico facilities. In addition, there were unanticipated delays in the launch of production for two new customers in the third quarter.

Due to its strategic investments in increased operational efficiencies in recent periods, the company reduced its workforce by approximately 10 percent, resulting in a severance charge of \$1.1 million in the third quarter of 2019. Due to accounting requirements, KeyTronic also wrote down its goodwill and intangibles by approximately \$12.5 million in the third quarter of 2019.

For the third quarter of fiscal year 2019, the company had a net loss of approximately \$12.0 million or \$(1.11) per share, compared to net income of \$0.6 million or \$0.06 per share for the same period of fiscal year 2018. For the first nine months of fiscal year 2019, the net loss was \$8.8 million or \$(0.82) per share, compared to net income of \$0.9 million or \$0.08 per share for the same period of fiscal year 2018.

Excluding charges for the write-off of goodwill and intangibles and for severance, the results would have been approximately net income of \$0.02 per share and \$0.32 per share, respectively, for the third quarter and first nine months of fiscal year 2019.

For the fourth quarter of fiscal year 2019, the company expects to report revenue in the range of \$112 million to \$117 million, and earnings in the range of \$0.10 to \$0.15 per diluted share. These expected results assume an effective tax rate of 20% in the quarter.

SMTC Corporation

(NASDAQ:SMTX). Revenue for the first quarter of 2019 was \$102.6 million, up \$65.5 million or 177%, compared to \$37.1 million in the first quarter of 2018, and up 27% or \$21.7 million from \$80.9 million in the fourth quarter of 2018. On a pro forma basis, assuming MC Assembly had been part of SMTC in the first quarter of 2018, revenue increased 45.2% from \$70.7 million in the first quarter of 2018. Approximately \$3.8 million of the revenues reported in the first quarter

of 2019 was due to the impact of the revenue accounting standard ASC 606 compared to \$1.7 million of the revenues in the same period in the prior year.

Gross profit was \$8.6 million or 8.4% of revenues, compared to \$3.9 million or 10.4% of revenues in the first quarter of 2018, and \$8.3 million or 10.3% of revenue in the fourth quarter of 2018. The year-over-year and quarter-overquarter declines in the gross margin percentage in the first quarter of 2019 were due to higher labor expenses and \$1.8 million of amortization of intangibles relating to the acquisition of MC Assembly (MCA). Adjusted gross profit was \$10.5 million or 10.2% of revenues, compared to \$3.5 million or 9.5% of revenue for the same period in the prior year.

Net income was \$1.2 million or \$0.05 per share, compared to net income of \$0.008 million or \$0.00 per share reported in the first quarter of 2018, and a net loss of \$(1.2) million or \$(0.05) per share reported in the fourth quarter of 2018. Net income in the first quarter of 2019 included a \$3.1 million noncash gain for a contingent consideration, which reflected a reversal of an accrual recorded in the prior quarter for an earnout provision associated with the MC Assembly acquisition.

Adjusted EBITDA was \$5.5 million, increased 494% from \$0.9 million reported in the first quarter of 2018, and up 2.9% from \$5.3 million reported in the fourth quarter of 2018. On a pro forma basis, assuming MC Assembly had been part of SMTC in the first quarter of 2018, adjusted EBITDA increased 116% from \$2.5 million in the first quarter of 2018.

Net debt at the end of the first quarter, excluding finance and operating lease obligations, was \$79.4 million, compared to \$80.8 million at the end of 2018. A higher than anticipated level of revenue in the first quarter of 2019, together with strong collection activities, eliminated the need for a Senior Debt Leverage Covenant waiver that SMTC secured during the quarter.

During the three months ended March 31, 2019, one customer exceeded 10% of total revenue, comprising 13.1% of

segments. During the three months ended April 1, 2018, four customers each exceeded 10% of total revenue, comprising of 45.8% of total revenue across all geographic segments.

As of March 31, 2019, no customers represented more than 10% of the trade accounts receivable. At December 30, 2018, two customers comprised 21% (11% and 10%, respectively) of the company's trade accounts receivable. No other customers individually represented more than 10% of trade accounts receivable in either period.

One long-standing customer in the telecom, networking, and communications sector serviced in China represented increased revenue of \$2.1 million in addition to \$2.3 million represented from the MCA acquisition. One customer serviced in Mexico in the semiconductor sector had increased volumes resulting in \$1.7 million of additional revenue. In the industrial, power, and clean technology sector, one customer serviced in Mexico and one customer serviced in the US had increased volumes representing an increase of \$5.8 million in revenue with an additional \$10.0 million represented from the MCA acquisition. Also, revenue increased as a result of the MCA acquisition in the medical, and aerospace and defense sectors, totaling \$4.5 million and \$7.0 million, respectively.

IEC Electronics Corp. (NYSE: IEC). IEC reported revenues of \$37.3 million for the second quarter of fiscal 2019, an increase of 17.4% as compared to revenues of \$31.8 million for the fiscal 2018 second quarter. Gross margin for the second quarter of fiscal 2019 was 12.3% compared to 15.1% in the same quarter last year. Selling and administrative expenses increased to \$3.3 million in the second quarter of fiscal 2019, or 8.9% of sales, as compared to \$2.9 million, or 9.2% percent of sales, in the second quarter of fiscal 2018. The company reported net income of \$0.6 million, or \$0.06 per basic and diluted share, for the second quarter of fiscal 2019, compared to net income of \$1.6

share, in the second quarter of fiscal 2018.

Increases in aerospace and defense customers resulted in a net increase of \$3.0 million in the second quarter of fiscal 2019. The medical sector saw a marginal increase in the second quarter of fiscal 2019 compared to the same period of the prior fiscal year.

The net increase in the industrial sector of \$2.4 million resulted primarily from the production rampup of new programs with three customers, which amounted to \$1.9 million.

One individual customer represented 10% or more of sales for the three months ended March 29, 2019. This customer was from the aerospace and defense sector and represented 22% of sales. Two individual customers each represented 10% or more of sales for the six months ended March 29, 2019.

Robust Q1 Growth for European Group

First-quarter sales in euros for a group of five European EMS providers rose 4.7% year over year, considerably above the European Union's GDP growth rate. Revenue for the five midsized providers totaled €495.5 million, up from €473.2 million in the year-ago quarter. As a group, the five providers made a good start in 2019 with a healthy year-over-year increase in O1.

Sales grew from a year earlier at three out of the five providers and two providers were able to achieve double-digit gains (Table 5). In the first quarter, **Neways Electronics**International recorded an 8.7% year-on-year increase in net turnover. This increase was entirely organic. The semiconductor, automotive, and industrial sectors made the greatest contribution to the higher turnover. Turnover in the medical sector was around the same level as in 1Q2018.

Order intake increased by 31.8%year on year in the first quarter, largely driven by the strong demand from the automotive sector for system solutions for electric cars. The order book increased to €372.2 million, an increase of 32.1% when compared to end-March 2018 (€281.8 million) and 22.4% when compared to year-end 2018 (€304.0 million). The increase is largely driven by higher demand in the automotive sector and the order book reflects better visibility in the current year.

As for **Scanfil**, turnover stood at €129.9 million, showing a decrease of 6.9% from the previous year. However, there were no signs of any general decrease in customer demand. Instead, the decrease in sales was highly customer-specific, resulting from low demand among a few significant customers. Therefore, sales in the Consumer Applications and Communication segments decreased clearly from the previous year, while sales within other customer segments were stable or developed positively.

The operating profit during the first quarter was €6.8 million, comprising 5.3% of turnover.

The largest customer accounted for 13% of turnover and the top ten customers accounted for 57% of turnover.

At LACROIX Electronics, Q1 sales decreased 4.8% year over year. LACROIX Electronics confirms its mixed performance in the sales of electronic equipment for third parties, mainly due to the evolution of the automotive market at the end of calendar year 2018.

For **Kitron**, its Q1 revenue grew 24.8% from a year earlier in its NOK reporting currency. Organic growth, excluding the acquisition of the EMS division of API Technologies Corp., was 20 percent. In absolute numbers, first-quarter revenue growth compared to the same quarter last year was particularly strong in the Industry market sector. Percentage-wise, Offshore/Marine grew the most. The order backlog ended at NOK1,466 million, an increase of 43 percent compared to last year, and an all-time high. All market sectors except Energy/Telecom increased the order backlog substantially. Increasing activity among customers in the oil and gas industry has led to a particularly strong backlog growth in the

Offshore/Marine market sector.

Revenue from customers in the Swedish market represented a 40.6 percent share of the total revenue during the first quarter. The Norwegian market represented 17.6 percent of Kitron's total revenue in the first quarter. For 2019, Kitron expects revenue to grow to between NOK2,900 million and 3,200 million. EBIT margin is expected to be between 6.2 and 6.6 percent.

Finally, **Connect Group** reported that Q1 sales increased by 13.3% from the same period last year. The second half of 2018 closed with sales of ϵ 74.2 million, compared ϵ 65.5 million in the second half of 2017.

Compared to the second half of 2017, the gross margin fell from 11.7 percent to 11.4 percent. The continuing shortages in the components market, coupled with at times significant price increases of components for certain product groups, explains the increasing pressure on the margins. Due to high efficiency measures, the costs of research and development, and administration and sales decreased from 8.5 percent of sales at the end of the first half of the year to about 7.7 percent of the turnover at the end of the second half of the year.

Company News

Foxconn's Capacity Outside China Can Meet Apple Needs

Foxconn reportedly has sufficient capacity outside China to meet **Apple**'s demand in the American market, according to a new report from Reuters. Moving production could come into play due to fallout from the US-China trade war.

"Twenty-five percent of our production capacity is outside of China, and we have enough capacity to meet Apple's demand in the US market," said Liu Young-way, a member of Foxconn's proposed new board

Foxconn's investment in Wisconsin is more important than before, he said. The Wisconsin investment, expected to reach up to \$1.5 billion, with up to 2,000 employees by the end of 2020, is reportedly on schedule.

He also said Foxconn could adjust production lines according to a future request from Apple.

Table 5: 1Q2019 Results for Five European EMS Providers (€M or %)

	EIVIS Pr	oviaers (€i	vi or %)		
Company	Head- quarters	Reports in Euros	1Q19 Sales	1Q18 Sales	YrYr. Chg.
Neways Electronics	Nether- lands	Yes	132.9	122.3	8.7%
Scanfil	Finland	Yes	129.9	139.6	-6.9%
LACROIX Electronics	France	Yes	75.5	79.3	-4.8%
Kitron	Norway	No	83.0	66.5	24.8%
Connect Group	Belgium	Yes	74.2	65.5	13.3%
Total/Avg.			495.5	473.2	4.7%

Results in non-euro currencies were converted to euros by applying a three-month average exchange rate for the corresponding quarter. Average exchange rates were obtained from OANDA. Note: For Connect Group we have considered its second half 2018 figures.

IEC Electronics Breaks Ground on \$22M NY Factory

IEC Electronics has broken ground on a \$22 million facility in New York.

The new site was funded in part by \$5 million from Empire State Development in exchange for job commitments. When completed, the EMS plant is expected to create more than 360 new jobs.

The company has reportedly created 175 jobs at its existing Newark location during the last year and a half.

IEC supplies PCB assembly, cable and wire harness assembly, and precision metalworking for medical, industrial, aerospace, and defense firms globally.

Operations are anticipated to begin in 2020.

Kitron CEO Expected to Resume Duties Sept. 30

Kitron chief executive Peter Nilsson is expected to resume his duties on September 30 after an extended medical leave that was originally expected to end after June.

Nilsson's cancer treatment has progressed according to plan and is in its final phases, says the EMS firm.

CFO Cathrin Nylander will continue as acting CEO until Nilsson returns.

Q1 North American EMS Orders Up 1%

First-quarter orders at North American EMS companies were up 1% year over year, says IPC. Slower growth is expected for the industry through 2020, the trade group added.

For the year, 2018 orders grew 13.5% over 2017, according to a survey of firms by IPC.

First-quarter sales growth was strong for box build and other production, but modest for PCB assembly. Among the industry's vertical markets, first-quarter sales to the military and aerospace market were up 25% year to date. Sales growth to the lighting and medical/instrumentation markets was also strong, says IPC.

Among the EMS companies in an IPC survey sample, wire harness and cable assemblies accounted for nearly 14% of the first-quarter sales for companies with annual sales of less than \$10 million. No revenue from this type of production was reported by the largest company size tier.

Pegatron to Invest Up to \$1B in Indonesia Chip Plant

Pegatron has signed a letter of intent to invest \$695 million to \$1 billion in an Indonesian factory to assemble iPhone chips, according to reports.

The company plans to partner with **PT Sat Nusapersada** to assemble the chips at the plant.

In the long term, Pegatron may also assemble MacBook components there.

Scanfil Acquires German EMS Hasec-Electronik

Scanfil signed an agreement to acquire a German EMS company for cash and stock, giving it further inroads to the central European market.

Under terms of the agreement, Scanfil will pay €10.25 million (\$11.42 million) for **Hasec-Elektronik GmbH**. Scanfil will finance the acquisition using cash plus €2.2 million (\$2.45 million) worth of stock issued to Hasec's ownership. The acquisition is subject to customary closing conditions such as a merger control filing and is expected to be finalized during the second quarter.

The acquired business will be incorporated into Scanfil's consolidated financial statements after the closing of the acquisition.

"This acquisition will give a significant boost to Scanfil's growth strategy by bringing in remarkable new customers and further strengthening our market position in Germany and wider in central Europe," said Petteri Jokitalo, CEO, Scanfil. "Scanfil and Hasec will create an attractive EMS partner for German and central European customers with strong local factory presence, design capability and access to [a] global factory network and supply chain. Hasec has long-term relationships with its large

amount of customers and an established position as a high-mix, low-volume manufacturer and complex systems integrator. Scanfil's existing Hamburg factory will complement Hasec's offering in Germany and in addition Scanfil's global factory network will benefit Hasec's customers."

TT Electronics Partners with Protek Power

TT Electronics says that it has entered into an exclusive sales agreement with Protek Power, aiming to enhance the company's ability to deliver design, integration, and assembly of power solutions to international standards, enabling a smarter supply chain and speed to market.

Protek Power, an FSP Group company, specializes in AC-DC power supplies focused on medical or commercial grade power supply conversion products.

NOTE and UNIPOWER Elevate Their Partnership

UNIPOWER has chosen **NOTE** as its manufacturing partner for its latest line of high-efficiency power electronics systems.

The two companies have been collaborating since 2012 and NOTE has already manufactured power products and systems for UNIPOWER. Annual sales are expected to be approximately SEK25 million (€2.34 million).

VTech Achieves Seventeenth Consecutive Year of Growth

VTech Holdings, Limited, the parent company of VTech Communications, Limited, announced its results for the year ended 31 March 2019, reporting higher revenue on the good performance of electronic learning products and contract manufacturing services (CMS). VTech CMS posted its seventeenth consecutive year of growth in the financial year 2019, recording a sales increase of 16.8% to US\$807.4 million.

"With the implementation of manufacturing automation, lean processes and the Smart Factory concept, VTech CMS continues to make good progress towards 'Industry 4.0.' By continuously strengthening our business strategy of customer focus and commitment to utilizing state-of-the-art manufacturing technology, we are confident that our business growth and high reputation within the industry will continue," said Mr. Andy Leung, CEO of VTech Communications, Limited.

VTech ranked 27th in *MMI*'s "Top 50 EMS Companies Worldwide" survey, announced earlier this year. The company also ranks #1 in the Hong Kong region.

EMS Provider Venture Manufacturing Fights Economic Headwinds

EMS provider Venture
Manufacturing has been relying on a lower effective tax rate and reducing its R&D tech spending to help fight the firm's declining net profit margin. Changes on the horizon with China's economy, a looming global slowdown, cash fleeing Europe for the US dollar, and ill-defined tariff outcomes still taking shape with the US and China are not helping Venture's prospects. In 2018 Venture received more than 70% of its sales from the Asia-Pacific region.

To fight this trend, Venture Manufacturing is also trying to tap into Silicon Valley opportunities (and compete against 200+ other Valley- centric EMS providers), offering proximity support for engineering, prototyping, and small-volume manufacturing services.

To help combat economic uncertainty, Venture Manufacturing, like dozens of other contract EMS/ODM companies, is trying to rely more on engineering services for more of its business appeal, targeting more high-value-add program opportunities like modules, and pursuing customers in industries like life sciences.

Venture Manufacturing is relying on new program wins and hopeful additional business from existing customers like **Raytheon**, **Waters**, **Oracle**, **Medtronic**, **Illumina**, and **ABB** to name just a few, to help grow its top line, as reported by *VentureOutsource*.

Flex Resumes Shipments for "Majority" of Huawei Products

Singapore-based electronics contract manufacturer Flex has resumed shipments to Chinese phone and telecom equipment maker Huawei, whose business has been disrupted after the United States put it on a blacklist over national security concerns.

The resumption of supply should be a relief to the Chinese telecommunications company, and the road map for Huawei will become clearer as it crosses the 90-day reprieve given by the US to keep servicing customers, people aware of the developments said.

Huawei, according to Counterpoint research, gets nearly 23% of its manufacturing done by EMS companies such as Flex and **Foxconn**.

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