Manufacturing Market INSIDER™

inside the contract manufacturing industry

Vol. 27, No. 3

March 2017

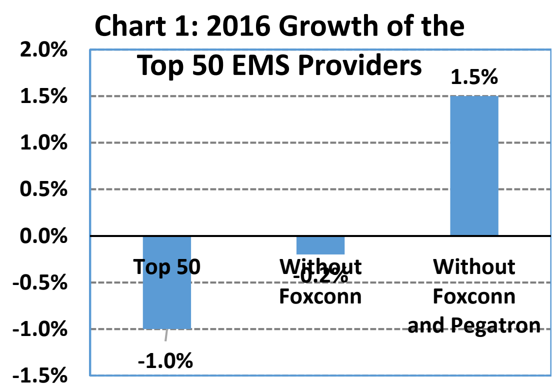
Top 50 Declines to $270 Billion

MMI's annual list of the 50 largest EMS experienced a decrease in revenue of $2.8 billion in 2016. Combined sales of the *MMI* Top 50™ EMS providers came in slightly behind 2015's $272.5 billion mark with a revenue total of $269.7 billion. Over the last few years, we have separated out the ODM business among the largest companies; this year it accounted for approximately $18.6 billion in revenue.

With the results of *MMI's* Top 50 survey now in, it can be said that 2016 was a slower year for the Top 50, with mid-tier EMS companies performing better than the top-tier ones. The group's 2016 sales declined 1.0% from the previous year. This result was surprising, given **Apple**'s launch of the iPhone 7 and 7 Plus, which sold 78.3 million smartphones. That's up about 5% from a year ago, when the company moved 74.8 million iPhones.

In recent years, Top 50 growth has declined and EMS giant **Hon Hai Precision Industry** can be partly blamed for it. Last year, Hon Hai generated consolidated sales of $135.2 billion, which represented a decline rate of 4.3%. When Hon Hai's contribution to the Top 50 is excluded, the growth rate for the rest of the group still declined 0.2%.

Hon Hai is known for assembling iPhones and iPads for Apple, Hon Hai's largest customer. But in recent years Apple has brought on **Pegatron** as a second source of assembly, and has become Pegatron's biggest customer as well. Pegatron is also the sole assembler of **Microsoft**'s notebook product, Surface Pro. Despite all this, Pegatron's 2016 sales declined by 4.7% to $36 billion from nearly $38 billion a year ago. Management attributed the shortfall to labor cost and utilization loss amid weakened iPhone 7 demand since November, along with slower growth in its component business. Also, the company's second largest client, **Toshiba**, discontinued its ODM partnership in Taiwan, so Pegatron lost orders for ~1 million units. Its FY16 notebook (NB) shipments reached only 9.80 million units, a slight decrease from 10.08 million units in FY15. Its NB shipments are forecasted to decline further to 9.60 million units in FY17 as the overall PC industry remains in decline.



Regarding its consumer segment, Pegatron has gradually exited the tablet market in recent years; therefore, its segment revenue has declined.

What effect did these two Apple-influenced providers have on Top 50 growth? Their combined effect was negative, because when the two companies are excluded from the group, its growth increased by 700 percentage points to 6.4% (Chart 1).

A higher cutoff

On pages 2–4, the *MMI* Top 50 providers for 2016 are ranked in order of calendar 2016 sales. As one can see

continued on p. 4

Some articles in this issue

Cover Story.....1
Top 50 Surpasses $274 Billion
Top 50 Listings.....2–4
Find out who made the Top 50 for 2016.
Company News.....6
Flex Expands Automotive Offering.....6

The *MMI* Top 50 EMS Providers in 2016

Company	Head-quarters	EMS Sales calendar 2016 (millions USD)	ODM Sales for 2016	EMS Rank by 2016 (millions USD)	EMS Sales calendar 2015 (millions USD)	EMS 2015 rank	EMS Growth '15-'16 in US$ (%)	No. of people	No. of plants	Total facility s.f.	No. SMT lines	No. of customers and notable customers
HonHai Precision Industry (Foxconn)	New Taipei, Taiwan	135,201		1	141,227	1	-4.3%	1,300,000	70	45.5 M (est.)	2000 (est.)	Acer, Amazon, Apple, Blackberry, Cisco, Dell, HP, IBM, Intel, Nintendo, Sony, Visio, Xiaomi
Pegatron	Taipei, Tawian	35,934		2	37,716	2	-4.7%	250,000	11	25 M (est.)	700 (est.)	Acer, Apple, ASUS, Epson, Sony, Toshiba
Flex	San Jose, CA	23,774		3	24,595	3	-3.3%	200,000	100	27.6 M	415 (est.)	Alcatel-Lucent, Casio, Ciena, Cree Lighting, F-5 Networks, Ford, Google, HP, J&J, Lockheed, Motorola, NEC, Oracle, Pace, Q-Cells, Siemens, Sunpower, Xerox
Jabil Circuit	St. Petersburg, FL	18,250		4	18,557	4	-1.7%	138,000	93	77.6 M	300 (est.)	Agilent, Apple, Cisco, EchoStar, Ericsson, GE, HP, IBM, Medtronic, Motorola, NetApp, Nokia Siemens Networks, Novartis, Pace, Sunpower, Valeo
Sanmina	San Jose, CA	6,667		5	6,374	5	4.6%	45,397	72	12.6 M	220	Advanced Digital Broadcast, AT&T, Brunswick, Canon, Ciena, Citizen, Dell, Diebold, GE, Harman, HP, IBM, Illumina, Panasonic, Philips, RF Surgical, Seagate, Trane
Celestica	Toronto, ON, Canada	6,017		6	5,639	6	6.7%	25,000	23	6.6 M	150 (est.)	Agilent, Alcatel-Lucent, Applied Materials, Baxter, Carrier, Cisco, EMC, HP, Hitachi, Honeywell, IBM, Juniper, NEC, Oracle
Wistron	Taoyuan, Taiwan	5,529	14,949	7	4,051	8	36.5%	34,280	8	20.5 M	81	Acer, Apple, ASUS, Dell, HP, Japan Display & Lenovo
New Kinpo Group	New Taipei, Taiwan	4,452	1,327	8	4,423	7	0.7%	42,000	31	18.1 M	306	HP / Seagate / Western Digital / Panasonic / Toshiba / Hitachi / TI / Casio / Pace / Nikon / Pioneer / GE / Lenovo / Asus / Asrock / Gigabyte / Sony / Buffalo / Epson / Samsung
Plexus	Neenah, WI	2,574		9	2,607	10	-1.3%	14,000	16	3.3 M	90	ABB, AMX, ARRIS Group, Coca-Cola, Draeger, Dragonwave, GE, General Dynamics, Gotham Networks, Harmonic, Honeywell Aerospace, Inovonics, Juniper, Motorola, MNS, Patientline, Siemens, Tellular, Visual Networks
Benchmark Electronics	Angleton, TX	2,310		10	2,541	11	-9.1%	9,900	21	3.7M	148	Applied Materials, ARRIS Solutions, Emerson, IBM
USI	Shanghai, China	2,286	1,310	11	2,779	9	-17.7%	15,000	7	3.8 M	128	100+
Shenzhen Kaifa	Shenzhen, China	2,160	110	12	2,447	12	-11.7%	31,000	8	5.6 M	>150	Seagate, Western Digital, Kingston, Micron, Huawei, vivo, Epson, Maxwell, ResMed, IBM, ENEL
Venture	Singapore	2,083		13	1,933	13	7.7%	12,000	10	3.7 M (est.)	180	ABB, Aglient, Dyson, Georgia Pacific, HP, Honeywell, IBM, Illumina, Keysight, Micros, NCR, Oclaro, Qlogic, Perfect (China), Talaris/Glory, Toshiba-TEC, Verifone, Waters, Zodiac
Zollner	Zandt, Germany	1,384		14	1,304	14	6.1%	10,900	18	3.3 M	68	AL Lighting Automotive, BMW, Continental, Valeo, Alcatel-Lucent, Core Optics, National Instruments, G&D, HP, IBM, BSH, Miele, ABB, Agilent, Bombardier, Carl Zeiss, Teradyne, Verigy, Draeger Medical, Dornier Medtech, Siemens, Diehl Aerospace
SIIX Corp.	Osaka, Japan	1,330	628	15	1,150	15	15.7%	9,976	11	19.0 M	N/A	200+

Note: Unless otherwise indicated, data represents 2016 year-end.

The *MMI* Top 50 EMS Providers in 2016

Company	Head-quarters	EMS Sales calendar 2016 (millions USD)	ODM Sales for 2016	EMS Rank by 2016 (millions USD)	EMS Sales calendar 2015 (millions USD)	EMS 2015 rank	EMS Growth '15-'16 in US$ (%)	No. of people	No. of plants	Total facility s.f.	No. SMT lines	No. of customers and notable customers
Fabrinet	Grand Cayman, Cayman Islands	1,211		16	845	19	43.2%	10,141	6	2.0 M	37	Avanex, Bookham, Cisco, Coherent, Emcore, Finisar, Hitachi Cable, Intel, JDSU, Lumentum Operations, Oclaro, Valeo
UMC	Saitama, Japan	1,026		17	915	17	12.1%	11,455	8	1.2 M	153	
PKC Group	Raahe, Finland	936		18	1,008	16	-7.1%	19,640	10	1.3 M	30	Saab, Sinotruk
Kimball Electronics	Jasper, IN	891		19	816	20	9.2%	4,728	9	1.2	40	Philips, Regal Beloit Corporation, ZF-TRW, Nexteer
Sumitronics	Tokyo, Japan	815		20	874	18	-6.8%	3,700	24	N/A	N/A	
Integrated Micro-Electronics, Inc.	Laguna, Philippines	800		21	772	21	3.6%	13,375	13	2.5 M	114	324+
NEO Technology	Fremont, CA	785		22	767	22	2.3%	3,800	14	1.2 M	42	
Asteelflash	Neuilly, France	736		23	755	23	-2.5%	4,400	17	1.8 M	45	150+
Alpha Networks	Hsinchu, Taiwan	677		24	724	24	-6.5%	6,000	3	530,000	30	
3CEMS Group	Guangzhou, China	667		25	628	26	6.2%	6,320	4	1,334,537	35	Finisar, Rohde & Schwarz, Honeywell, ASUS, Kongsberg Maritime, Tridium, Goodman, Mobileye, Micron, Maxon, DIEBOLD, Kyocera
VTech Communications	Hong Kong	631		26	579	27	9.0%	4,200	1	850,000	24	85
Creation Technologies	Burnaby, BC Canada	630		27	444	38	41.9%	3,100	10	780,000	35	> 200
V.S. Industry Berhad	Senai, Malaysia	586		28	521	31	12.4%	11,050	11	3.6 M	44	Dyson, Georgia-Pacific, Keurig, Green Mountain, Seb/Calor Group, Zodiac
Scanfil	Sievi, Finland	562		29	573	28	-2.0%	3,294	10			Danfoss, ABB, The Switch (Yaskawa), Metso, Valmet, Nokia, Ericsson, Airbus, Teleste, Axis, Medtech, Thermo Fischer Scientific, Planmeca, Vaisala, Getinge, Kone, RAY, Photo-Me (KIS), Tomra
Enics AG	Zurich, Switzerland	555		30	560	29	-0.9%	3,200	8	756,000	N/A	ABB, Alfa Laval, Axis Communications, Bombardier Transportation, CRRC Yongji Electric, Detection Technology, Domino Printing, Eaton, Ensto, Gambro, Honeywell, Leica Biosystems, Roche Diagnostics, Schneider Electric, Tomra
Ducommun, Inc.	St. Louis, MO	551		31	666	25	-17.3%	2,750	14	1.7 M	10	Boeing, Raytheon, Spirit and United Technologies
VIDEOTON	Székesfehérvár, Hungary	528		32	501	33	5.4%	8,200	9	4.6 M	30	ABB, Alstom, Apex, BESI, Carrier, Eaton, ebm-papst, Emerson, Formlabs, GE, Grässlin, Hager, Honeywell, Itron, IVM, Kopp, Kuka, Legrand, Mars Drinks, Minimax, Osram, Schneider Electric, Sensus, Socomec, Stadler, Vertiv

Note: Unless otherwise indicated, data represents 2016 year-end.

Company	Head-quarters	EMS Sales calendar 2016 (millions USD)	ODM Sales for 2016	EMS Rank by 2016 (millions USD)	EMS Sales calendar 2015 (millions USD)	EMS 2015 rank	EMS Growth '15-'16 in US$ (%)	No. of people	No. of plants	Total facility s.f.	No. SMT lines	No. of customers and notable customers
Katolec	Japan	490		33	529	30	-7.4%	5,246	11	1.4 M	118	Panasonic, Canon, Epson, Pioneer, FUJIFILM, HONDA LOCK, TOKAI RIKA, Omron
Hana Microelectronics	Bangkok, Thailand	483		34	443	39	9.0%	17,500	4	1.3 M	105	Avago, HID, Lumiled, Safenet, Sensata, Synaptics
Key Tronic	Spokane Valley, WA	482	1.5	35	472	35	1.9%	4,947	15	1.8M	39	Citrix, Clorox, DND, HP, International Gaming, Lexmark, QUALCOMM, Transact, TPG, Zebra
Neways Electronics (est.)	Son, The Netherlands	462		36	418	40	10.5%	2,593	11	1.1 M	21	~760
Orient Semiconductor Electronics	Kaohsiung, Taiwan	458		37	468	36	-2.1%	2,578	8	756,336	81	115
Computime	Hong Kong	454		38	385	42	17.9%	4,000	4	1.2 M	28	
WKK Technology	Hong Kong	453	2.4	39	510	32	-11.2%	4,425	2	1.0 M	60	Alcatel-Lucent, Canon, Fujitsu, NEC, Oki, Philips, Yamaha
Wong's International Holdings Ltd.	Hong Kong	440		40	490	34	-10.2%	4,300	2	1.0 M	60	20+
Global Brands Mfg.	New Taipei City, Taiwan	415	283	41	445	37	-6.7%	7,767	3	1.4 M	144	Hitachi, InfoAction, Toshiba, LG, Carrier
éolane	Le Fresne Sur Loire, France	411	12	42	410	41	0.2%	3,200	16	968,850	45	Airbus, Alstrom, Areva, Dassault, Orange, Renault, Rolls Royce, Safran, Schlumberger, SFR, Siemens Automotive, Thales, Valeo, Zodiac
Sparton	Schaumburg, IL	407		43	382	43	6.5%	1,853	9	641,860		Andrews Technology, BAE Systems, Bally, BioMarket Strategies, Cytomedix, Fenwal, GE,Goodrich, Honeywell, Neuronetics, Northrup Grumman, NuVasive, Parker, Raytheon, Siemens, Smith Detection, U.S. Navy
ALL CIRCUITS	Meung Sur Loire, France	369		44	316	46	16.6%	1,500	3	538,250	24	Tridium, Goodman
SVI	Bangkadi, Pathumthani, Thailand	352		45	340	45	3.5%	3,600	9	735,000	30	ABB
LACROIX Electronics	Saint Herblain cedex, France	344		46	311	48	10.7%	3,150	4	430,600	26	250+
Di-Nikko Engineering Co. Ltd.	Nikko City, Japan	324		47	265	49	22.3%	2,286	13	698,000	71	Canon
Valuetronics Holdings	Hong Kong	298		48	313	47	-4.9%	4,000	2	800,000	25	
PRIME BASE	Guangzhou, China	293		49				1,850	1	242,213	11	Finisar, Rohde & Schwarz, Honeywell, ASUS, Kongsberg Maritime, Tridium, Goodman, Mobileye, Micron, Maxon, DIEBOLD, Kyocera
Nippon Manufacturing Service (est.)	Tokyo, Japan	269		50	261	50	3.2%	3,051	9	1.5 M	67	Kyocera Document Solutions, Brother, Ricoh, Panasonic, Zoom Corp.

Note: Unless otherwise indicated, data represents 2016 year-end.

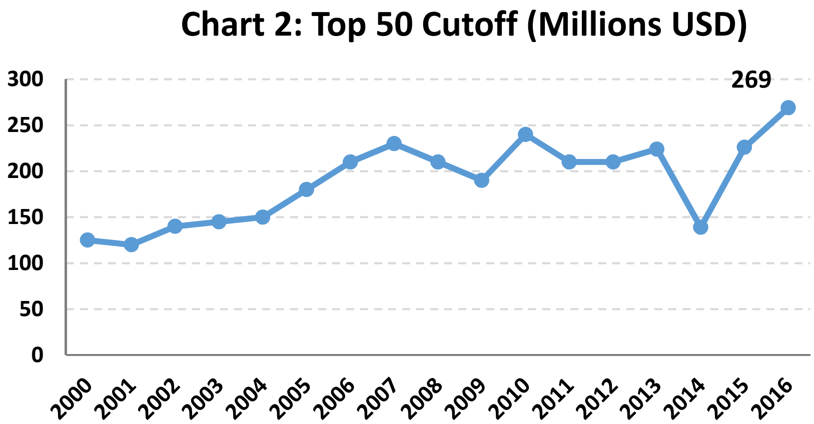
from last place on the list (above), it took a minimum of $269 million in sales to make the Top 50. Earning a spot on the 2016 list was more difficult than the year before, when the cutoff was $226 million. Sales growth at the bottom rungs of the Top 50 resulted in a higher cutoff. This increase in the cutoff has set a new record (Chart 2, p. 5).

Three companies from the 2015 list dropped off the 2016 version. These companies are Topscom (Shenzhen, China), Kitron (Billingstad, Norway), and TT Electronics (Rogerstone, Wales, UK).

Three departures meant that there were three additions to the Top 50. The companies joining the 2016 list include North America–based **Sparton Corp.** (Schaumburg, IL), Taiwan-based **Alpha Networks** and lastly Chinese company **PRIME BASE** made the Top 50 for the first time.

Counting down the top ten

The makeup of the top ten providers did not change much as the first six companies maintained their previous ranking. However, Wistron and Plexus both moved up one position from 2015 while New Kinpo lost one position and USI got replaced by Benchmark.



Top 10 admission required sales of at least $2.31 billion, compared with $2.60 billion for 2015. The top 10 minimum was 11.5% lower than the year before, making it a bit harder to break into the top 10.

For 2016, the top 10 accounted for 89.2% of Top 50 sales, further indicating how top-heavy the EMS industry has become. Nonetheless, the top 10's share declined from 2015 when it was 90%. In 2016, the top 10 could not sustain their scale and size advantage, as their growth declined compared to bottom 40 providers in the group. The bottom 40 together produced a 5.2% growth rate, 520 basis points higher than the top 10 result (Chart 3, below). For providers looking to benchmark themselves against a pure EMS average, bottom 40 growth may be more appealing because non-EMS business accounts for a smaller share of bottom 40 revenue than in the case of the top 10.

Upward mobility

A total of 19 companies moved up in the standings from 2015. There was more upward mobility in 2016 than in 2015 because many companies achieved the sort of growth necessary to advance in the standings.

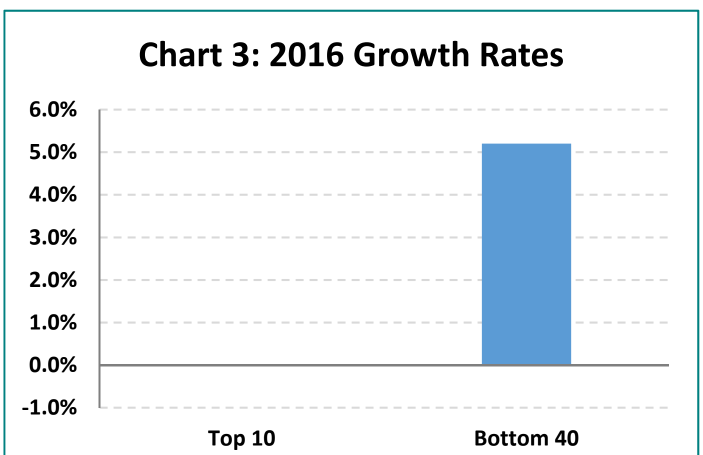
Alpha Networks (24th) experienced a steep decline in revenue in 2016. Yet, the networking device maker saw its net profits surge 408% year on year to NT$608 million (US$19.96 million) in 2016. The company shipped 35% of its switch products to the data center sector, 45% to the business sector, and 10% to telecom and SMB clients. Switch products account for 55% of Alpha's total sales currently. In 2016, a majority (64%) of the Top 50 had sales of at least $500 million.

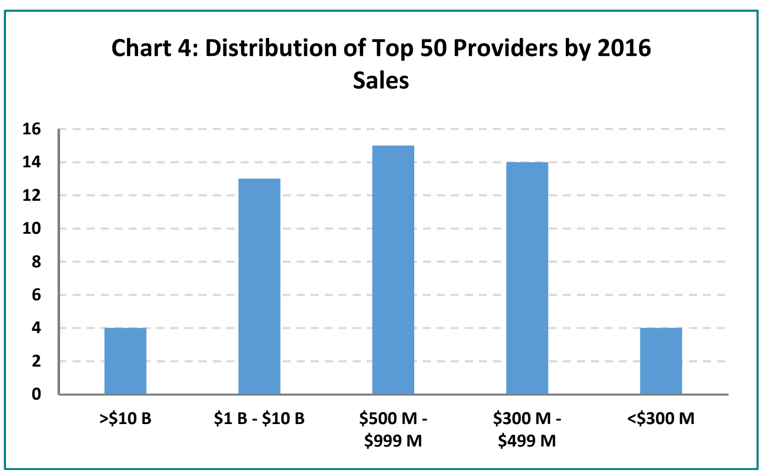
These providers constituted a majority of suppliers. Sales of $500 to $999 million bracket, accounted for the largest number of suppliers in 2016 (Chart 4, below).

Benchmarking ratios

Top 50 data yield three productivity ratios. One can start with revenue per employee. Employee counts for 50 companies totaled about 2.3 billion people, of which an estimated staffing level of about 1.3 million was attributed to Hon Hai. If one were to assume 1.3 million employees for Hon Hai, the revenue per employee for these 50 providers works out to $117,617. But this ratio is skewed by the economics of Hon Hai's massive workforce. With Hon Hai excluded, revenue per employee increases to $134,804, which is below the 2015 ratio of $154,644 based on a somewhat different group of 50 companies that also excluded Hon Hai.

Top 50 data can also be used to calculate revenue per SMT line. Of the 50 providers, 45 companies reported the number of SMT lines that they operate. Revenue per SMT line for these companies averaged $60 million, which was higher than the 2015 ratio of $43 million per line computed for a somewhat different group of 47 Top 50 providers. Note that revenue per SMT line is highly variable, depending on the speed and productivity of a line, whether it is single or double sided, and the





amount of EMS revenue generated by box build.

Methodology. Where information was not publicly available, *MMI* depended on companies to provide accurate data. Companies were asked to convert sales in non-US currencies into US dollars, if necessary, by using an average annual exchange rate corresponding to the sales year. Where possible, sales of non-EMS businesses were excluded. A number of the largest providers do not break out the sales of their non-EMS businesses. Hence, the Top 50's total revenue is not purely EMS.

Company News

Jabil to Shutter Site in Scotland

Jabil Circuit will close its EMS plant in Scotland by year end and lay off more than 150 workers, the company said.

The company told a local paper that a "detailed strategic review ... concluded that there is unsustainable current and future demand to support the viability of the site. It is anticipated that manufacturing will cease by the end of calendar year 2017."

About 100 of the 260 workers at the site will remain to help shut down the plant. Jabil also has a factory in Ayr, Scotland. That plant will remain open, the report said.

Xiaomi, Foxconn to Open Second Plant in India

Xiaomi will open a second manufacturing unit in India in concert with **Foxconn**, its main ODM, the company said this week.

The new site will be adjacent to the company's current plant, which employs 5,000 workers. At full capacity, the company will be able to produce one phone per second during peak hours.

India is the largest market in terms of volume and growth rate for Xiaomi. The new plant will boost the percentage of Xiaomi's India sales that are produced in-country up 20 percentage points to 95%. The smartphone maker did $1 billion in revenue in India last year.

Tesla Model 3 Control Computers Will Reportedly Be Built by Pegatron

Tesla is planning to increase orders to Model 3, and orders for the control computer reportedly have been landed by **Pegatron Technology**, according to sources from the upstream supply chain.

Because of the handsome profits offered by control computers, which carry a unit price of more than US$1,000, US-based **Jabil** and Taiwan-based **Quanta Computer** also competed for the orders.

The sources pointed out that Tesla formerly manufactured its control computers in house and only procured motherboards from outside makers. However, since the company's Model 3 is seeing such strong demand, Tesla has decided to also outsource the control computers' assembly.

Tesla originally outsourced its car-use motherboard orders mainly to **Foxconn Electronics** (**Hon Hai Precision Industry**) and Jabil, but has shifted its orders from Foxconn to Quanta and Pegatron, after Foxconn began to cooperate with China-based players to develop electric vehicles (EV).

Although Quanta was not able to land orders for the control computers, Quanta's orders for motherboards from Tesla are still expected to grow strongly in 2017 and even in 2018 with the Model 3. However, Quanta declined to comment on its orders or clients.

Tesla announced the Model 3 in March 2016 and by February 2017 orders for the EV reportedly have reached nearly 400,000 units. Tesla also noted that production of the Model 3 will begin in July and mass production will start in September, to allow its buyers to receive the cars by the end of 2017.

Flex Expands Automotive Offering by Acquiring AGM Automotive

Flex has entered into a definitive agreement to acquire **AGM Automotive** (AGM), a supplier of automotive interior components and systems, including overhead console systems, interior lighting, and electronic components.

AGM is headquartered in Troy, Michigan, with additional facilities in the US, Mexico, Costa Rica, Austria, and China. The acquisition is expected to close in the second quarter of calendar year 2017. Additional terms of the deal were not disclosed.

This strategic acquisition will complement and expand Flex's automotive offerings, particularly in lighting, and will further strengthen certain key strategic customer relationships. The addition of AGM will enhance its ability to provide customers with more-complete solutions for innovative interior lighting systems, from plastics to electronics, and drive greater growth of its dollar content per vehicle.

Thinfilm Stacks Up with New Manufacturing Equipment

Thinfilm Electronics ASA has completed the purchase of manufacturing equipment to be used in the roll-to-roll production of its Electronic Article Surveillance (EAS) tags.

The equipment will be housed at Thinfilm's new facility in Silicon Valley and is expected to be operational in the fourth quarter of 2017.

Additionally, Thinfilm is on schedule regarding the purchase of additional manufacturing equipment necessary to enable the roll-to-roll line to also produce Printed Dopant Polysilicon (PDPS) digital circuitry used in fabricating front-end die for Thinfilm's NFC SpeedTap™ and OpenSense™ tags. The company expects to complete purchase of the remainder of the operational line by 2Q2017.

By migrating production from sheet-based to roll-based lines, Thinfilm is expecting to increase the capacity of its EAS and NFC product lines to billions of units annually when fully installed. Following the start of production of EAS later in 2017, the first commercial production of roll-based manufacturing of front-end die for NFC products is expected by 3Q2018.

Kitron Expanding Its US Capabilities and Services

EMS provider **Kitron** has signed a new agreement with **HMS Industrial Networks**. The estimated contract value was not stated.

The agreement is considered a milestone for Kitron's operations in the US, as it involves newly developed logistics and distribution services to support HMS Industrial Networks in the region, in line with Kitron's strategy of increasing service sales.

Construction Begins on Foxconn-Sharp's $9 Billion LCD Plant

Foxconn's joint venture with **Sharp** started construction of a new LCD manufacturing facility in Guangzhou (China).

This is the first part of a massive CNY61 billion (USD8.8 billion) investment. The project in Zengcheng district covers an area of about 1.5 square kilometers, scheduled to be completed in June 2019, writes the Chinese media agency *Xinhua*.

When completed, the facility is intended to manufacture displays, smart TVs, and electronic whiteboards at an annual production value of CNY92 billion (USD13.4 million). It is estimated that the investment will create between 6,000 and 10,000 jobs.

GPV Acquires BHE

GPV has acquired the electronics manufacturer **BHE** in Horsens (Denmark). The acquisition promotes GPV's growth plan and further consolidates the company's position in the northern European home market.

A year ago, GPV was acquired by the industrial conglomerate Schouw & Co. in Aarhus when it launched an ambitious growth strategy.

In addition to the production in Horsens, where about 70 staff are employed, BHE also has production in China. After the acquisition by GPV, BHE's activities are expected to be integrated into GPV's manufacturing footprint.

EC Electronics Acquires Hunter Cable Assemblies

Basingstoke (UK)-based EMS provider **EC Electronics** has acquired **Hunter Cable Assemblies, Ltd.** (HCAL) from Arcum, Ltd.

The addition of HCAL increases EC Electronics's group revenue significantly. At EC Electronics there is excellent growth potential for mid-sized cable assembly and box build specialists in the UK and mainland Europe. HCAL will significantly strengthen the group's UK capabilities. HCAL has an excellent reputation for quality and customer service, both of which have contributed to recent growth in the business.

HCAL will continue operating as an independent business from the existing premises in Theale under the existing management team.

Enics Possibly to Close Raahe Plant

Enics Raahe announced a negotiation process with its factory employees that could lead to a restructuring or shutting down of the site.

The main goal for the process is to improve overall competitiveness, financial performance, and customer satisfaction in the long term, noted Mikko Lassas, managing director. Therefore, Enics will start to negotiate with the employees of its Raahe factory according to Finnish legislation and union agreements to find the measures by which to reach this goal. Based on its initial plans, those measures could include a possible restructuring of the organization, a change of the business model, or a possible closure of the factory entirely or partially and transfer of business to other Enics locations.

The negotiation period is expected to last at least six weeks.

Neo Tech Inks Deal for New Massachusetts Site

Neo Tech has purchased a 25-acre lot in the western Boston suburbs for $10 million.

The new site includes a 168,000-square-foot manufacturing and warehouse facility, plus another 30,000 square feet of office space. It formerly was the site of the Whitney Rand Packaging Co., and years ago was home to Solectron.

Neo Tech currently operates a 55,000-square-foot plant in Springfield, MA, and a 35,000-square-foot NPI plant in Wilmington, another Boston suburb. According to *Circuits Assembly* sources, Neo Tech plans to consolidate those plants into the Westborough location. The company has not responded to an inquiry at this time.

Jabil Buys Custom Machining Firm

Jabil Circuit has acquired **Lewis Engineering** in an asset purchase for an undisclosed price.

Lewis Engineering is a custom machining services provider. Its management will remain with the company, according to reports.

ADI Receives Final Approval for Acquisition of Linear Technology

Analog Devices has received regulatory approval from the Ministry of Commerce of China to complete its acquisition of **Linear Technology Corporation**. This was the final regulatory approval needed to go forward with the deal.

The parties expected to complete the acquisition on March 10, 2017. In connection with the closing, Linear Technology stockholders will receive USD 46.00 in cash and 0.2321 of a share of Analog Devices common stock per share of Linear Technology common stock.

Celestica Opens Customer Service Center in Santa Clara

Celestica announced the opening of its Silicon Valley Customer Experience Center.

The new site showcases the company's capabilities and hardware solutions, and allows customers access to a collaborative team of engineers, designers, and market experts to help solve complex problems.

The Customer Experience Center is centrally located in Santa Clara.

cms electronics Expands in Hungary

Austria-based **cms electronics gmbh** now owns 87 percent of the company's shares in the Hungarian location; 13 percent remain with the previous local partner.

The business relationship between cms manufacturing and cms electronics, which has existed since its foundation in 2005, is strengthened by these changes in the company structure, a press release states. At the same time, the company purchased the property and building structure. This means that a total of 6,000 square meters of production space (including space reserves) is now available at the Hungarian production site. After remodeling and adaptation, the additional space will be used for the planned expansion of the capacities in manual production and for manufacture of medical products. With the increase in capacity, the company also plans to significantly increase the number of employees in 2017.

ams Acquires a VCSEL Technology Company

ams has signed an agreement to acquire 100 percent of the shares in **Princeton Optronics, Inc.**, a provider of vertical cavity surface-emitting lasers (VCSELs), in an all-cash transaction.

Princeton Optronics operates an outsourced high-volume supply chain with partners in Taiwan, the US, and the United Kingdom. Headquartered in Princeton, NJ (USA) with a total of 37 employees, Princeton Optronics has an annual revenue run rate of around USD 10 million and is profitable.

Leveraging this portfolio, ams can now design and manufacture the most complete and differentiated optical solutions for future growth areas like mobile 3D sensing and imaging or automotive autonomous driving. Princeton Optronics is a strategic partner to ams/Heptagon for optical sensing products.

Publisher: Randall Sherman

Editor: Anna Reynolds

Research Analyst: Vivek Sharma

Manufacturing Market Insider is a monthly newsletter published by New Venture Research Corp., 337 Clay St., Suite 101, Nevada City, CA 95959. Phone (530) 265-2004, Fax (530) 265-1998. ISSN 1072-8651

E-mail: rsherman@mfgmkt.com

Website: www.newventureresearch.com