

# Manufacturing Market <sup>TM</sup>

# INSIDER

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## Top 50 Reaches \$265 Billion

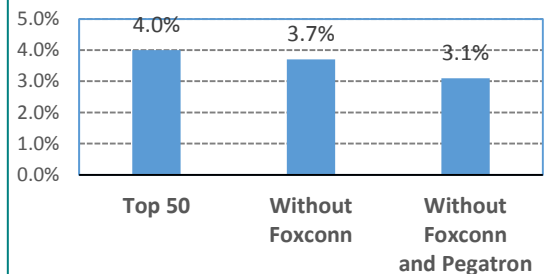
MMI's annual list of the 50 largest EMS providers worldwide has reached another milestone. In 2014, combined sales of the MMI Top 50<sup>TM</sup> EMS providers reached nearly \$265 billion, with a revenue total of \$264.8 billion. While not all of this revenue is pure EMS—there is some ODM and other non-EMS business mixed in among the largest companies—the lion's share of it is EMS, offering a clear indication of how much OEMs now depend on the EMS industry.

With the results of MMI's Top 50 survey now in, it can be said that 2014 was a good growth year for the Top 50 as a whole. The group's 2014 sales increased 4.0% from the previous year. This result should not be surprising, given Apple's launch of the iPhone 6 and the iWatch series, which increasingly contributed to revenue for a few EMS providers.

In recent years, Top 50 growth has received a boost from EMS giant Hon Hai Precision Industry because of its size and history of above-average growth. Last year, Hon Hai generated consolidated sales of \$139 billion, which represented a growth rate of just 4.4%. When Hon Hai's contribution to the Top 50 is excluded, the growth rate for the rest of the group decreases to 3.7%. So in 2014 Hon Hai exerted a 0.3 percentage point increase on Top 50 growth.

Hon Hai is known for assembling iPhones and iPads for Apple, the company's largest customer. But in recent years Apple has brought on Pegatron as a second source of assembly, and as a result Apple has become Pegatron's biggest customer as well. Pegatron's EMS business has grown steadily, recording a 5.4% growth rate in 2014. Pegatron saw annual net profits rise 38.7% to US\$831.2 million in 2014, according to quarterly results, boosted by a growing share of Apple's supply chain, including the hugely popular iPhone 6. The iPhone 6 was released only partway through Pegatron's fiscal year, in September. Pegatron's communications segment accounted for 59% of the firm's revenue last quarter, up 29 percentage points from a year ago. On the other hand, the revenue contribution from the company's computing segment, which includes motherboard, desktop, and notebook computer products, plunged 18 percentage points to 16% in the last quarter from a year ago.

Chart 1: 2014 Growth of the Top 50 EMS Providers



What effect did these two Apple-influenced providers have on Top 50 growth? Their combined effect was slightly positive because when the two companies are excluded from the group, its growth falls by 0.9 percentage points, to 3.1% (Chart 1). The four leading EMS companies (Foxconn, Pegatron, Flextronics, and Jabil) accounted for 80 percent of all revenue in 2014.

### A Higher Cutoff

On pages 2–4, the MMI Top 50 providers for 2014 are ranked in order of calendar 2014 sales. As one can see from last place on the list (page 4), it

*continued on p. 4*

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## The MMI Top 50 EMS Providers in 2014

Company	Headquarters	Sales calendar 2014 (millions USD)	Rank by 2014 (millions USD)	Sales calendar 2013 (millions USD)	2013 rank	Growth '13-'14 in US\$ (%)	No. of people	No. of plants	Total facility s.f.	No. SMT lines	No. of customers and notable customers
Hon Hai Precision Industry (Foxconn)	New Taipei, Taiwan	139,030	1	133,226	1	4.4%	~1,000,000	70 (est.)	100 M (est.)	2,000 (est.)	Acer, Amazon, Apple, Blackberry, Cisco, Dell, HP, IBM, Intel, Nintendo, Sony, Visio, Xiaomi
Pegatron	Taipei, Tawian	30,506	2	28,935	2	5.4%	250,000 (est.)	10	25 M (est.)	350 (est.)	Acer, Apple, ASUS, Epson, Sony, Toshiba
Flextronics	San Jose, CA	26,921	3	24,680	3	9.1%	200,000	70	25 M	400 (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	15,969	4	18,311	4	-12.8%	142,000	72	30 M (est.)	300 (est.)	Agilent, Apple, Cisco, EchoStar, Ericsson, GE, HP, IBM, Medtronic, Motorola, NetApp, Nokia Siemens Networks, Novartis, Pace, Sunpower, Valeo
New Kinpo Group	New Taipei, Taiwan	7,230	5	6,625	5	9.1%	431,999	31	14.45 M	295	ASUS, ASRock, Buffalo, Casio, Epson, Gigabyte, HP, Hitachi, GE, Lenovo, Nikon, Pace, Panasonic, Pioneer, Samsung, Seagate, Sony, TI, Toshiba, Western Digital
Sanmina	San Jose, CA	6,438	6	5,870	6	9.7%	43,101	32	12.2 M	130 (est.)	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	5,630	7	5,796	7	-2.9%	33,000	75	12 M	150 (est.)	Agilent, Alcatel-Lucent, Applied Materials, Baxter, Carrier, Cisco, EMC, HP, Hitachi, Honeywell, IBM, Juniper, NEC, Oracle
Benchmark Electronics	Angleton, TX	2,797	8	2,506	8	11.6%	11,000	23	3.45 M	158	Applied Materials, ARRIS Solutions, Emerson, IBM
Shenzhen Kaifa	Shenzhen, China	2,654	9	2,430	9	9.2%	21,000	7	5.4 M	>100	ENEL, Epson, Hitachi, Huawei, Kingston, ResMed, Samsung, Seagate, Western Digital, ZTE
USI	Shanghai, China	2,579	10	2,303	10	12.0%	16,000	6	2.7 M	120	100+
Plexus	Neenah, WI	2,509	11	2,228	11	12.6%	12,000	12	3.4 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
Venture	Singapore	1,950	12	1,865	12	4.6%	12,000	10	3.7 M (est.)	180	ABB, Agilent, HP, Honeywell, IBM, Illumina, Keysight, Micros, NCR, Oclaro, Qlogic, Talaris/Glory, Toshiba TEC, Verifone, Waters
Zollner	Zandt, Germany	1,423	13	1,180	15	20.6%	8,790	17	3.1 M	48	>500
SIIX Corp.	Osaka, Japan	1,139	14	1,240	14	-8.1%	8,862	9	1.4 M	n/a	200+
UMC	Saitama, Japan	1,034	15	1,293	13	-20.0%	9,825	8	1.4 M	139	
Sumitronics	Tokyo, Japan	914	16	841	16	8.7%	3,900	26			
OSI Electronics	Camarillo, CA	907	17	802	17	13.1%	5,607	14	0.9 M	n/a	200+

Note: Unless otherwise indicated, data represents 2014 year-end.

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Integrated Micro-Electronics, Inc.	Laguna, Philippines	800	18	702	21	13.9%	17,301	13	2.5 M	127	
Kimball Electronics Group	Jasper, IN	796	19	732	20	8.7%	4,124	6	920 K	37	> 65
Asteel/flash	Neuilly, France	708	20	784	18	-9.7%	5,200	18	19.4 M	44	150+
Fabrinet	Grand Cayman, Cayman Islands	678	21	642	23	5.6%	6,340	4	1.2 M	17	Avanex, Bookham, Cisco, Coherent, Emcore, Finisar, Hitachi Cable, Intel, JDSU, Oclaro, Valeo
Global Brands Mfg.	New Taipei City, Taiwan	646	22	733	19	-11.9%	9,004	3	1.4 M	144	Hitachi, InfoAciton, Toshiba, LG, Carrier
PKC Group	Reaahе, Finland	624	23	665	22	-6.2%					
Enics AG	Zurich, Switzerland	600	24	554	24	8.3%	3,200	8	756 K		ABB, Alfa Laval, Bombardier, Doomino Printing, Eaton, Ensto, Gambro, Honeywell, Schneider Electric, Tomra, Vaisala
V.S. Industry Berhad	Senai, Malaysia	574	25	430	32	33.6%	9,465	11	3.6 M	45	Dyson, Georgia Pacific, Keurig Green Mountain, Seb/Calor Group
TT Electronics	Rogerstone, Wales, UK	545	26	554		-1.5%	2,913	6	1.1 M	30	
Wong's International Holdings Ltd.	Hong Kong	530	27	474	31	11.8%	5,000	2	1 M	60	20+
éolane	Le Fresne Sur Loire, France	520	28	490	28	6.1%	3,400	15	1.1 M	15	AIRBUS, Alstrom, Areva, Daussalt, Orange, Renault, Rolls Royce, Safran, Schlumberger, SFR, Siemens Automotive, Thales, Valeo, Zodiac
Vtech Communications	Hong Kong	515	29	488	29	5.5%	4,200	10	650 K	21	
VIDEOTON	Székésfehérvár, Hungary	512	30	501	27	2.2%	7,800	9	4.6 M	29	ABB, Alstom, Bosch, BWI, Continental, Delphi, Denso, Eaton, ebmpapst, Emerson, FDK, GE, Hager, Itron, JCI, NCR, OneAccess, Osram, Panasonic, Philips, P&G, Socomec, TE, Valeo
WKK Technology	Hong Kong	510	31	522	25	-2.3%	6,533	1	1.5 M	40	Alcatel-Lucent, Canon, Fujitsu, NEC, Oki, Philips, Yamaha
Creation Technologies	Burnaby, BC Canada	465	32	506	26	-8.1%	2,500	10	701 K	36	> 230
Hana Microelectronics	Bangkok, Thailand	443	33	345	37	28.4%	10,700	3	1.3M	105	Avago, HID, Lumiled, Safenet, Sensata, Synaptics
Neways Electronics Intl. NV	Son, The Netherlands	410	34	355	37	15.6%	2,288	14	478,000	24	~760
OnCore Manufacturing, LLC	Fremont, CA	406	35	375	35	8.3%	1,840	9	700 K	38	Thermo Fisher Scientific
Orient Semiconductor Electronics	Kaohusiung, Taiwan	388	36	286	44	35.7%	2,368	7	688 K	83	97
ALL CIRCUITS	Meung Sur Loire, France	370	37	390	34	-5.1%	1,500	3	538 K	20	40+
Sypris	Tampa, FL	355	38	311	41	14.1%	355	1	318 K	3	ArvinMeritor, BAE, Boeing, DoD, Honeywell, Lockheed Martin, National Security Agency, Northrop Grumman, Raytheon

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Computime	Hong Kong	352	39	320	40	10.0%	4,000	4	1.2 M	25	
Key Tronic	Spokane Valley, WA	345	40	325	39	6.3%	3,343	15	1.7 M	34	Citrix, Clorox, HP, International Gaming, Lexmark, QUALCOMM, Transact, TPG, Zebra
Sparton	Schaumburg, IL	336	41	224	50	50.0%	1,483	10	731 K	8	Andrews Technology, BAE Systems, Bally, BioMarket Strategies, Cytomedix, Fenwal, GE, Goodrich, Honeywell, Neuronetics, Northrup Grumman, NuVasive, Parker, Raytheon, Siemens, Smith Detection, U.S. Navy
Di-Nikko Engineering Co. Ltd.	Nikko City, Japan	327	42	359	36	-8.9%	4,050	13	698 K	71	Canon
PartnerTech	Malmö, Sweden	326	43	341	38	-4.4%	1,379	11	906 K	11	200+
Nippon Manufacturing Service	Tokyo, Japan	324	44	306	42	6.1%	3,000	10	1.6 M	86	N/A
Valuetronics Holdings	Hong Kong	314	45	285	45	10.1%	3,000 (est.)	2	337 K	3	
SMT Technologies	Kedah, Malaysia	307	46	263	47	16.7%	1,750	2	350 K	25	Dyson, OJE, Oxylane, SETO, WSI, Western Digital
LACROIX Electronics	Saint Herblain cedex, France	293	47	239	49	22.7%	2,900	4	420 K	27	100+
Scanfil	Sievi, Finland	285	48	251	48	13.6%	1,782	6	1.3 M		ABB, AIRBUS, Alcatel-Lucent, Danfoss, Ericsson, KONE, Metso, Motorola, Nokia, Photome (KIS), Planmeca, Ray, Teleste, The Switch (Yaskawa), Thermo Fisher, Vacon, Vaisala
Kitron	Billingstad, Norway	278	49	278	46	0%*	1,196	6	431 K	15	DiaSorin, HMS Networks, Husqvarna, Kongsberg, Maquet Critical Care, Sensys Traffic
Selcom Elettronica	Bologna, Italy	275	50	295	43	-6.8%	1,753	7	646 K	26	83

Note: Unless otherwise indicated, data represents 2014 year-end.

took a minimum of \$275 million in sales to make the Top 50. This is significantly higher than the year before, when the cutoff was \$224 million. Sales growth of the Top 50 has risen each year, which is indicative of the overall momentum and viability of the EMS industry. (Chart 2, p. 5).

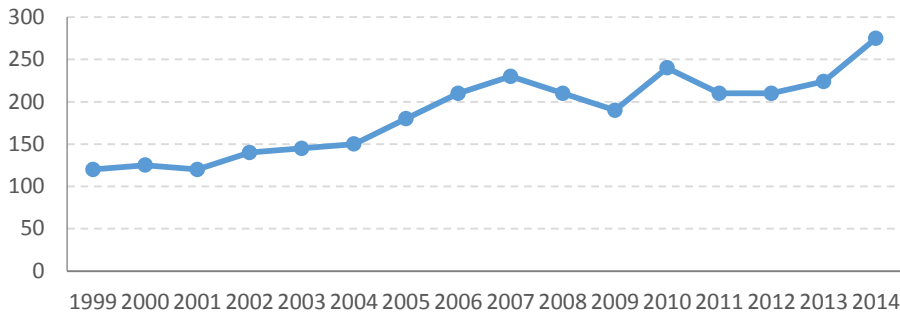
The higher minimum occurred despite several EMS companies dropping off the 2013 list in 2014. These companies included SVI, Neways, SMTC, Cicor, and MC Assembly.

Several companies decided against participating in the survey and included 3CEMS, Beyonics, Elite Industrial, Topscom, Note, and PCI Ltd. Two new companies joined the 2014 list: Valuetronics Holdings (Hong Kong) and Sypris (Tampa, Florida). We unsuccessfully attempted to expand our coverage this year by polling new EMS companies such as HANZA, Pan International, TQ-Systems, Prettl Electronics, Fittex International, DRS Laurel, DBG, and GPC Electronics.

### Counting Down the Top 12

The top 12 leading EMS maintained the same ranking as in the 2014 survey. These are solid companies and include Foxconn, Pegatron, Flextronics, Jabil Circuit, New Kinpo Group, Sanmina, Celestica, Benchmark, Shenzhen Kaifa, USI, Plexus, and Venture. Sales among this group increased approximately 4 percent over the previous year from \$234.8 billion in 2013 to \$244.2 billion in 2014.

**Chart 2: Top 50 Cutoff (Millions USD)**



The highest growth in revenue of any company was achieved by Sparton, which has been on an acquisition binge for the last several years (see *MMI's* Feb. 2015 issue) and experienced growth of 50% from the previous year. Orient Semiconductor Electronics also experienced hyper growth of 35.7%, while V.S. Industry Berhad achieved 33.6% growth. Close behind was Hana Micro-Electronics, which realized 28.4 percent revenue growth in 2014. LACROIX achieved an impressive 22.7 percent increase in revenue, while Zollner jumped ahead two positions with an increase of 20.6 percent in revenue in 2014. SMT Technologies also experienced excellent growth, expanding its revenue by 16.7 percent; it was followed closely by Neways, and then Sypris Electronics which achieved a 15.6% growth and 14.1 percent growth in revenue, respectively. Other strong growth companies included Scanfil, OSI Electronics, and Integrated Micro-Electronics, Inc.; all experienced 13+ percent growth in revenue from the previous year. Benchmark achieved an 11.6 percent increase in revenue

in 2014. Sanmina, Flextronics, and New Kinpo Group all achieved a very respectable 9+ percent growth in revenue.

All this points to the fact that it was the second-tier EMS companies that experienced higher revenue growth than did tier-one EMS companies. (Chart 3, below, summarizes this difference.) 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.

**Negative Results**

There were some companies that clearly experienced negative revenue growth in 2014. The most significant company of these was Jabil Circuit, which saw a decline of more than \$2 billion in revenue, or 12.8 percent, from the previous year. Jabil's annual report cites adjustments to changes in customer Blackberry devices as the main culprit in this downturn.

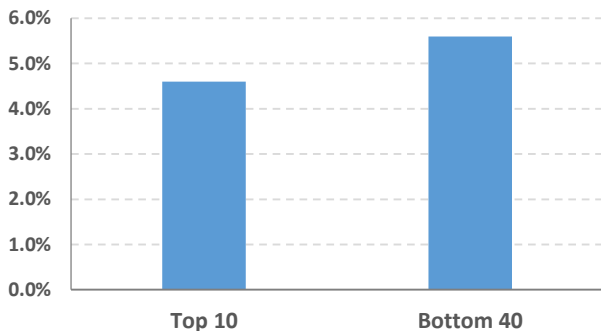
Celestica also experienced a decline of approximately \$0.1 billion in revenue, or 2.9 percent, in 2014. However, it was UMC that experienced the most dramatic decline of 20 percent in revenue from the previous year. Other EMS companies that reported slight declines in revenue include SIIX Corp., Asteel/Flash, Global Brands Mfg., PKC Group, TT Electronics, WKK Technology, Creation Technologies, ALL CIRCUITS, Di-Nikko Engineering, PartnerTech, and Selcom Elettronica.

In 2014, two-thirds of the Top 50 had sales of at least \$500 million or greater. With sales of \$500 million and above representing a majority, the largest number of providers resided in the \$500 million to \$999 million bracket (Chart 4, below).

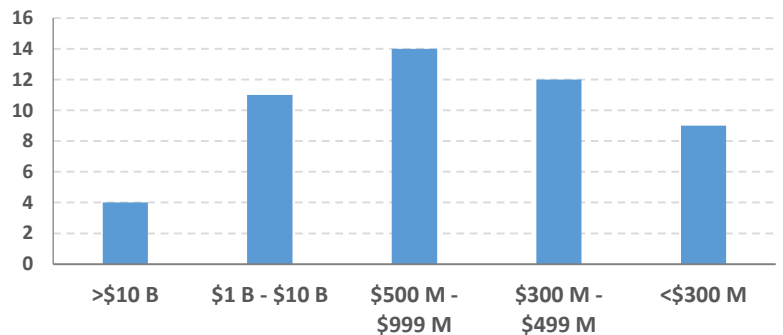
**Benchmarking Ratios**

Top 50 data yield three productivity ratios. One can start with revenue per employee. Employee counts for 50 companies totaled about 2.3 million people, of which an estimated staffing level of about 1.0 million was attributed to Hon Hai. The revenue per employee for these 50 providers works out to \$113,098, which is well below the 2013 ratio of \$134,700 (based on a somewhat different sample group of 46 companies). Top 50 data can also be used to calculate revenue per SMT line. Of the 50 providers, there are approximately 3,817 SMT lines, which averages revenue of approximately \$69,373 per line in 2014.

**Chart 3: 2014 Growth Rates**



**Chart 4: Distribution of Top 50 Providers by 2014 Sales**



Note that revenue per SMT line is highly variable, depending on the speed and productivity of a line, whether it's 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 separate their EMS and non-EMS sales. Hence, the Top 50's total revenue is not purely EMS.

**Editor's Note:** In this revised issue, *MMI* has decided to remove EMS supplier Ducommun from the Top 50 rankings because it is not at all clear when the company is going to report its year end revenue. It is fortuitous that Neways conveniently replaced Ducommun's position with nearly the exact same revenue that was not noticed earlier because of a mathematical error.

## Company News

*Partnerships...* Danish PCB provider **Elcon** has entered into a strategic partnership with Germany's **Quicktronics**. Both Quicktronics and Elcon have logistics setups in China, but the companies are working together on a large joint logistics center in southern China. The goal is to establish this joint logistics center based on Elcon's existing facility and employees in China... EMS provider **Incap Corporation** (Finland) and **Aidon Oy** (Finland), the developer of Automatic Metering Infrastructure (AMI), have strengthened their cooperation to support an optimal supply chain process. Incap will contribute to the cooperation by launching a new project focusing on a smart prototype and new product introduction (NPI) model. Incap provides Aidon with EMS services from its Kuressaare factory and now the companies are taking steps toward better implementation of the lean supply chain model.

### Ericsson's Production Closes goes to Flextronics in Poland

As reported by *Evertiq*, **Ericsson** (Sweden) announced that it intends to close its facility in Katrineholm, Sweden. And it looks like the production might end up at EMS manufacturer **Flextronics** (Singapore). According to Martin Johansson, production and logistics manager at Ericsson, the production will be moved to Poland. He says that the facility in Polish Tczew is geographically advantageous and the decision agrees with Ericsson's strategy.

*Manufacturing deal...* **Incap Ltd.** (India) has entered into cooperation with **AUMA** (India), a manufacturer of electric actuators for valve automation, for electronics manufacturing. Based on this agreement,

Incap will supply electronic assemblies to be used in AUMA's electric actuators for valve automation.

The assemblies will be manufactured at Incap's factory at Tumkur, India and delivered to AUMA's factory in Bangalore.

*New contracts....* **Kitron AS** (Norway) will develop a test program set (TPS) for evaluating and troubleshooting F-35 Lightning II Joint Strike Fighter aircraft avionics under a four-year development contract awarded by **Northrop Grumman Corporation** (Falls Church, VA).

Kitron was selected as an international source for TPS equipment, which consists of complex interface test assemblies that work with the LM-STAR test system developed by Lockheed Martin. The contract has a total value of NOK16 million (€1.86 million).

*New facilities...* **NATEL EMS** (Chatsworth, CA) has recently invested a significant amount in creating a new facility with lithium-ion assembly capability at its location in Chatsworth, CA. The highly advanced plant features equipment that enables the microelectronics company to expand its capabilities to include advanced module manufacturing in the automotive and space industries.

### Apple Products to Boost Quanta's Sales Growth

Apple hosted a press conference to launch its new Apple Watch and 12" MacBook in the US on 9 March. These products will help improve the revenue momentum for **Quanta** (Taipei, Taiwan), which is the sole supplier for both. Quanta's Apple Watch shipments are forecast to

reach 18 million units, with a sales contribution of 8% in 2015. Its profit contribution to the company will likely be below 5-6% in 2015 due to the challenge of improving the efficiency of assembly (multiple models and smaller volume for Apple Watch than MacBook orders).

We are positive that the new 12" MacBook will support Quanta's notebook sales momentum and ease concerns about potential demand reduction from the 12" iPad Pro. However, the project's postponement from 4Q14 and higher R&D and manufacturing costs should negatively influence its 4Q14 and 1H15 margins and earnings performance.

### Apple's Supply Chain Shift Creates New Opportunities

Historically, **Apple** has been using one assembler as the first/single source for its flagship products; however, that strategy changed in 2011, when Apple started to include **Pegatron** (Taipei, Taiwan), the parent company of **Casetek** (Taipei, Taiwan), as a second supplier. Adding a new supplier implies not only Apple's intention to reduce risks associated with supplier concentration, but also a shift in its product launch strategy.

Casetek is well positioned to grab share-gain opportunities from Apple by leveraging the help of its parent company Pegatron, which is now a solid

Vertical integration of key component by EMS/ODMs	
EMS/NB ODMs	In-house casing supply
Hon Hai	- Foxconn Tech (NB/tablet/handset metal casing)
Pegatron	- Casetek (NB, tablet metal casing)
	- Yi Ping (NB plastic casing: JV with Huan Hsin)
Jabil	- Green Point (handset/tablet plastic and metal casing)
Quanta	- Zhan Yun (NB/tablet plastic casing)
	- DragonTech Metallic (light metal inner parts)
	- Kenseisha (NB light metal casing)
Compal	- Compal Precision (NB metal casing: JV with Ju Teng)
Wistron	- WIS Precision (NB plastic casing: JV with Ju Teng)
	- Lian-Yi Precision (LCD TV plastic casing: JV with Ju Teng)
	- NB plastic casing JV with Catcher
Inventec	- Inventec Huan Hsin (NB plastic casing: JV with Huan Hsin)

second-tier source for Apple's iPhone and iPad mini assembly. Casetek obtaining iPhone casing orders would be positive for Pegatron, given that Pegatron would thus be able to further improve its assembly yield and efficiency through increasing in-house component supply and vertical integration.

In addition, Casetek would likely see stronger revenue growth and could diversify its product mix away from tablets, under the assumption that yields were satisfactory.

The key swing factors for such a business model to work for Casetek include the availability of effective capacity, timing of capital expenditure deployment, and potential order allocation, as well as satisfactory manufacturing yield and efficiency; all of these factors are largely unknown at present.

### ***Leoni Acquires Factory Site***

Cable systems provider **Leoni** (Germany) has acquired a site in the industrial area of Roth near Nuremberg, taking another step toward realizing its plans for the "factory of the future."

The cable specialist plans to leave its current site in the center of Roth and move to the outskirts. A milestone has now been reached, with the company's purchase of a 134,000-square-meter site in the "An der Lände" industrial area.

Now that the site has been purchased, the plans provide for construction to commence in mid-2016. Based on an estimated construction period of about 18 months, Leoni expects to start step-by-step relocation of its ongoing production from the existing plant in early 2018. Relocation to the new facility is likely to be completed in early 2019, as reported by *Evertiq*.

### ***Terry Gou Steers Foxconn toward an Industry 4.0 Future***

As per *Manufacturing Global*, Terry Gou, chairman of **Hon Hai Precision Industry** (Taiwan), has vowed to move toward integrating innovation and design manufacturing (IIDM) from the original equipment manufacturing (OEM) model, stating that the robot industry will eventually surpass the auto industry.

Since 2014, Hon Hai has decided to focus on the development of Industry 4.0,

following a trend started in Germany. Hon Hai's transformation has won the recognition of the outside world and attracted world-class enterprises, including **Nokia**, to seek cooperation.

Gou said Hon Hai has been in close cooperation with Nokia, saying Nokia's N1, which won the 2014 best **Android** tablet PC award last year, was the result of bilateral cooperation, in which Nokia is in charge of brand and core telecom technologies while Hon Hai takes care of the rest, including the Internet of Things (IoT), patents, and next-generation wireless technology. This proves that Hon Hai is moving toward the IIDM model.

Hon Hai's Industry 4.0 move will focus on integrating cloud computing, mobile devices, big data, smart living, smart work networks, and robots, Gou said. He sees a sound outlook in developing robots, saying the robot industry will definitely become bigger than the auto industry in the future.

Hon Hai is developing robots to use to help its workers and facilitate the production process, as products have become more precise and human power alone is insufficient to complete all the processes. As Hon Hai employs more than 1 million workers globally, reaching the company goal of a 70 percent automated workforce will take at least three more years, he said.

Facing a transformation period, Hon Hai must increase investments to upgrade its competitiveness, Gou added, pledging to invest an additional NT\$70–80 billion (US\$2.2–2.5 billion) in Kaohsiung's flat panel factory. Gou also plans to set up an 18-story research and development center in New Taipei City's Tucheng district.

Hon Hai will continue to invest in the telecom industry, pledging to join in the bidding for the fifth-generation (5G) mobile technology if Taiwan opens such bidding for the next-generation technology.

### ***PKC Wins New €30 Million Contracts***

**PKC Group** (Finland) has won new business contracts from two major

global vehicle manufacturers. The new contracts are estimated to launch by 2018 and to generate annual revenue of about €30 million.

The major part of the revenue relates to the engagement of PKC North America to manufacture high-current fuse modules and associated EDS routing and retention shields for a new light vehicle platform. The focus of the PKC North America components has been on special power distribution center (PDC) development for commercial and light commercial vehicles. However, extension of this product line to light vehicles provides PKC with economies of scale and strengthens its partnership with a key customer.

### ***exceet Opens Berlin Office***

**exceet Group AG** (Germany) has opened a new office in central Berlin. With the new office the company aims to position itself at the heart of the e-health market.

exceet has opened premises situated in the immediate vicinity of key contact partners in business, politics, and health-focused associations. These close relations with e-health decision makers offer exceet an opportunity to take current developments into account in its customer projects, particularly in matters related to the electronic health card (eGK).

### ***Ericsson Divests in Italy; Sells Facility to Jabil***

According to an article in *Evertiq*, **Ericsson** (Sweden) and **Jabil** (St. Petersburg, FL) have—together with the Ministry of Economic Development in Italy—held talks regarding a possible sale of Ericsson's plant in Marcianise, Caserta.

With the Swedish company's Cost and Efficiency program under way, which has already resulted in job cuts in Sweden and Germany, it really does not come as a surprise that the company might shake things up in Italy as well. The companies have been in negotiation since earlier this year, perhaps even longer.

A potential takeover could impact production levels and employment in the area. However, during the meetings, Jabil

explained that it is developing a business plan that includes an expansion of production volumes and an expansion of the clientele, a plan that Ericsson has expressed willingness to support. Ericsson has, however, confirmed its desire to keep its R&D centers in Italy, according to the press service at the Italian Ministry of Economic Development.

The workers at the Caserta plant will also have their say in the matter, and so far the news has been met with mixed feelings. The now-reached agreement would guarantee contracts for Ericsson and work for at least 335 employees (out of the facility's roughly 400). After the initial consultation with employees had a negative outcome, negotiations resumed and the workers at the Ericsson facility returned to approve the agreement for the sale.

### ***Xiaomi Looking to Expand in India, with Foxconn and Inventec***

**Xiaomi** (China) is planning to set up an Indian production facility together with **Foxconn** and **Inventec** (Taiwan).

Chinese consumer electronics company Xiaomi is in negotiations with EMS giant Foxconn and

Inventec regarding the possibility of jointly setting up a manufacturing facility for smart phones in India, according to a report in *DigiTimes*.

The companies have held talks regarding the location of the planned site but have not yet agreed on a schedule to implement the plan, the report continues.

### ***Indian Government to Invest \$10 Billion for Semiconductor Fab***

Addressing the first Indian electronics expo, organized by the Electronics and Computer Software Export Promotion Council (ESC) in New Delhi, R. S. Sharma, secretary, Department of Electronics and Information Technology (DeitY), revealed that the government would be investing \$10 billion in semiconductor fab facilities to be built in **Gujarat** and **Uttar Pradesh**, where a consortium of manufacturing firms has come to set up production bases.

Infrastructure for chip manufacturing and design will be considerably strengthened in India to cater to the growing domestic demand and to cut down on imports in the next few years.

The government has begun several initiatives with respect to semiconductor manufacturing. India will also be investing \$400 million in developing an Indian version of

microprocessors. A dedicated fund known as the **Electronics Development Fund** has been created to leverage the use of venture capital funds to promote start-ups in the country.

China undoubtedly is a major producer of electronic goods in the world. Of late, many of the electronics giants have embarked on a "China plus" strategy, mostly focusing on India.

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