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Annual Drop in M&A Deals

In 2015 the number of EMS industry mergers and acquisitions fell from the year before. M&A transactions that closed during 2015 totaled 26, down 7.1% from a revised count of 28 in 2014. Transaction totals have been in decline since a postrecession high of 45 in 2010 (Chart 1). The lackluster macro environment and associated uncertainties that followed the recession have not encouraged deal making.

MMI's annual Scorecard of EMS industry M&A on pages 2 and 3 lists the transactions closed in 2015 and classifies them according to four categories developed by MMI.

EMS providers made acquisitions to extend their service or supply chain capabilities. In 2015, this was the most popular type of deal, in contrast to the year before. Last year, there were 20 instances of EMS providers buying competitors' operations to extend service or supply chain capabilities (marked S on the Scorecard), an increase from 10 the year before (Chart 2, p. 4). Back in the prerecession days, capability deals were more commonplace. From 2002 to 2008, capability deals averaged 17.9 per year. As the industry matures, providers are seeking to enhance their service offerings and are feeling the need to acquire new capabilities.

Chart 1: EMS Industry Mergers and Acquisitions



The second most common deal in 2015 was acquiring competitor operations (marked C on the Scorecard). With these transactions, EMS providers acquire competitor operations to expand their footprint or consolidate their operations to gain competitive advantage. Last year, there were five instances of EMS providers buying competitor operations, down from 17 the year before (Chart 2, p. 4).

All of these 2015 deals resulted in consolidation, or the loss of an independent provider. Industry consolidation persists, though the number of consolidation deals dropped last year (Chart 3, p. 4). The consolidation count of five deals in 2015 was 66% below a 13-year average of 15.

In the early part of the 2000s, OEM divestitures contributed a significant

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MMI Scorecard: EMS Industry Mergers and Acquisitions in 2015

Deal Maker	Home Base	Type	Target	Location	Some Details
Sparton Corp.	Schaumburg, IL	S	KEP Marine	Birdsboro, PA	This acquisition of KEP Marine meets the criteria of Sparton's growth strategy by growing its ruggedized electronics platform. KEP Marine will be added into Aydin Displays, allowing Sparton to further enhance its position in the marine market.
Sparton Corp.		S	Hunter Technology Corp.	Milpitas, CA	Sparton acquired Hunter Technology Corp. in a \$55 million all-cash transaction. This fulfilled Sparton's strategy of having a significant facility in Silicon Valley.
Integrated Micro-Electronics Inc.	Laguna, Philippines	S	PSi Technologies	Laguna, Philippines	Integrated Micro-Electronics, Inc. (IMI) bought out minority investors in the semiconductor manufacturing unit PSI Technologies, Inc., thus taking control of 100% of the company.
Kulicke & Soffa	Singapore	S	Assembléon B.V.	Veldhoven, Netherlands	This acquisition expanded Kulicke & Soffa's advanced packaging portfolio and market opportunities; the deal was valued at approx. \$98 million.
Centre Lane Partners	New York, NY	C*	STACI Corp. and EPM Global Services	Lagrange, OH & Markham, Ontario	Centre Lane is merging STACI with EPM Global Services. EPM Global Services and STACI Corporation announced the new name of the combined companies: Vexos.
PKC Group Plc	Helsinki, Finland	S	Kabel-Technik-Polska Sp. z o.o.	Czaplinek, Poland	This acquisition fits PKC's strategy and adds a rolling stock business segment to its portfolio. The net debt-free purchase price is €50 million.
NATEL Engineering Company	Chatsworth, CA	C*	OnCore Manufacturing, LLC	Springfield, MA	NATEL Engineering Company, Inc. and OnCore Manufacturing, LLC (OnCore), both suppliers of EMS, have merged and the new company is named NEO Tech. In 2014, OnCore had revenue of approximately \$406 million.
Flex (also known as Flextronics)	Singapore	S	Mirror Controls International	Woerden, Netherlands	Flex acquired Mirror Controls International (MCI) from private equity firm Egeria in a deal valued at \$494 million. MCI is a strategic acquisition that will directly enhance Flex's automotive offering.
Flex		O	Alcatel-Lucent plant	Trieste (Italy)	Flex will take responsibility for new product introduction, manufacturing, integration, and repair services of Alcatel-Lucent optical equipment at the site. Alcatel-Lucent and Flex have also signed a five-year, renewable contract for the supply of optical products.
Flex		S	NEXTracker	Fremont, CA	The deal has been valued at \$330 million. The acquisition will augment the Flex Energy business and contribute to its more than \$1 billion in sales.
Flex		S	Wink	New York, NY	Flex entered into an agreement to acquire Wink, a smart home platform that enables smart products to work together seamlessly and connect and communicate globally, as it is expanding its stake in the IoT, or what Flex calls the "Intelligence of Things."
Flex		S	Farm Design	New Hampshire	With the acquisition of Farm Design, Flex further expands its medical device segment, industrial design, usability engineering, and development expertise.
Scanfil Oyj	Finland	C*	PartnerTech AB	Vellinge, Sweden	The combined company will be the leading EMS company in the Nordic market, with a comprehensive service portfolio and factory network and a strong global presence.
NCAB Group	Bromma, Sweden	S	Ulf Andersson Elektronik	Gävle, Sweden	NCAB Group has acquired 100% of Ulf Andersson Elektronik's PCB Division.
Valence Surface Technologies	Gardena, CA	S	Flex facilities in California	San Carlos, CA	Valence has acquired the assets and operations of Flex San Carlos in San Carlos, California. Under Valence ownership, the business now operates under the name Valence San Carlos.

Deal Maker	Home Base	Type	Target	Location	Some Details
Nortech Systems	Wayzata, MN	S	Devicix, LLC	Eden Prairie, MN	Nortech Systems, Inc. is hoping to capitalize on high demand for healthcare gadgets by acquiring Devicix, a company that does outsourced design work for large and small medical-device makers. The deal was valued at \$5.3 million.
Manz AG	Reutlingen, Germany	S	KLEO Halbleitertechnik GmbH	Tettngang, Germany	Manz has acquired a specialist in laser direct imaging of printed circuit boards. Expansion of the technology portfolio opens new perspectives for Manz in the rapidly growing market for high-resolution printed circuit boards.
IEE S.A.	Luxembourg	S	ALL Circuits S.A.S.	France	With the ALL Circuits acquisition, IEE will be positioned to develop its expertise in the automotive safety electronic production process and will have direct access to electronic manufacturing excellence. This acquisition will also enable it to enlarge its product portfolio, particularly in the nonautomotive market. The company, however, will continue its EMS business.
HANZA Holding AB	Sweden	C*	Metalliset Oy	Finland	Through this acquisition HANZA creates a group with turnover of about SEK1.5 billion and profitability considerably higher than the current level, both in absolute and relative figures. Through the acquisition, the number of manufacturing technologies provided in HANZA's all-you-need-is-one™ and MIG™ concepts is increased and HANZA's geographical presence is strengthened.
Keysight Technologies	Santa Rosa, CA	S	Anite Plc	United Kingdom	Keysight paid approximately \$600 million in cash for Anite, in a deal that supports Keysight's strategy to grow in wireless and expand its software offerings.
Greatbatch, Inc.	Frisco, TX	C*	Lake Region Medical	Wilmington, MA	The deal was valued at about \$1.73 billion. The combined company, expected to employ more than 9,000, will service the cardiac, vascular, orthopedics, and advanced surgical markets, with operations in the United States, Latin America, Europe, and the Asia-Pacific region.
Libra Industries	Mentor, OH	S	ACD	Richardson, TX	This acquisition adds to Libra's capabilities, allowing it to offer quick-turn prototypes and more testing technologies.
Benchmark Electronics, Inc.	Angleton, TX	S	Secure Communication Systems, Inc.	Santa Ana, CA	Benchmark acquired Secure for approximately \$230 million in cash. It will open up new opportunities with customers in Benchmark's industrial markets, which include the aerospace and defense sectors.
Foxconn (also known as Hon Hai Precision Industry)	New Taipei, Taiwan	S	Wcube Co., Ltd.	China	Foxconn acquired optical product maker Wcube from Ace Noble Investments. Foxconn reportedly paid \$10.62 million when acquiring a 21.18% stake in the company.
Jabil	St. Petersburg, FL	S	Shemer	Israel	Jabil said this acquisition will strengthen its position in the Israeli market and in the business for contract manufacturing in Europe.
Noratron Group	Horten, Norway	S	Hatteland Display	Nedre Vats, Norway	Including Hatteland Display, the Noratron Group will have an estimated annual turnover of approximately NOK1.8 billion (€193.14 million) and will be a significant player in several segments of the electronics industry, with positions in markets for complete products and components.

C = CM acquiring or merging with CM operation. O = OEM divesting OEM operation. S = service or supply chain extension. N = new player. *Consolidation deal.

number of deals. As the industry progressed, these deals, often in high-cost areas, became less and less attractive. For 2015, *MMI* discovered one OEM divestiture (indicated as O), surprisingly, up from zero the year before.

One might think that a mature EMS industry, notorious for low margins,

would not attract any new players. That has been the case this year. No company entered the EMS industry via acquisition last year (marked N), versus one the year before. *MMI* also keeps track of alliances and equity partnerships, which are an alternative to M&A deals. In 2015, there were 12 such partnerships,

down from 13 formed the year before (see table, p. 4).

Note that the M&A Scorecard does not include private equity deals or divested assets sold to industry outsiders.

EMS Industry Alliances and Equity Partnerships in 2015

Company	Home Base	Partner	Location	Some Details
Europlacer	Dorset, UK	EMS Partners	Lakeville, MN	Europlacer has appointed EMS Partners as its manufacturer's representative, servicing Minnesota, Wisconsin, North Dakota, South Dakota, Iowa, Nebraska, Missouri, and Kansas.
STMicroelectronics	Switzerland	Flex (also known as Flextronics)	Singapore	To jointly develop a plug-in charging platform based on an ST multimode power-management controller mobile device
Kimball Electronics	Jasper, IN	Genetec Technology Berhad	Malaysia	To support the production of multiple newly awarded programs for a Kimball automotive customer
PartnerTech	Sweden	Toyota Material Handling	Europe	The companies have signed a framework agreement covering production of electronics and electromechanical modules for forklifts. The agreement includes product development, prototyping, production, and aftermarket sales. The deal is valued at SEK30 million (or €3.14 million).
Elcon	Denmark	Quicktronics	Germany	Both Quicktronics and Elcon have logistics setups in China, but the companies are working to create a large joint logistics center. The goal is to establish this joint logistics center in southern China.
Incap Corporation	Finland	Aidon Oy	Finland	Incap will contribute to the cooperation by launching a new project focusing on a smart Prototype & New Product Introduction (NPI) model. Incap provides Aidon with EMS services from its Kuussaare factory and now the companies are taking steps toward better implementation of the Lean Supply Chain model.
Flex	Singapore	SunEdison	Belmont, CA	Flex has been selected to partner with SunEdison to manufacture its solar modules in Mexico.
PKC Group	Finland	Jiangsu Huakai Wire Harness Co., China Ltd.		The joint venture aims to increase PKC's market share in the Chinese medium and heavy trucks segment by 8 percentage points, and also expand its clientele with new customers.
PartnerTech	Sweden	Kongsberg Devotek	Norway	The companies have entered an agreement to cooperate around a joint offering to product owner customers, with complete service from the concept stage to the finished product.
Kitron AB	Sweden	Saab AB	Sweden	Kitron has signed a strategically important long-term frame agreement with Saab AB for military avionics and aeronautic electronic equipment. The frame agreement has a potential order value of more than NOK400 million over 20 years.
Incap Corporation	Finland	Comsel System, Ltd.	Sweden	The companies have signed an agreement to manufacture Internet of Things (IoT) equipment. Devices to be manufactured by Incap include communication modules used for remote data acquisition and control for the energy sector.
Briton EMS	United Kingdom	42 Technology	United Kingdom	The companies have joined forces to help the Aircraft Research Association (ARA) develop and launch a new research tool for use within its high-speed wind tunnel in Bedford.

Chart 2: Deal Breakdown 2015 Versus 2014

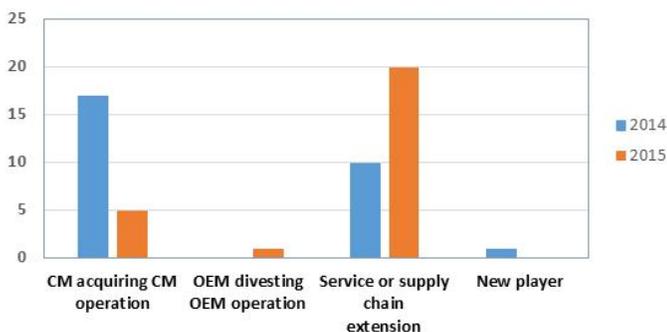
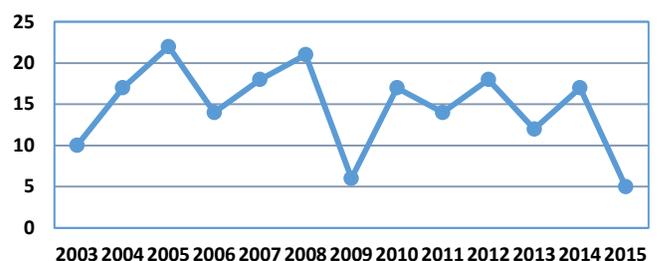


Chart 3: Consolidation Deals



Flat Year for US-Traded Group

Growth in combined revenue for the six providers was negative 0.1%. Fortunately, fourth-quarter results on the whole came in better than expected, and 2015 will go down as a flat year for this US-traded group.

Revenue for the six providers totaled \$60.18 billion in 2015, compared with \$60.26 billion in 2014. Last year, sales decreases at three providers offset revenue increases at three providers, with the second company in the table (**Jabil**) holding the highest growth position with 16.2% sales growth. Annual growth rates ranged from 16.2% for Jabil to -9.2% for **Benchmark** (Table 1, below).

In Q4, the six providers together generated sales of \$16.26 billion, up 1.4% from the same period a year ago. For the fourth quarter in a row, the group's revenue grew year over year. This growth was driven by Jabil and, to a lesser extent, **Celestica**, while only Jabil attained double-digit growth (Table 1). These were the only two companies (Jabil and Celestica) with appreciable Q4 growth on a year-over-year basis.

On a sequential basis, the group's Q4 revenue increased 6%, again largely due to Jabil, with support from Celestica and **Flex** (also known as Flextronics). Jabil posted double-digit

gains, though these gains were not enough to outweigh declines at the other three providers (Table 1).

For the five GAAP companies, GAAP gross margin in Q4 was a combined 8.1%, up 30 basis points sequentially and up 30 basis points year over year. All except Plexus were able to raise their gross margins from Q3, and all but Plexus improved their margins from the year-earlier period.

Together, the five companies in Q4 produced a GAAP operating margin of 3.6%, up 10 basis points sequentially, and no growth in basis points year over year. The GAAP operating margin increased quarter to quarter throughout 2015. Benchmark's operating margin of 4.5% was well above results turned in by the other GAAP companies. Jabil, **Sanmina**, and Benchmark improved their GAAP operating margins from the prior quarter and also from a year earlier. As for the lone IFRS reporting company, Celestica saw its IFRS operating margin decrease from the prior quarter and also from the year-ago period (Table 1).

On a sequential basis, GAAP net income for the five companies in Q4 grew faster than sales did. Their aggregate net income of \$361 million increased 19.2%, while sales went up 5.9%. Flex, Jabil, and Benchmark Electronics were responsible for the sequential increase in net income, as they were the only GAAP companies

whose bottom lines increased from Q3. On a year-over-year basis, GAAP net income growth was much higher, with a 22% compared to a 0.9% increase in revenue. Three companies succeeded in boosting their net income from a year earlier, with Jabil posting the biggest net income increase. Q4 net margin for the GAAP reporting companies was up 2.4%, compared to 2.1% sequentially and 2% year over year.

For 2015, however, combined GAAP revenue for the five companies fell despite net income growth. Net income for the year increased 15.3% to \$1.15 billion, whereas sales dropped 0.2%. Sanmina and Plexus were the only two companies to realize annual decreases in GAAP net income, whereas Jabil posted the highest growth.

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Table 1: Q4 and 2015 Results for the Six Largest US-Traded EMS Providers (M US\$ or %)

Company	Q4 '15 sales	Q3 '15 sales	Qtr.-qtr. chg.	Q4 '14 sales	Yr.-yr. chg.	Q4 '15 gross marg.	Q3 '15 gross marg.	Q4 '14 gross marg.	Q4 '15 oper. marg.	Q3 '15 oper. marg.	Q4 '14 oper. marg.	Q4 '15 net inc.	Q3 '15 net inc.	Q4 '14 net inc.	2015 Sales	2014 Sales	Yr.-yr. chg.	2015 net inc.	2014 net inc.
Flex	6,763.2	6,316.8	7.1	7,025.1	-3.7	6.4%	6.0%	5.7%	2.2%	2.6%	2.6%	148.9	123.0	152.9	24,597.8	26,920.3	-8.6	517.8	508.7
Jabil	5,208.0	4,680.8	11.3	4,550.4	14.5	9.1%	7.9%	8.3%	4.1%	3.2%	3.5%	131.4	87.7	73.8	18,556.8	15,969.9	16.2	342.5	201.7
Sanmina	1,534.7	1,636.6	-6.2	1,671.2	-8.2	8.0%	7.4%	7.8%	3.6%	3.0%	3.5%	26.8	47.7	22.7	6,238.1	6,438.8	-3.1	113.7	117.6
Benchmark	625.7	630.2	-0.7	709.5	-11.8	9.1%	8.6%	7.9%	4.5%	4.3%	4.0%	39.4	20.6	23.3	2,540.9	2,797.1	-9.2	95.4	81.5
Plexus	616.7	668.7	-7.8	664.7	-7.2	8.1%	8.9%	9.2%	3.7%	4.3%	4.6%	14.4	23.9	23.1	2,606.3	2,509.0	3.9	85.7	92.5
Subtotal/avg.	14,748.3	13,933.1	5.9	14,620.9	0.9	8.1%	7.8%	7.8%	3.6%	3.5%	3.6%	361.0	302.8	295.7	54,539.9	54,635.1	-0.2	1,155.1	1,002.0
Celestica	1,514.9	1,408.5	7.6	1,424.3	6.4	6.5%	7.0%	7.2%	2.7%	3.1%	3.1%	12.1	10.9	(4.4)	5,639.2	5,631.3	0.1	66.9	108.2
Total/avg.	16,263.2	15,341.6	6.0	16,045.2	1.4										60,179.1	60,266.4	-0.1		

All results are based on GAAP except those of Celestica, which has adopted IFRS reporting. With the exception of sales, GAAP and IFRS results are not necessarily comparable. Flextronics' name has been changed to "Flex" officially. For Sanmina we have considered non-GAAP net income for its fourth-quarter (both 2015 and 2014) period.

Sparton Corporation's President and CEO Resign

Sparton (Schaumburg, IL) announced two resignations effective immediately, of Cary Wood as President and CEO, and Michael Osborne as SVP of Corporate Development.

Joseph J. Hartnett, current Chairman of the Board of Directors, has been appointed interim President and Chief Executive Officer and will serve in that position until a new President and Chief Executive Officer has been appointed. Mr. Hartnett has stepped down as Chairman and from the Board's Audit Committee but will remain on the Board.

The company did not announce the reason for Wood's and Osborne's departures.

Sparton announced the closure of the Lawrenceville, GA site and the consolidation of the Irvine, CA design center last quarter.

Facility relocations... EMS provider **Kitron** (Norway) has decided to relocate the Swedish operations to a facility that will be built for Kitron in Torsvik, not far from the current facility in Jönköping. Kitron will lease the new facility, and the move is expected to take place in late 2016. The company's relocation of its Norwegian facility in Arendal, from Hisøy to Kilsund, is going according to plan and budget. The first production in Kilsund started up in the beginning of January... **SMK Electronics** (Chula Vista, CA), a division of SMK Corporation, a manufacturer of OEM remote controls and consumer electronics components, will relocate and expand its SMK and SMK-Link San Jose business offices. To better serve its customers in northern California, the company will relocate to a new 3,600-square-foot facility... Swedish EMS provider **HANZA Holding** acquired the mechanics manufacturer **Metalliset** last year. Through the acquisition, a production unit in Aruküla, Estonia was obtained. HANZA has now decided to transfer and merge this unit with the Group's other operations in Tartu, Estonia, creating a manufacturing

cluster with approximately 450 employees. The decision affects 80 employees in Aruküla and is expected to result in limited one-time costs, which essentially will be charged during the first half of 2016. The merger is expected to have a positive effect on the HANZA Group's earnings as of the third quarter of 2016.

Apple Adds Wistron to New iPhone Supply Chain

Apple (Cupertino, CA) is adding **Wistron** (Taiwan) as a supplier of the so-called "iPhone 5se," in addition to **Foxconn Electronics**, as reported by *DigiTimes*. The latter will still lead production on the next-generation 4-inch iPhone, but Apple is ensuring that manufacturing goes as smoothly as possible by introducing a secondary supplier in Wistron.

According to the report, the split in suppliers will also continue for the iPhone 7 and iPhone 7 Plus. Foxconn and Wistron will both supply the larger 5.5-inch iPhone 7 Plus, while **Pegatron** will share manufacturing duties with Foxconn for the 4.7-inch device.

Apple sees doubling up suppliers on one particular iPhone as a chance to lessen manufacturing risks, such as faulty components. The company used the same strategy most recently in the iPhone 6s, divvying up production duties between Foxconn and Pegatron. On both versions of the 2016 iPhone, Foxconn will remain the "major supplier" for each device.

Taiwan Earthquake: Apple Chipmaker TSMC Says Damage Will Affect Production

An earthquake hit southern Taiwan on Saturday, February 6. At least 37 people died in the magnitude 6.4 quake; more than 500 are reported injured.

Semiconductor foundry **Taiwan Semiconductor Manufacturing Company** (TSMC) and **United Microelectronics** (UMC) were affected by the earthquake. The companies' production lines were automatically shut

down by the quake, thus affecting wafer production. TSMC is one of two chip fabricators for the iPhone 6s, and is expected to be the sole manufacturer of the A10 chip for the iPhone 7. TSMC initially said that it expected 95% of production capacity to be restored within 2–3 days, and that the long-term impact would be a loss of around 1% of 2016 production. However, *DigiTimes* now reports the company says that damage to one of the chip-fabrication facilities is "worse than originally assessed."

The company has, however, indicated that it is "confident" of hitting its revenue targets for the first quarter of the year, suggesting that it still expects the impact to be relatively minor.

The quake also hit several semiconductor, optoelectronic, and photovoltaic companies located in the Southern Taiwan Science Park (STSP). Several of the companies had their production lines shut down, and as the lines were in mid-production, the companies will have to clear the semi-finished products from the lines before continuing with production, according to a report in *DigiTimes*.

One of the affected companies was LCD panel maker **Innolux**. The company evacuated its plants in Tainan, Taiwan as soon as the quake hit. The company's production system automatically shut down all equipment. However, there was a small fire in one of the company's engine rooms. Production is gradually returning to normal, the report continues.

New orders... Equipment manufacturer **Manz AG** has acquired several large and important orders in the electronics segment, following several new and follow-up orders in the energy storage segment just recently. These new and follow-up orders comprise machines for assembly automation and laser process equipment, with a total volume of more than €20 million. The orders will impact revenues and earnings during the first six months of 2016. Following the company's successful acquisition

of several large orders in the assembly automation segment last year, it has now obtained a large Chinese group in the consumer electronics industry as a new customer.

BB Electronics Sold... to Its Own Management

Following recent operational improvements at Danish EMS provider **BB Electronics**, equity fund **Axcel** entered into an agreement to sell the company to an investor group consisting of representatives from management and the board.

An investor group is now acquiring BB Electronics from Axcel. The group includes the current minority shareholder Skovbit (a company owned by the original founder) and businessman Per Blinkenberg-Thrane, co-founder of Thrane and Thrane. In addition, the group consists of representatives from the management, including CEO Carsten Christensen and Chairman Ole Steen Andersen, former CFO of Danfoss.

The company has a turnover of approximately DKK425 million (€6.94 million) and has 500 employees in Denmark and China. Under its new ownership, the company expects its positive development to continue, as reported by *Evertiq*.

Partnerships and alliances... EMS provider **Sanmina Corporation** (San Jose, CA) will collaborate with **Nokia** (Finland) for the delivery of a range of data center solutions to enable operators to harness the cloud. This strategic collaboration between Nokia and Sanmina will focus on the delivery of cost-effective, scalable, multivendor cloud infrastructure solutions. With Sanmina's experience in IT infrastructure, hardware integration, and global fulfilment for the telecommunications and cloud computing markets, Nokia aims to be able to rapidly deliver custom infrastructure solutions to improve operator time to market... **InvenSense, Inc.** (San Jose, CA), provider of MEMS sensor platform solutions, announced the extension of its strategic distribution agreement with **Avnet, Inc.** (Phoenix, AZ), a technology

distributor, increasing the footprint and expanding the "Internet of sensors" platform globally. With the extended agreement, Avnet is now chartered with sales and value-added support for InvenSense's MEMS sensor platform solutions in the US, Asia, the EU, and Japan.

Pegatron to Compete for Dell Notebook ODM Orders

Pegatron Technology (Taiwan) is poised to compete for notebook ODM orders from **Dell** to make up for **Toshiba** canceling orders for consumer notebooks in 2016, according to industry sources.

Toshiba has decided to focus on business-use notebooks and undertake consumer model production in-house, and so stopped outsourcing production at the end of 2015, the sources said. Toshiba placed ODM orders for consumer notebooks with Pegatron (about 50%) and Compal Electronics (40%), the sources indicated.

Pegatron is a main ODM for Dell's AIO (all-in-one) PCs currently, the sources said. However, as Dell has released ODM orders for 70–80% of its notebooks to be launched in 2016 to **Compal** and the remaining portion to **Wistron**, Pegatron is unlikely to obtain orders from Dell in 2016 but is likely to in 2017 if its quotes are competitive, the sources indicated.

Facilities closing... **Toshiba** (Japan) reportedly plans to close its R&D center in Taiwan and will lay off about 100 engineers working at the center, according to sources in Taiwan's notebook industry. As the planned layoff is scheduled to be executed by the end of March, some local notebook brands and ODMs have begun to raid talent from the R&D center, the sources noted. Toshiba will also shift the focus of its PC business to the business sector and will promote its consumer notebooks mainly in the US and Japan, as reported by *DigiTimes*.

Foxconn Leads Patent Applications in 2015

Hon Hai Precision Industry (Foxconn) topped Taiwanese companies in the number of patent applications in 2015, with 659, according to data released by the

Intellectual Property Office (IPO) under Taiwan's Ministry of Economic Affairs.

Taiwan Semiconductor Manufacturing Company (TSMC) ramped its position to second place with 503 applications, the company's highest in 10 years. **ITRI** (Industrial Technology Research Institute) ranked third, with 466.

Intel led foreign enterprises in the number of patent applications in Taiwan in 2015, with 956 patents, also the highest number in 10 years.

Toshiba followed with 413 and **Tokyo Electron** with 404.

Semiconductor companies were the most active patent applicants in 2015; the number of applications filed by Intel, TSMC, and Samsung Electronics showed significant growth compared with a year earlier, said the IPO.

However, patent applications filed by LCD panel makers, including **Samsung, LG Display, AU Optronics (AUO)**, and **Innolux**, declined sharply this year, as reported by *DigiTimes*.

Innolux Restores 85% Capacity at STSP

TFT-LCD panel maker **Innolux** has restored 85% of its production capacity at the Southern Taiwan Science Park (STSP) following damage from the massive earthquake that hit southern Taiwan on February 6. Due to fewer working days and the earthquake impact, Innolux said it expects revenues for February to drop to a low level, reports *DigiTimes*.

Investments... Chinese mobile handset firm **Oppo** said it will invest Rs 1 billion to start its own manufacturing unit in India by August this year. Oppo has already started its mobile handset production in India at electronic manufacturing services firm **Foxconn's** plant. It expects to grow its business volume significantly. It has sold 40 million handsets in China so far and expects its Indian business to grow similarly. Oppo is looking at producing 10 million handset units per year in India at its own plant. It will continue its relationship with Foxconn as well.

Sumitomo to Increase Electronic Parts Output in Southeast Asia

Sumitomo Corp. (Japan) will expand southeast Asian contract production of electronic parts amid expected growth in demand following the recent creation of a regional economic community.

Sumitomo will form a joint venture this April in Poipet, a Cambodian city bordering Thailand. An existing venture with **Alpine Electronics** that operates a Thai plant will take a 51% stake, while the Sumitomo group will own the rest.

The Cambodian venture will lease a factory with about 1,000 square meters of floor space, with two production lines set to start up in October. A roughly 5,000-square-meter factory will be built three years later, bringing total production lines to about 10.

The project will cost around ¥2 billion (\$16.3 million). The initial workforce of about 50 will grow to an estimated 300 in a few years. Sales of ¥4 billion are targeted in five years.

The facilities will produce electronic parts such as circuit boards used in car navigation systems. These will be sold mainly to Japanese manufacturers in Thailand.

The Sumitomo group's electronics manufacturing services business is expected to generate sales of about ¥110 billion for the year ending March 31, up 10% from a year earlier. But Sumitomo suffered a group net loss in fiscal 2014, weighed down by depressed earnings in resource operations, as reported by *Asian Review*.

Electronics Manufacturing Cluster in Chhattisgarh (India)

Under the *Make in India* initiative, the Indian government has proposed seven greenfield manufacturing clusters—in Naya Raipur (Chhattisgarh), Bhopal and Jabalpur (Madhya Pradesh), Bhiwandi (Rajasthan), Adityapur (Jharkhand), Karnool (Andhra Pradesh), and Falta (West Bengal).

The proposed cluster in Chhattisgarh will have facilities for manufacturing LED lights, solar panels, tablets, mobile phones, IT hardware, set-top box electronics, and automotive electrical parts.

An official spokesman said 11 investors have already signed memoranda of understanding (MOU) with the state government, proposing an investment to the tune of Rs 9.3 billion in the upcoming electronic manufacturing cluster, as reported by the *Times of India*.

SMTC Appoints Chief Financial Officer

SMTC Corporation (Canada) announced the appointment of Roger Dunfield as Chief Financial Officer.

Mr. Dunfield is an experienced finance executive with over 15 years of experience in the manufacturing industry. He joins SMTC from **Sanmina Corporation**, where he has been employed as Vice President, Finance and Controller in Sanmina's Interconnect Division since 2010.

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