

Manufacturing Market TM

INSIDER

inside the contract manufacturing industry

Vol. 26, No. 12

December 2016

Will Foxconn Manufacture in the US?

As most readers of MMI are aware, **Foxconn Technology Group** is in preliminary discussions to make an investment that would expand the company's US operations. The disclosure came hours after an announcement by US President-elect Donald Trump and **SoftBank Group Corp's** Masayoshi Son to invest \$50 billion in the US and create 50,000 jobs. A document that Son held up after the meeting in Trump Tower also included the word "Foxconn."

Restoring thousands of manufacturing jobs to the United States' struggling Rust Belt communities was one of President-elect Donald Trump's biggest campaign promises, and **Apple** has begun exploring the possibility of moving smartphone production to the United States.* Speculation began with an interview with *The New York Times* in which Trump recounted a phone conversation with Tim Cook, during which he urged the CEO to move part of Apple's production line to the US. In this conversation, president-elect Donald Trump apparently said, "I think we'll create the incentives for you, and I think you're going to do it. We're going for a very large tax cut for corporations, which you'll be happy about." Trump is a vocal supporter of US companies that build their products in the US, and has proposed levying steep tariffs—potentially as high as 45 percent—on competing Chinese importers.

But China's reaction could be severe. In an opinion piece published in a state-backed newspaper, the Chinese government warned of retaliatory measures if such trade restrictions were to go into effect. "A batch of Boeing orders will be replaced by Airbus

US auto and iPhone sales in China will suffer a setback, and US soybean and maize imports will be halted. China can also limit the number of Chinese students studying in the US," a *Global Times* article read.

Trump is quoted to have said last January that "We're going to get Apple to build their damn computers and things in this country instead of other countries...How does it help us when they make it in China?" Perhaps because making iPhones and iPads in China at very low cost is what consumers want, as an iPhone 7 now exceeds \$700 retail and making it in the US could only make it cost more—at least according to some, but not all, EMS companies.

Apple's plan isn't without precedent. In 2013, **Motorola Mobility** employed more than 3,800 people to assemble the Moto X, a flagship Android phone, at a factory in Fort Worth, Texas. Just a year later, though, it was forced to shutter production as a result of "exceptionally tough" market conditions. The company subsequently moved production to China. Yet, others have been more successful. Foxconn established a stateside iMac computer assembly line in 2012. A year later,

Singapore-based **Flex**, manufacturer of Apple's Mac Pro desktop computer, built a production line in Austin, Texas.

The Trump administration is going to have to find a way to deal with the almost 10x increase in the purported labor costs found in the US, that might go into making the iPhone. Labor normally accounts for around 15 percent of the total cost of goods, but this amount is shrinking due to advances in automation and robotics. Foxconn's operations in China, however, are finely tuned to produce iPhones 12 hours a day, six days a week, at \$400 a worker per month. Even at the current minimum wage of \$7.25 in the US (\$10.10 by 2017), a similar workweek of 72 hours could result in a monthly wage of \$3,556, counting overtime. Although Foxconn has been investing massively in robotic assembly, there remains a substantial proportion of assembly, such as of power supplies, subassemblies, through-hole, and box build, that requires a high degree of hand labor.

Aside from labor cost, supply chain is another limiting factor. According to the tech news giant *Popular Science*, Apple gathers the raw materials for its devices from a total of 748 suppliers, of which more than three-fourths are from Asian countries. Specifically, 663 suppliers—or around 89%—are in Asia

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generally, including 44% of the aggregate in mainland China, and only 85—or 11%—of the suppliers are from North America, the company’s homeland. Foxconn may be able to strong-arm some of its suppliers into locating in the US, but such maneuvers won’t streamline the manufacturing process, only impede it. Relocating the supply chain to North America would be a disruptive undertaking and paying for these parts in US currency will result in an economic disadvantage to the Chinese yuan.

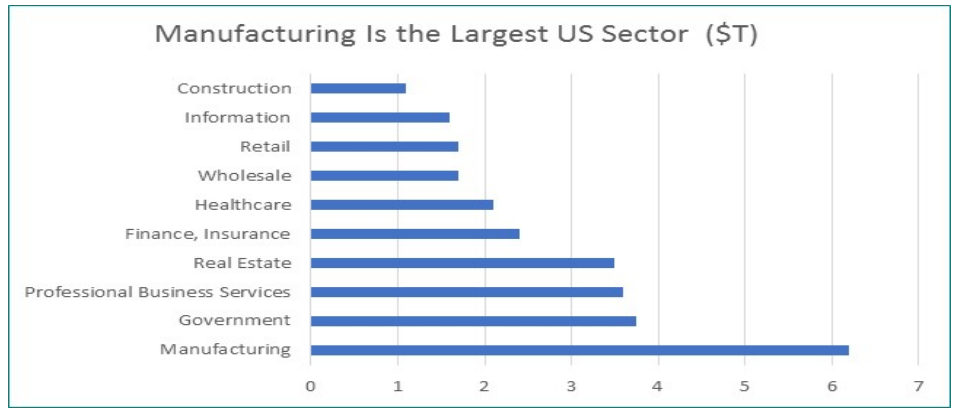
It’s going to take more than lower margins or a significant tax incentive for Foxconn to move any iPhone assembly to the US anytime soon. In effect, the tax reduction needs to offset the cost increase for every Chinese worker replaced by an American worker. Depending on the size of the workforce—say, 10,000 new jobs as an example—if the costs above hold, this might result in nearly \$0.4 billion annually in additional labor cost (\$3,556/month – \$400/month x 12 months x 10,000 new jobs = \$379 million).

And 10,000 jobs is just a drop in the bucket. NVR estimates that between 2000 and 2012, China gained over 1.3 million new jobs in electronics manufacturing—mostly from the West—whereas the Americas stayed about the same (most new jobs migrated to Asia).

Regardless, bringing any manufacturing jobs back to the United States will have positive benefits to a company’s image. For example, **Walmart** contracted with **General Electric** to manufacture high-efficiency light bulbs in its plants in Ohio and Illinois as part of Walmart’s brand-boosting Made in USA initiative. Similarly, **Farouk Systems, Inc.** cites image as a primary reason for reshoring jobs. Many have done it because of the consumer preference for made-in-America products.

The roughly 22,000 jobs these companies have brought back to the country over the last five years is nothing compared to those that the manufacturing industry has sent abroad. According to one estimate, Walmart alone was directly responsible for the loss of 200,000 American manufacturing jobs due to its Chinese offshoring. Companies such as **Flex**, **Jabil**, **Sanmina**, and **Celestica** have contributed their own figures, and led the field in electronics offshore outsourcing.

In contrast, in polling the MMI subscriber base, several EMS companies don’t agree



Source: BEA

that US labor costs are going to affect the final outcome of Apple’s product price. Based on comparable quotations, the labor cost differential between the two countries will be negligible due to advanced robotics and automation, so the deciding factor will likely be a political decision that functions as a matter of excess capacity available in China—so long as demand for Apple’s products remains strong.

Of course, as a fallback plan, Apple could always sacrifice its current record profit level, which in 2015 was \$53 billion, but declined in 2016 to \$45 billion—not a prospect any CEO or shareholder would relish. Perhaps Apple may be willing to do this to gain valuable political capital, both for itself and Trump, which shows what happens when you mix politics with business. But this is not uncommon, as companies such as Walmart and others have demonstrated.

Sometimes it’s good for business to keep jobs domestic. The recent **Carrier** deal had a net positive benefit to the local government because of the unemployment costs it saved and the personal income tax revenue that Indiana preserved, which were significant. So, this tactic works for preserving jobs in America, but not for bringing them back when they are no longer competitive, which is true of high-volume electronics assembly as well as ordinary coal mining.

Historically, many industries have nearly disappeared. The output of the apparel industries is down more than 80% since the heyday in the 1980s, while the output of textile mills is down about 50% since 2000. Agriculture has changed drastically, from small local farmers to large and automated industrial farming operations. Those factory and other jobs

are really gone for good. Bringing back jobs that are noncompetitive is not going to make America great again. Once your competition goes offshore to achieve lower costs, you must similarly do so or be left behind. Donald Trump realized this when he went into the apparel and wine businesses. America still makes lots of stuff, but the number of jobs has shrunk because it doesn’t take nearly as many workers as it used to.

Refined oil is America’s top manufactured product. America’s other top manufactured products are pharmaceuticals, airplanes, and automobiles. This current gambit for the electronics industry may play out on the political stage, but it likely won’t come to pass on the business one. Some compromise solution will have to be reached to allow both parties to save face.

The decline in manufacturing jobs certainly makes it seem as if America has been deindustrialized, but it’s not so. China became the leading manufacturing economy in the world in 2010, but the United States maintains a strong second-place standing. The value added by US factories is more than \$6 trillion a year, equal to the next three countries (Japan, Germany, and South Korea) combined. Manufacturing is America’s leading industrial sector (see chart) and US manufacturing is still the envy of the world.

*According to NVR’s annual report, *The Worldwide Electronics Manufacturing Services Market – 2016 Edition*, Foxconn has 13 manufacturing facilities in the US, mostly dedicated to fulfillment and enclosure services, with a sprinkling of PCBA assembly—but none of it dedicated to high-volume assembly operation.

Nine-Month Sales Down for Large CMs

Based on nine-month sales of 20 of the largest contract manufacturers, the outsourced manufacturing space is not having a good year. Nine-month revenue for the 20 CMs totaled \$235.7 billion, down 4.2% year over year. Sales in US dollars were down at 14 companies, with seven of them showing double-digit declines (Table 1, p. 4).

The 20 CMs consist of eleven EMS providers, six ODMs, and three hybrid providers. *MMI* recently began using the hybrid category to identify companies that do substantial amounts of both ODM and EMS work and to separate them for the purposes of analysis from those whose sales put them in the traditional EMS or ODM classes. *MMI* believes that this three-way system, though far from perfect, will yield a clearer picture of EMS versus ODM performance while acknowledging the rise of the hybrid model.

Nine-month sales were down collectively for all three groups—EMS providers, ODMs, and hybrid providers. Combined sales for the EMS group fell 4.7% year over year versus 5.6% for the ODMs and 0.5% for the hybrid providers (Chart 1). For now at least, the hybrid group is gaining share and poses a competitive threat to both the EMS and ODM factions.

EMS providers generated the majority of the 20 CMs' sales for the period. Revenue in the EMS category amounted to \$142.1 billion, or 60.3% of overall sales. ODMs contributed \$53 billion, or 22.4% of sales, while the hybrid group accounted for \$40.6 billion, or 17.2% of sales.

Upon further review, *MMI* has made one change to the EMS group. **Kimball Electronics** has been added to the group, replacing **AmTRAN Technology**. **Wistron** has also been reclassified as a hybrid provider (Table 1).

Of the six CMs that grew their nine-month revenue, one is a hybrid provider, two are ODMs, and three are EMS providers (Table 1). One hybrid provider, **Kinpo Electronics**, achieved triple-digit gains, whereas EMS provider Kimball Electronics posted double-digit gains.

Hon Hai Precision Industry, the EMS giant, had a minimal effect on the combined nine-month sales of the 20 CMs. Without Hon Hai, combined sales would have been down 4.5% from a year earlier versus 4.2% when including Hon Hai.

While nine-month sales were down overall for the 20 CMs, third-quarter results present a brighter picture. Totaling \$86.8 billion, Q3 sales for the entire group rose 18.7% sequentially and 2.5% year over year. US-dollar increases at 15 CMs carried the day, and eight of those gains were of the two-digit variety.

In the year-over-year comparison, ten companies achieved sales growth in Q3, more than offsetting the declines at the ten other CMs. Kinpo Electronics, Wistron, Kimball Electronics, **Inventec**, and **Celestica** all achieved double-digit increases. On the other hand, sales fell by double-digit percentages at **Ability Enterprise**, **Cal-Comp Electronics**, **Quanta**, and **Universal Scientific Industrial** (Table 1).

There was a wide range in Q3 sales results among the three CM groups. On a year-over-year basis, Q3 sales in the hybrid category increased 10.1% compared with a 2.3% decrease for ODMs and 2.1% growth for the EMS providers. When compared with the prior quarter, the hybrid group again led with a 33% gain, followed by the EMS group with a 17.8% increase and the ODM providers at 11.1% growth (Table 2, p. 4).

When combined, Q3 income for the 20 CMs was approximately \$1.9 billion, up from about \$1.2 billion in the prior quarter but down from about \$2.4 billion a year earlier. (Net income is approximate because not all companies follow the same accounting rules.) Net profit fell about 19.3% year over year despite the corresponding sales increase of 2.5%. At 13 companies, Q3 net income decreased versus a year ago, overwhelming the gains made at seven others. **Flex**, **Sanmina**, and **Jabil** reported net losses of more than 50% for Q3. Hon Hai represented about 57.5% of Q3 net income yet accounted for 39.5% of sales.

For the first nine months, the 20 CMs together earned net income of approximately \$4.6 billion. Net income declined at a faster rate than sales did as net income was down about 19.1% year over year compared with the 4.2% drop in sales for the period. Net margin overall came in at about 1.9% for the first nine months. Aggregate net margin for the EMS providers stood at about 2.3%, above the CM average, while the net margins for the ODM and hybrid groups were below average at about 1.4% and 1.3%, respectively.

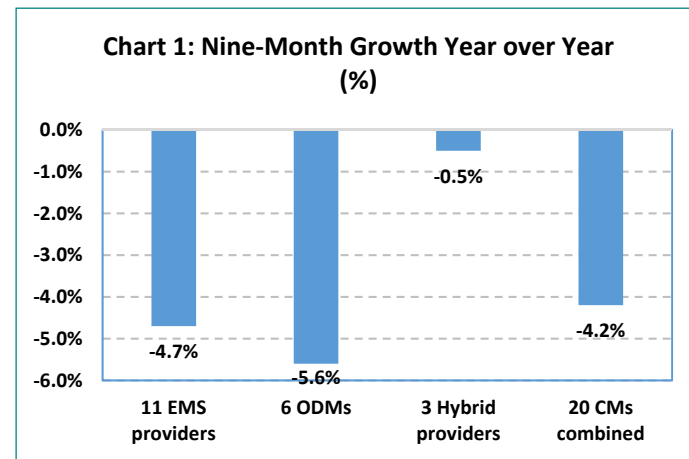


Table 1: Q3 and Nine-Month 2016 Results for 20 of the Largest Contract Manufacturers (M US\$ or %)

Company	Primary Business	Head-quarters	Reports in US\$	3Q2016 Sales	2Q2016 Sales	Qtr.-qtr. chg.	3Q2015 Sales	Yr.-yr. chg.	3Q2016 Net Inc.	2Q2016 Net Inc.	3Q2015 Net Inc.	Q1-3 '16 Sales	Q1-3 '15 Sales	Yr.-yr. chg.2	Q1-3 '16 Net Inc.	Q1-3 '15 Net Inc.
Hon Hai	EMS	Taiwan	No	34,306.3	28,585.4	20.0	32,362.1	6.0	1,105.0	548.2	1,149.8	92,658.3	96,298.1	-3.8	2,510.0	2,953.4
Pegatron	ODM/EMS	Taiwan	No	10,087.4	6,964.0	44.9	9,400.6	7.3	171.6	123.6	182.6	25,017.5	25,228.9	-0.8	422.8	535.8
Quanta	ODM	Taiwan	No	7,136.6	6,437.7	10.9	8,378.9	-14.8	126.2	108.5	177.1	19,706.6	23,072.0	-14.6	347.1	403.8
Compal	ODM	Taiwan	No	6,313.1	5,360.8	17.8	6,555.7	-3.7	69.5	53.8	87.7	17,162.6	19,337.9	-11.2	173.1	201.0
Flex	EMS	Singapore	Yes	6,008.5	4,332.3	38.7	6,316.8	-4.9	(2.5)	77.9	123.0	16,113.6	17,834.6	-9.6	136.8	368.9
Wistron	ODM/EMS	Taiwan	No	5,376.8	4,545.3	18.3	4,628.8	16.2	16.3	19.1	19.9	14,107.3	14,179.5	-0.5	47.3	45.5
Jabil	EMS	Florida	Yes	4,430.8	4,310.8	2.8	4,680.8	-5.3	38.1	5.2	87.7	13,145.1	13,348.8	-1.5	122.2	211.1
Inventec	ODM	Taiwan	No	3,562.0	3,358.2	6.1	3,201.7	11.3	38.7	43.8	59.0	9,883.3	8,995.1	9.9	120.8	143.4
Sanmina	EMS	California	Yes	1,665.8	1,669.5	-0.2	1,636.6	1.8	100.8	29.5	315.4	4,946.5	4,703.4	5.2	160.7	354.6
Celestica	EMS	Canada	Yes	1,554.0	1,485.5	4.6	1,408.5	10.3	53.6	36.2	10.9	4,392.8	4,124.3	6.5	115.4	54.8
Kinpo Electronics	ODM	Taiwan	No	1,059.4	1,020.9	3.8	313.5	238.0	6.2	13.1	4.8	2,959.2	1,077.9	174.5	33.2	37.4
Qisda	ODM	Taiwan	No	1,020.4	977.1	4.4	1,009.8	1.0	45.6	24.7	17.4	2,984.5	3,122.5	-4.4	86.3	60.6
Universal Scientific Industrial	EMS	China	No	982.3	755.4	30.0	1,123.2	-12.5	39.9	27.1	35.8	2,494.4	2,871.1	-13.1	80.1	76.7
Cal-Comp Electronics	EMS	Thailand	No	773.0	688.3	12.3	1,067.6	-27.6	6.7	7.5	8.8	2,427.3	3,685.4	-34.1	26.6	36.9
Plexus	EMS	Wisconsin	Yes	653.1	667.6	-2.2	668.7	-2.3	19.1	26.1	23.9	1,939.3	1,989.6	-2.5	62.0	71.3
Benchmark Electronics	EMS	Texas	Yes	574.3	579.3	-0.9	630.2	-8.9	21.7	12.7	20.6	1,702.9	1,915.2	-11.1	45.5	56.0
Venture Corp	ODM/EMS	Singapore	No	517.5	507.7	1.9	487.3	6.2	34.8	32.2	28.5	1,493.6	1,421.9	5.0	93.6	79.0
Shenzhen Kaifa	EMS	China	No	495.1	552.0	-10.3	503.4	-1.6	10.0	23.4	14.0	1,684.5	1,875.9	-10.2	39.6	28.4
Kimball Electronics	EMS	Indiana	Yes	226.5	220.4	2.7	200.4	13.0	10.1	5.8	4.5	661.0	585.0	13.0	23.4	16.2
Ability Enterprise	ODM	Taiwan	No	70.9	92.5	-23.3	151.1	-53.1	7.2	1.6	8.8	249.7	459.7	-45.7	7.9	18.8
Total/avg.				86,813.8	73,110.6	18.7	84,725.6	2.5	1,918.8	1,220.2	2,380.2	235,730.0	246,126.8	-4.2	4,654.4	5,753.6
Total/avg. without Hon Hai				52,507.5	44,525.2	17.9	52,363.6	0.3	813.8	672.0	1,230.5	143,071.7	149,828.7	-4.5	2,144.4	2,800.2

Results in non-US currencies were converted to US dollars by applying a three-month average exchange rate for the corresponding quarter. Average exchange rates were based on monthly 2016 and 2015 data from the US Federal Reserve. Company net profits shown here are attributable to shareholders. Net profit totals are approximate because not all companies follow the same accounting standard.

Table 2: Comparing Results Where Companies Are Grouped by Primary Business (M US\$ or %)

Company (in order of 9-mo. sales)	Primary Business	3Q2016 Sales	2Q2016 Sales	Qtr.-qtr. chg.	3Q2015 Sales	Yr.-yr. chg.	3Q2016 Net Inc.	2Q2016 Net Inc.	3Q2015 Net Inc.	Q1-3 '16 sales	Q1-3 '15 sales	Yr.-yr. chg.	Q1-3 '16 Net Inc.	Q1-3 '15 Net Inc.
11	EMS	51,669.7	43,846.5	17.8	50,598.3	2.1	1,402.5	799.7	1,794.3	142,165.7	149,231.4	-4.7	3,322.3	4,228.3
6	ODM	19,162.4	17,247.2	11.1	19,610.7	-2.3	293.5	245.6	354.9	52,945.9	56,065.1	-5.6	768.4	865.0
3	EMS/ODM	15,981.7	12,016.9	33.0	14,516.7	10.1	222.7	175.0	231.1	40,618.4	40,830.3	-0.5	563.7	660.3
20		86,813.8	73,110.7	18.7	84,725.7	2.5	1,918.8	1,220.2	2,380.2	235,730.0	246,126.8	-4.2	4,654.4	5,753.6

Net profit totals are approximate because not all companies follow the same accounting standard.

Mediocre Results for North American Group

For a group of eight mid-tier and smaller EMS providers based in North America, combined Q3 sales were rather disappointing. On a year-over-year basis, the group's revenue was down 4.3%, and

versus the prior quarter revenue was down 0.8%. Q3 sales for the group of eight North American providers totaled \$682.2 million, representing a decline from the group's year-earlier revenue of \$713.1 million. Among the group, year-over-year sales performance varied greatly, ranging from -26.6%

for Ducommun to 13% for Kimball Electronics. Sales declines at seven providers outweighed increases at the remaining one (Table 3, p. 5). The group's 4.3% decline from a year earlier was significantly lower than the 3% collective loss of the six largest providers in the US-traded sector (Nov., p. 4).

In the sequential comparison, Q3 sales increases at three out of eight providers were offset by decreases at the other five providers. As a result, the group's revenue growth was negative. Only **SigmaTron** raised its revenue from the previous quarter in double-digit fashion. On a sequential basis, the North American group's 0.8% decline in Q3 was far behind a 14.1% gain achieved by the six largest US-traded providers (Nov., p. 4).

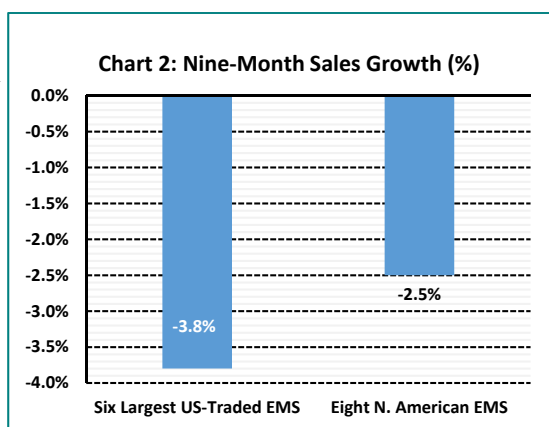
For the first nine months of 2016, the eight mid-tier and smaller EMS providers declined less compared with their larger counterparts in the sales department. Nine-month sales for the eight mid-tier and smaller providers declined 2.5% year over year, compared with a 3.8% drop for their larger competitors (Chart 2). Collectively, the eight mid-tier and smaller providers generated sales of \$2 billion for the first nine months, down from \$2.1 billion in the year-ago period. Sales decreases at five providers were enough to drag down combined sales. Both Ducommun and **SMTC** turned in double-digit declines, with 25.2% and 19.8% drops, respectively.

The group of eight mid-tier and smaller providers consists of seven companies in the EMS space, all publicly traded, and one EMS unit within a larger publicly held corporation. **Sparton Electronics** turned in a high gross margin of 17.2%.

Two providers increased their operating margins sequentially and four raised their margins year over year (Table 3). **Kimball Electronics** achieved the highest operating margin at 3.9%.

The seven stand-alone providers combined for a Q3 net income of \$12.6 million, compared with a net loss of \$33.2 million in the previous quarter and net income of \$7.5 million in the year-ago period, respectively. **Kimball Electronics** achieved the highest net income in the group of \$10.1 million.

For the first nine months, net loss for the stand-alone providers amounted to \$7.8 million, a decrease of 133% from a year earlier that dwarfed their increase in sales of 1.3%. **Sparton Electronics**, which posted a net loss of \$40.8 million, was single-handedly responsible for the net loss (Table 3).



A Brief Look at Some Providers

IEC Electronics Corp. (IEC). For the fourth quarter of fiscal 2016, the company recorded net sales of \$28.4 million, a 16.3% decrease compared with net sales of \$33.9 million in the fourth quarter of the last fiscal year. Gross profit margin for the fourth quarter was 11.5%, compared to 15.3% in the same quarter last year. The company recorded net income of \$0.2 million, or \$0.02 per share, consistent with the same quarter last year. During the fourth quarter of fiscal 2015, the company incurred a loss on discontinued operations of \$0.7 million or \$0.07 per share related to its divestiture of its subsidiary **Southern California Braiding (SCB)**.

In the fourth quarter, IEC began to experience a reduction in volume from certain key customers, which negatively impacted near-term backlog and resulted in its decision to take proactive steps to align its cost structure with a workforce reduction at its Newark, New York facility. The company anticipates that the backlog softness will continue through the first half of fiscal 2017 but strengthen in the second half of fiscal 2017. This softness is not a result of any lost customers or programs, but rather is related to slowdowns for two of its key strategic customers, which are committed to IEC and are working through their own end-market dynamics.

Table 3: Q3 and Nine-Month 2016 GAAP Results for Eight Mid-Tier and Smaller EMS Providers Based in North America (M\$ or %)

Company	Q3 '16 sales	Q2 '16 sales	Qtr.-qtr. chg.	Q3 '15 sales	Yr.-yr. chg.	Q3 '16 gross marg.	Q2 '16 gross marg.	Q3 '15 gross marg.	Q3 '16 oper. marg.	Q2 '16 oper. marg.	Q3 '15 oper. marg.	Q3 '16 net inc.	Q2 '16 net inc.	Q3 '15 net inc.	Q1-3 '16 sales	Q1-3 '15 sales	Yr.-yr. chg.	Q1-3 '16 net inc.	Q1-3 '15 net inc.
KeyTronic	117.1	123.9	-5.5	126.2	-7.2	8.3%	8.7%	7.1%	2.4%	2.8%	1.4%	1.8	2.1	0.8	359.5	359.6	0.0	5.7	5.0
Sparton	100.4	107.0	-6.1	106.7	-5.9	17.2%	17.9%	17.5%	2.1%	4.5%	4.2%	0.1	-42.0	2.4	309.5	326.1	-5.1	-40.8	11.5
SMTC	42.7	43.6	-2.1	53.4	-20.1	8.5%	7.1%	5.8%	0.3%	-0.6%	-1.7%	0.0	-0.6	-1.3	128.2	159.9	-19.8	0.3	-0.8
SigmaTron	65.8	58.9	11.7	69.7	-5.6	8.4%	9.3%	10.9%	0.4%	0.7%	3.0%	0.3	0.1	1.2	185.5	194.0	-4.4	0.5	2.0
IEC Electronics	28.4	32.5	-12.6	28.7	-1.1	11.5%	16.8%	20.1%	1.6%	6.1%	10.8%	0.2	1.6	0.2	94.1	94.2	-0.2	3.2	-9.4
Nortech Systems	29.7	28.9	2.7	30.4	-2.3	12.7%	10.8%	11.5%	0.6%	-0.4%	-0.2%	0.1	-0.2	-0.1	87.6	83.8	4.5	-0.1	-0.7
Kimball Electronics	226.5	220.4	2.7	200.4	13.0	8.1%	8.1%	7.2%	3.9%	4.4%	3.1%	10.1	5.8	4.5	661.0	585.0	13.0	23.4	16.2
Subtotal/avg.	610.6	615.3	-0.8	615.6	-0.8							12.6	-33.2	7.5	1,825.4	1,802.6	1.3	-7.8	23.8
EMS Unit of Larger Public Companies																			
Ducommun*	71.6	72.7	-1.5	97.5	-26.6							6.6	6.8	8.6	222.4	297.2	-25.2	20.5	22.6
Total/avg.	682.2	688.0	-0.8	713.1	-4.3										2,047.8	2,099.8	-2.5		

Operating and net income are not necessarily equivalent to GAAP results on a stand-alone basis. Segment operating income did not include corporate general and administrative expenses. (*) For Ducommun, we have considered its Electronic Systems segment numbers.

This backlog reduction will result in approximately \$20–\$25 million in lower revenue, primarily impacting the first half of 2017. While the company anticipates a ramp-up with existing and new customers in the second half of 2017, it does not expect to be profitable in the first half of 2017, given the need to retain key skilled labor and expertise to support the life-saving and mission-critical products it manufactures.

KeyTronic Corporation (KTCC). For the first quarter of fiscal year 2017, KeyTronic reported total revenue of \$117.1 million, compared with \$126.2 million in the same period of fiscal year 2016. Net income for the first quarter of fiscal year 2017 was \$1.8 million or \$0.16 per share, compared with \$0.8 million or \$0.07 per share for the first quarter of fiscal year 2016. For the first quarter of fiscal year 2017, gross margin was 8.3% and operating margin was 2.4%, compared with 7.1% and 1.4%, respectively, in the same period of fiscal 2016.

For the second quarter of fiscal year 2017, the company expects to report revenue in the range of \$115 million to \$120 million, and earnings in the range of \$0.13 to \$0.18 per diluted share. These expected results assume an effective tax rate of 25%.

The company continues to see a robust pipeline of potential new business, and won new programs during the first quarter involving transportation logistics, and medical and personal safety products. Strong prospects for new business involve the US plants that it acquired in the **Ayrshire** acquisition.

Kimball Electronics, Inc. (KE). Consolidated net sales increased 13%, compared to the first quarter of fiscal year 2016, setting a new quarterly sales record for the third consecutive quarter. The company received \$4.0 million during the quarter, \$2.5 million net of tax, related to proceeds from the settlement of a class action lawsuit of which the company was a member. During the quarter, Kimball completed the acquisition of **Aircom Manufacturing, Inc.** As a result of the acquisition, a bargain purchase gain of \$0.9 million was recognized during the

quarter and included in net income. Incremental net loss associated with the start-up of the company's Romania facility was \$1.1 million during the current fiscal year first quarter. Return on invested capital (ROIC) was 9.6% for the first quarter of fiscal year 2017, which improved from 7.9% in the prior year quarter. Cash flow from operating activities was \$14.0 million for the quarter.

Continued strength in the automotive market, combined with double-digit growth in its medical end-market vertical, helped the company set a new quarterly sales record in the first quarter of fiscal year 2017. Its new program launch activity remains high as the company continues to work diligently to achieve its goal of \$1 billion in annual sales by fiscal year 2018.

Nortech Systems, Inc. (NSYS) reported net sales of \$29.7 million for the third quarter ended September 30, compared with net sales of \$30.4 million for the third quarter of 2015. Operating income for the third quarter was \$190,000, compared with an operating loss of \$66,000 for the third quarter of 2015. Nortech Systems reported net income in the third quarter of \$63,000, or \$.02 per diluted common share, compared with a net loss of \$124,000, or \$0.05 per diluted common share, for the same period last year.

The company's gross margin improved 320 basis points to 12.7 percent of sales in the third quarter, as compared to the prior year's third quarter. This increase was aided by the mix of medical products, greater engineering service activity, and selective pricing actions.

Medical segment sales continued their strong momentum in the third quarter, up 9 percent sequentially and 27 percent year over year, with the backlog growing 35 percent over the prior year. Nortech's other two core markets are still experiencing mixed results. Industrial sales decreased 25 percent in the quarter, due primarily to transportation customers, while defense sales rose 6 percent. The overall corporate backlog increased 5 percent

during the quarter, providing some additional momentum for the remainder of the year. The company is targeting the medical market with full-service solutions including product development, design transfer, and production manufacturing services, along with FDA expertise. For the industrial and defense markets, Nortech is focused on improving asset utilization and profitability while supporting early engagement, including design for manufacturability and rapid prototyping.

SMTC Corporation (SMTX). For 3Q2016, SMTC reported revenue of \$42.7 million, compared with \$53.4 million in the third quarter of the prior year. The decrease was primarily the result of two customers that exited over the last year, and reduced demand from another customer. The decreases were partially offset by new customer revenue, specifically two new customers that represented \$6.1 million of additional revenue during the quarter.

Gross profit was \$3.6 million or 8.5% for the third quarter, compared with \$3.1 million or 5.8% for the same period in the prior year. While revenues decreased by 20% in the third quarter of 2016 compared to the same period in the prior year, the company improved its gross profit percentage. The increase in gross margin was due to a higher margin product mix, reduced manufacturing expenses, and significantly reduced labor as a result of head count reductions.

Net loss was \$0.02 million for the third quarter of 2016, compared with a net loss of \$1.3 million for the same period in the prior year; the net loss in both of these quarters included unrealized foreign exchange losses on unsettled forward exchange contracts. Despite the reduction in revenue, adjusted EBITDA increased to \$1.3 million in the third quarter of 2016, up from \$1.0 million for the same period in the prior year, mainly due to reduced selling, general, and administrative expenses.

Cash flow from operations was \$5.1 million in the third quarter, compared with \$4.8 million in the third quarter of the prior year. Debt, net of cash, was \$6.0 million as of October 2, 2016, representing a significant improvement from \$12.8 million as of September 27, 2015.

Although revenue levels have declined from 2015 due to customers transferring, the company is encouraged by the momentum of new customer wins and new programs wins. Its medical sector business grew to \$8.2 million or 19.2% of revenue this quarter, as compared to \$3.1 million or 5.7% of revenue in the prior year. The company's focus is to continue to add customers with established product lines in key market segments in support of margin expansion initiatives.

Sparton Corporation (SPA) reported 1Q2017 net sales of \$100.4 million, compared with \$106.7 million in the period a year ago. Gross profit was reported as 17.2% of net sales compared with 19.8% in the period a year ago. Reported SG&A was 13.3%, adjusted was 12.6%, compared with 12.8% (both reported and adjusted) in the period a year ago.

In the first fiscal quarter, there were 64 new program wins in the Manufacturing and Design Services (MDS) segment, which have expected annual revenue of \$12.2 million when they are fully up to speed. MDS has trailing fourth-quarter win revenue of \$62 million, which is supportive of future organic growth.

The backlog is \$125 million in the MDS segment and \$115 million in the Engineered Components and Products (ECP) segment. The ECP's backlog consists of \$98 million in domestic sonobuoys, \$6 million in foreign sonobuoys, and \$11 million in rugged displays.

The Engineered Components and Products segment operations had sales of \$37.6 million, with \$0.027 million of intercompany sales. This compares with almost \$38.0 million and \$0.126 million, respectively, in the period a year ago. Total net sales were \$37.6 million, compared with \$38.1 million. The gross profit was \$10.0 million, or 26.6% of net

sales, compared to \$10.8 million, 28.4% of net sales, in the period a year ago.

Management noted that revenue was just above the midpoint of its guidance range. During the quarter, management remained engaged in activities related to the exploration of a possible sale of Sparton.

Guidance for fiscal Q2 calls for revenues in the range of \$97–101 million and for gross margin to be about 18%.

The sales pipeline and new program wins continue to demonstrate traction as Sparton focuses on organic growth. Management is building a foundation that will support profitable revenue growth through new business development and improved operating performance.

Sluggish Growth in Q3 for European Providers

Third-quarter sales for a group of five European EMS providers were poor compared with the year-earlier period. Revenue for the five providers totaled €375.1 million, versus €382.8 million in the year-ago quarter. Sales in Q3 dropped by 2%.

Revenue declines at three providers, **Scanfil**, **Connect Group**, and **Kitron**, offset euro-based increases at **LACROIX Electronics** (Table 4).

LACROIX Electronics was the only EMS provider to achieve double-digit growth. The French provider, a division of the LACROIX group, accomplished a Q3 sales increase of 13.1% year over year. After two years of growth of more than 20%, LACROIX's third-quarter growth of 13.1% was noticeably slower.

At **Neways Electronics**, Q3 sales came in flat at €96.5 million for the quarter on a year-over-year basis, with higher sales contributions from the semiconductor, automotive, and defense sectors offset by a lower contribution from the medical sector. Order intake was up 3.8% and 8.8% year on year for 3Q16 and year to date 2016, respectively.

At **Scanfil**, revenue totaled €121.7 million (3Q2015: €135.8M), down 10.3%. Operating profit was €7.4 million (€5.2M), 6.1% (3.9%) of turnover. The operating profit of 6% shows that the restructuring and efficiency measures taken are having results. The Dongguan plant in China was closed down, and the statutory labor negotiations to adjust the Vantaa plant's operations were started. Scanfil specified an estimate of its turnover and operating profit in 2016, estimating that the turnover will be €500–520 million and the operating profit before adjustments will amount to €22–25 million.

Kitron saw its revenue decrease 1.2% compared with the same period last year. The Defence/Aerospace sector revenue increased by 7.5% compared to last year. The Energy/Telecoms sector revenue decreased by 4.0% compared to last year. Revenue in the Medical Device sector decreased by 10.8% compared to the same period last year. The Offshore/Marine sector revenue decreased by 60% compared to the same period last year.

Connect Group saw its 3Q2016 revenue decrease by 7.7%. The turnover with its customer ASML (a customer that phased out all operations) amounted to €980,000, compared with €3 million in the third quarter of 2015. Taking into account this fact, sales remained stable. From the fourth quarter of 2016 it is expected that sales will be negligible with this customer.

Table 4: 3Q2016 Results for Five European EMS Providers (M € or %)

Company (in order of Q3 '16 sales)	Head-quarters	Reports in Euros	Q3 '16 sales	Q3 '15	Yr.-yr. chg.
Neways Electronics International	Netherlands	Yes	96.5	96.5	0.0%
Scanfil	Finland	Yes	121.7	135.8	-10.4%
LACROIX Electronics	France	Yes	79.2	70.0	13.1%
Kitron	Norway	No	51.3	51.9	-1.2%
Connect Group	Belgium	Yes	26.4	28.6	-7.7%
Total/avg.			375.1	382.8	-2.0%

Results in non-euro currencies were converted to euros by applying a three-month average exchange rate for the corresponding quarter. Average exchange rates were obtained from OANDA.

Company News

Foxconn/Sharp TV Panels JV to Stop Supplying Samsung

Foxconn and **Sharp** have decided that the companies' joint venture will stop supplying LCD panels to South Korean tech giant **Samsung**, as they review the loss-making unit.

Sources told *Reuters* that the joint venture will stop supplying Samsung with LCD panels next year, as the three companies could not agree on the terms of the arrangement.

South Korean Samsung is—or was—the JV's biggest customer, with shipments of 2–3 million panels per year. The report continues, stating that Samsung had to turn to **LG Display** for the panels after it received notice of the decision.

S&T: Full Takeover by Foxconn a Possibility

EMS giant **Foxconn** had previously shown interest in Austrian company **S&T** when its subsidiary **Ennoconn** subscribed to a 10% capital increase in S&T, giving Ennoconn a 29.4% stake in the company.

S&T currently owns a 29.9% stake in **Kontron AG**—which then would fall into Foxconn's ownership if a takeover

by Ennoconn happened, as reported in *Evertiq*.

New Orders... **Kinpo Electronics** has obtained OEM orders for vacuum cleaners from UK-based **Dyson** and began shipments from its factory in the Philippines in mid-November, according to a Chinese-language *Economic Daily News* (EDN) report. In addition to vacuum cleaners, Kinpo Electronics expects to begin OEM production of Dyson hand dryers in the first quarter of 2017.

Kitron Receives Contract from Northrop Grumman

Kitron has been selected by **Northrop Grumman Corporation** as an international source for manufacturing a subassembly for the F-35 Joint Strike Fighter. The potential value for Kitron is more than NOK 1 billion over the lifetime of the agreement, which runs until 2036.

The contract covers the initial steps of transferring technical know-how and manufacturing prototypes for testing and validation. This process will be ongoing through 2017. Kitron will then be awarded production contracts with deliveries starting in 2018.

Aimtron Acquires Target Corp.

Aimtron has acquired fellow EMS company **Target Corp.** for a reported \$1 million in cash.

Aimtron, which is based about 40 miles south in Palatine, IL, said it will be business as usual for Target.

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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. Copyright 2016 by NVR™. ISSN 1072-8651

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