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Hon Hai's Start Leaves Other Players in the Dust

Once again, Hon Hai Precision Industry has defied conventional wisdom. In the first quarter, the gigantic provider, also known by its Foxconn trade name, gobbled up market share versus year-earlier levels despite economic head winds and a rule that says a company its size cannot sustain a high growth rate. Hon Hai's consolidated Q1 sales climbed 35.5% year over year in US dollars, outpacing other large EMS companies by wide margins.

Hon Hai started the year on a different track from the other players in the top-11 EMS group. Contrast its 35.5% growth in Q1 with a combined sales decline of 1.9% for the other 10 companies in the top 11. The company's high-volume approach, which caters to the likes of **Apple**, has been a fountain of growth, while at least two of its competitors are de-emphasizing high-velocity business in favor of higher margin opportunities that also promise growth.

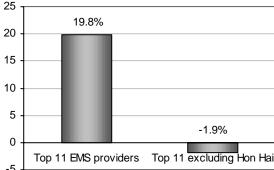
Hon Hai's \$33.7 billion in Q1 sales accounted for 65.7% of top-11 sales, which totaled \$51.3 billion. Thanks to Hon Hai, top-11 revenue increased 19.8% year over year. Without the EMS giant, top-11 sales would have fallen by the aforementioned 1.9%. Hence, Hon Hai was responsible for a positive swing of 21.7 percentage points (see chart).

On a year-over-year basis, only one other company, **Benchmark Elec-**

tronics, achieved a double-digit increase in Q1, and its growth rate was some 25 percentage points below that of Hon Hai. Take Hon Hai out of the analysis, and the Q1 picture that emerges does not evoke enthusiasm. Six out of the remaining 10 providers recorded year-over-year sales declines (Table 1, p. 2).

When comparing Q1 results to the prior quarter, however, Hon Hai does not stand out. The company's Q1 sales fell 5% sequentially versus a 5.5% decline for the top 11 overall. Excluding Hon Hai, the top-11 revenue drop would have been slightly greater at 6.4%. Q1 is generally regarded as a seasonally weak quarter, and the global business climate didn't help matters. Plus EMS companies had to deal with specific customer and sector issues. Just three providers in the top 11 succeeded in increasing their sales from the prior quarter, led

Hon Hai's Effect on Y-Y Growth of Q1 2012 Sales for the Largest EMS Providers



by **Cal-Comp Electronics** with a 10% gain (Table 1).

All 11 companies but one, Sanmina-SCI, were in the black for Q1.

Jabil posted the highest year-overyear growth in net income with a 76% increase. Four companies – Celestica, Flextronics, Shenzhen Kaifa Technology and Universal Scientific Industrial – achieved double-digit growth in their Q1 net income from a year earlier despite revenue reductions over the same interval.

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Together, the 11 providers earned net income of approximately \$902 million in Q1 for a net margin of around 1.8%. (These figures are approximate because not all companies use the same accounting standard.) Hon Hai had a negative effect on the group's net margin, which would have been about 2.3% without Hon Hai.

Hon Hai's attributable net margin of 1.49% for Q1 dragged the group's result downward and represented a 48-basis point drop from the level of a year ago. What's more, the company's Q1 gross margin of 6.64% declined 61 basis points year over year, while its operating margin of 1.52% went down 22 basis points from a year earlier.

Table 1:	Q1 2012 R	esults f	or the 1	1 Large	st EM	S Provi	ders (l	M US\$ c	or %)	
Company	Head-	Reports	Q1 '12	Q4 '11	Qtr	Q1 '11	Yrvr.		Q4 '11	
(in order of	quarters	•	sales	sales	qtr.	sales	chg.	net	net	net
Q1 '12 sales)	quartors	πιοοφ	34103	34103	chg.	34103	orig.	profit	profit	profit
Hon Hai	Taiwan	No	33,736	35,518	-5.0	24,895	35.5	503	1,158	492
(Foxconn)										
Flextronics	Singapore	Yes	6,382	7,480	-14.7	6,789	-6.0	173	104	135
Jabil	Florida	Yes	4,236	4,327	-2.1	3,929	7.8	98	113	55
Celestica	Canada	Yes	1,691	1,753	-3.6	1,800	-6.1	43	69	30
Sanmina-SCI	California	Yes	1,463	1,502	-2.6	1,569	-6.8	(1)	9	13
Cal-Comp	Thailand	No	1,093	993	10.0	1,009	8.3	8	(6)	25
Electronics										
Shenzhen Kaifa	China	No	640	688	-6.9	758	-15.5	7	11	7
Technology										
Benchmark	Texas	Yes	593	559	6.1	538	10.2	6	3	15
Electronics										
Plexus	Wisconsin	Yes	574	530	8.3	568	1.0	20	18	24
Universal Scien-	Taiwan	No	466	478	-2.5	515	-9.6	18	20	12
tific Industrial										
Venture	Singapore	No	455	492	-7.5	460	-1.3	28	30	32
Total/avg.			51,329	54,319	-5.5	42,830	19.8	~902	~1,527	~838
Total/avg. with-			17,593	18,801	-6.4	17,935	-1.9	~400	~369	~347
out Hon Hai										
out non Hai										

Results in non-U.S. currencies were converted to U.S. dollars by applying a three-month average exchange rate for the corresponding quarter. Average exchange rates were based on monthly 2011 and 2012 data from the US Federal Reserve. Net profit totals are approximate because not all companies follow the same accounting standard.

Down Quarter for US-Traded Group

As a group, the six largest US-traded EMS providers are starting the year in the hole, albeit a shallow one compared with a year ago. Their combined sales for the first quarter went down 1.7% year over year. On a sequential basis, the decline was greater, measuring 7.5%.

Though in negative territory, these results beat *MMI's* estimates of -2.8% year over year and -8.2% quarter on quarter, based on guidance midpoints (Feb., p. 7). Revenue for the six companies totaled 14.94 billion, \$100 million, or 0.7%, above *MMI's* estimate of \$14.84 billion.

The first quarter was the proverbial mixed bag. Compared with the year-earlier quarter, sales growth at three companies was more than offset by revenue declines at the other three.

Benchmark Electronics recorded the

highest year-over-year rate at 10.2%, followed by **Jabil** at 7.8%. In the sequential comparison, Benchmark and **Plexus** were the only providers to show sales gains (Table 1A, p. 3).

Five of the providers adhere to GAAP reporting, while the sixth, **Celestica**, has switched to IFRS reporting. For the five GAAP companies, GAAP gross margin for Q1 was 6.7% in the aggregate, up 30 basis points sequentially and 10 basis points year over year. Two providers, Benchmark and **Flextronics**, were responsible for the sequential increase.

GAAP operating margin for the five companies amounted to a collective 2.9%, up 40 basis points sequentially and 30 basis points year over year. Again, Benchmark and Flextronics drove the sequential gain, while Flextronics and Jabil were the only providers to achieve year-over-year improvement. As usual, Plexus turned in the highest margin at 4.5%. For the five companies combined, GAAP

gross and operating margins rose from the prior quarter and from a year earlier despite revenue declines of 8% sequentially and 1.1% year over year. Not bad for a challenging quarter.

Combined net income also improved sequentially and year-over-year in the face of aggregate revenue reductions. GAAP net income for the five providers totaled \$295.3 million, up 20% sequentially and 22.2% year over year. Benchmark, Flextronics and Plexus all raised their GAAP net income from the prior quarter, while Flextronics and Jabil achieved year-over-year gains. Q1 net margin for the GAAP reporting companies was 2.2%, up 50 basis points sequentially and 40 basis points year over year.

Q1 summaries for four providers

Last month's issue covered quarterly results for two out of the six largest US-traded providers. Results for the remaining four companies are briefly summarized below.

Benchmark Electronics. O1 sales of \$593 million exceeded guidance of \$550 million to \$590 million, and non-GAAP EPS of \$0.25 beat guidance of \$0.17 to \$0.23. Revenue rose 6% sequentially and 10% year over year, while non-GAAP EPS increased 47% sequentially and 4% year over year. The company earned GAAP net income of \$5.6 million, up from \$2.9 million in the prior quarter but down from \$14.5 million in the year-earlier period. Included in GAAP results for Q1 were Thailand flood-related charges of \$10.2 million, which are expected to be recovered from insurance.

Non-GAAP operating margin improved to 3% from 1.2% in Q4 2011, when the provider's Thailand operation was flooded. Benchmark attributed the margin increase to revenue growth driven by new program ramps, recovery from the Thailand flood and the focus of its global operations team. Although the company is at pre-flood revenue levels in Thailand, not all portions of its Thailand operation are completely back to business as usual. The margin impact of the Thailand flood includes duplicative costs and program transition and reintroduction costs. Benchmark is working toward achieving its margin target of 4% by the end of 2012.

Overall, the company saw increased demand during Q1 in three out of the

five market sectors it serves. Revenue from the telecom sector grew 36% sequentially, as this sector experienced a rebound, primarily made possible by the recovery in Thailand with an additional boost from new program ramps. Medical sales went up 3% from the prior quarter. Going forward, the company believes that recent wins will help maintain this sector's growth despite sluggish spending overall and customer concerns about industry changes. Sales from the industrial control sector advanced 1% sequentially. Test and instrumentation business was flat versus the prior quarter, while sales from the computing sector fell by an expected 5%. In general, Q1 is a seasonally lower quarter for this segment.

During Q1, the provider booked 37 new programs, including 10 engineering projects, worth an estimated \$100 million to \$120 million in annual revenue.

For Q2, Benchmark estimates that sales will be between \$595 and \$625 million, as the favorable impacts of new program ramps and end market stability are expected to continue amid macroeconomic head winds. The company expects EPS excluding restructuring and Thailand flood-related charges to be between \$0.26 and \$0.30. (See also the article on p. 5.)

Celestica. Q1 revenue of \$1.69 billion came in just below the high end of

guidance of \$1.60 billion to \$1.70 billion. Revenue fell 4% sequentially, while on a year-over-year basis the decline was 6%, mainly due to weaker demand across a number of customers. IFRS net earnings of \$43.2 million dropped 38% sequentially but increased 44% year over year. The yearover-year gain primarily resulted from lower SG&A expense and restructuring recoveries. Adjusted EPS amounted to \$0.25, down from \$0.33 in the prior quarter but unchanged from the year-ago period. The adjusted EPS result was one cent above the company's guidance range. Non-IFRS operating margin of 3.4% dropped 40 basis points sequentially but increased 10 basis points year over year.

Free cash flow (non-IFRS) in Q1 amounted to \$44.4 million.

The provider's diversified end market grew 3% sequentially and 58% year over year, with about one half of the latter growth coming from the Brooks Automation acquisition in 2011. This segment now represents 19% of Q1 revenue, up from 11% in the same period a year earlier. Consumer business declined 12% sequentially, as expected, and fell 14% year over year, primarily due to demand weakness and program transitions at one of Celestica's largest customers. Celestica did not identify the customer, yet **RIM**, which contributed some 19% of Celestica's Q1 sales, fits this

	Table	1A: Q1 20)12 R	esults for	Six L	arge E	MS Pro	viders	, US-Tr	aded (I	W US\$	or %)		
Company	Q1 '12 sales	Q4 '11 sales	Qtr qtr. chg.	Q1 '11 sales	riyi.	aross		gross		Q4 '11 oper. marg.	oper.		Q4 '11 net inc.	
Flextronics	6,382.4	7,479.8	-14.7	6,788.8	-6.0	5.7	5.1	5.6	2.61	1.7 ¹	2.41	173.4 ²	103.7°	134.7 ²
Jabil ³	4,236.2	4,326.8	-2.1	3,928.7	7.8	7.6	7.9	7.5	3.5	3.9	2.7	97.7	112.9	55.4
Sanmina-SCI	1,463.1	1,502.4	-2.6	1,569.1	-6.8	7.3	7.3	7.4	2.1	2.6	2.8	(1.4)	8.6	13.1
Benchmark	593.4	559.1	6.1	538.3	10.2	6.8	5.2	7.0	1.3	0.0	2.9	5.6	2.9	14.5
Plexus	573.5	529.7	8.3	568.1	1.0	9.5	9.8	9.8	4.5	4.5	4.6	20.0	17.9	23.9
Subtotal/avg.	13,248.6	14,397.8	-8.0	13,393.0	-1.1	6.7	6.4	6.6	2.9	2.5	2.6	295.3	246.0	241.6
Celestica	1,690.9	1,753.4	-3.6	1,800.1	-6.1	6.6	7.0	6.5	2.8	3.2	1.9	43.2	69.2	30.0
Total/avg.	14,939.5	16,151.2	-7.5	15,193.1	-1.7									

All results are based on GAAP except those of Celestica, which has converted to IFRS reporting. With the exception of sales, GAAP and IFRS results are not necessarily comparable. ¹Intangible amortization was subtracted from reported operating income. ²Net income from continuing operations. ³For Jabil, Q1 '12 corresponds to the quarter ended Feb. 29.

description. Revenue from the communications segment decreased 5% sequentially, and the year-over-year drop was 15%, as the provider experienced demand declines across a number of customers. Sales from the server segment grew 4% from the prior quarter, driven by a major customer in this end market, but went down 8% from a year earlier. Storage business made a slight sequential gain, but it fell 19% year over year, primarily due to demand softness across a few customers.

The majority of Celestica's end markets appear to be stable, yet visibility remains limited. For Q2, the company expects revenue of \$1.65 billion to \$1.75 billion. While the revenue outlook is relatively flat on a sequential basis, Celestica anticipates reductions of about 10% in the consumer segment offset by growth in the balance of its end markets, with the strongest growth coming from storage and servers. Q2 guidance calls for adjusted EPS of \$0.20 to \$0.26. At the midpoint of this guidance, non-IFRS operating margin would be about 3.4%.

Celestica reported that it is in discussions with RIM regarding RIM's desire to reduce its supply chain capacity and number of manufacturing locations (April, p. 8). Given the uncertainty with RIM, Celestica was unable to provide a full-year outlook for 2012. The company backed away from its earlier estimate of 3% to 5% growth this year (Feb., p. 7).

Flextronics. For its fiscal Q4 ended Mar. 31, sales totaled \$6.38 billion, down 15% sequentially and 6% year over year. Both results were driven by a decline in the company's High Velocity Solutions (HVS) business. Revenue was within guidance but somewhat below its midpoint of \$6.45 billion. By contrast, adjusted EPS of \$0.28 beat guidance of \$0.22 to \$0.24 and rose 56% sequentially and 33% year over year.

Non-GAAP operating income of

\$190 million increased 25% sequentially and 1% year over year. GAAP net income from continuing operations equaled \$173 million, up 67% sequentially and 28% year over year. Including discontinued operations (soon-to-be divested **Vista Point Technologies** business now falls in this category), GAAP net income came to \$157 million, up 53% sequentially and 16% year over year.

Two of the company's business groups achieved sequential and yearover-year growth, as the other two units experienced a sales decline in both comparisons. Integrated Network Solutions (INS) business, which had the largest share of March quarter sales, grew 13% year over year and 3% sequentially, in line with the company's quarter-to-quarter expectations. In addition, revenue from High Reliability Solutions (HRS) rose 27% year over year and 9% sequentially. Sales from this group exceeded expectations. Within HRS, the fastest growing segment was automotive, with a sequential increase of 17% and a yearover-year gain of 32%.

On the other hand, sales from Industrial and Emerging Industries (IEI) fell 6% year over year and 4% sequentially, and the latter result came in slightly below expectations of stable revenue primarily as a result of weakness in the company's solar portfolio. Finally, High Velocity Solutions (HVS) saw its revenue drop 38% sequentially and 29% year over year. Significant weakness from the provider's largest mobile customer, RIM, combined with unfavorable seasonality among a handful of consumer electronics customers drove the majority of a significant double-digit decline from the prior quarter in the mobile and consumer businesses within HVS.

For the March quarter, adjusted gross margin was 5.7%, up 50 basis points sequentially, and adjusted operating margin came in at 3%, up 100 basis points sequentially. The increase

in both margins was primarily due to the company's withdrawal from the ODM PC business and a reduction of related charges.

Guidance for the quarter ending June 29 calls for sales of \$5.9 billion to \$6.3 billion, reflecting a sequential decline that is not typical for the company's business. Flextronics foresees a sequential drop of 15% to 25% in its HVS business, partially offset by growth on the non-HVS side. On a sequential basis, the company expects high single-digit growth for IEI, low single-digit growth for HRS and flat sales for INS. The forecast for non-GAAP EPS is \$0.20 to \$0.24. (See also the article on p. 5.)

The company believes it can achieve a 70-30 mix of non-HVS business to HVS business for fiscal 2013.

Regarding RIM, Flextronics expects to move away from manufacturing on four continents for the customer and to end up with a smaller base of business.

Sanmina-SCI. For its fiscal Q2 ended Mar. 31, the provider reported revenue of \$1.46 billion, down 3% sequentially and 7% year over year. Revenue was at the low end of guidance of \$1.45 billion to \$1.55 billion. Non-GAAP gross margin came in at 7.4%, up 10 basis points from the prior quarter but down 10 basis points from the same period a year earlier. Non-GAAP operating margin amounted to 3.1%, down 20 basis points sequentially and 30 basis points year over year, as non-GAAP operating income fell 10% sequentially and 16% year over year. Non-GAAP EPS of \$0.27, which equaled the guidance midpoint, was one cent less than in the prior quarter and three cents below the year-earlier level.

On a GAAP basis, the company reported a net loss of \$1.4 million for the March quarter, compared with net income of \$8.6 million in the previous quarter and \$13.1 million a year earlier. The loss included a \$6.5-million

charge associated with the redemption of \$150 million of debt during the quarter and a \$2.8-million reserve for a customer that declared bankruptcy. In April (the June quarter), Sanmina-SCI paid down an additional \$100 million in debt. The combination of the two redemptions will save the company about \$20 million in annual interest expense.

In the March quarter, the company generated \$46 million in free cash flow.

During the quarter, Sanmina-SCI saw relatively flat demand across most segments, except for multimedia, where sales dropped 14.5% sequential-

ly. Compared with the prior quarter, sales from communications networks went down 0.9%, instead of improving slightly as the company had forecasted. This is company's largest segment at 45% of March quarter sales. Business in the defense/industrial/medical segment declined 2.2% sequentially, while sales from enterprise computing and storage rose 3.2% sequentially.

The June quarter outlook calls for revenue of \$1.475 billion to \$1.525 billion, non-GAAP operating margin of 3% to 3.2%, and non-GAAP EPS of \$0.26 to \$0.32. Sanmina-SCI expects business to improve sequentially in communications networks and enter-

prise computing and storage. The forecast for the defense/industrial/medical segment is stable to slightly up, while the outlook for multimedia is flat to

The provider said its visibility and outlook for the second half of the calendar year are more promising, and most customers still have a better outlook for the second half. Second-half demand should also benefit from new program shipments and anticipated pipeline refilling. In addition, Sanmina-SCI has noticed that the second-half forecast for its component business is starting to improve.

US-Traded Group Projected to Slip Further

On a year-over-year basis, *MMI* is estimating a substantially greater group sales decline in Q2 than in Q1 for the six largest US-traded providers. As a result, projections say their combined first-half sales will suffer a decline that could put their entire year at risk.

Estimated Q2 sales for the group of six total \$14.82 billion, down 9.6% year over year. Unless *MMI's* estimates are way off, this will mark the third straight quarter of year-over-year sales declines. The group started out the year with a much milder Q1 revenue decline of 1.7% (see article on p. 2). Taken together, these two drops place the group's first-half sales

squarely in negative territory. Projected first-half sales come to \$29.75 billion, which is 5.8% below the year-earlier level. As a group, the six providers must stage a strong recovery in the next two quarters in order to end up with a respectable year for growth.

While combined first-half sales are expected to be a disappointment, a more nuanced picture emerges when estimates are viewed company by company. According to *MMI's* estimates, three providers – **Benchmark Electronics**, **Jabil** and **Plexus** – will see their first-half sales grow year over year, and the projected increases range from 4.5% to 7.1%, with Benchmark at the high end. First-half estimates for

the other three providers – **Celestica**, **Flextronics** and **Sanmina-SCI** – point to sales declines. Flextronics is expected to endure the largest drop at -12.7% (Table 1B).

When it comes to year-over-year performance for Q2 sales, the same groupings emerge. As with first-half sales, Celestica, Flextronics and Sanmina-SCI – will watch their Q2 sales fall from a year earlier, according to *MMI's* estimates. Both Flextronics and Sanmina-SCI are expected to experience double-digit declines in the June quarter, with Flextronics' 18.7% drop exerting the greatest drag on group performance. On the plus side, projections show Q2 sales growing year over

Table 1B: Q2 2012 Guidance and Estimates for the Six Largest US-Traded Providers (sales in B\$ except as noted)														
Company	Q2 guidance	Q2 mid- point	Q1 '12 sales	Qtrqtr. estim. chg.	Q2 '11 sales	estim.	Q1-2 '12 estimat- ed sales	'11	Esti- mated change	eu EFS	Q2 guidance adjusted EPS* \$	Q2 EPS midpoint		EPS Y-Y chg. at midpoint
Flextronics	5.9 - 6.3	6.1	6.38	-4.4%	7.51	-18.7%	12.48	14.30	-12.7%	0.28	0.20 - 0.24	0.22	-21%	5%
Jabil**	4.2 - 4.4	4.3	4.24	1.5%	4.23	1.7%	8.54	8.16	4.7%	0.58	0.60 - 0.70	0.65	12%	12%
Celestica	1.65 - 1.75	1.7	1.69	0.5%	1.83	-7.1%	3.39	3.63	-6.6%	0.25	0.20 - 0.26	0.23	-8%	-15%
Sanmina-SCI	1.475 - 1.525	1.5	1.46	2.5%	1.67	-10.4%	2.96	3.24	-8.6%	0.27	0.26 - 0.32	0.29	7%	-31%
Benchmark	595 M - 625 M	0.61	0.59	2.8%	0.59	4.2%	1.20	1.12	7.1%	0.25	0.26 - 0.30	0.28	12%	12%
Plexus	590 M - 620 M	0.61	0.57	5.5%	0.56	8.2%	1.18	1.13	4.5%	0.56	0.60 - 0.66	0.63	13%	9%
Total/avg.		14.82		-0.8%	16.38	-9.6%		31.58			idpoint of O2 au			

Q2 estimates equal midpoint of Q2 guidance. First-half 2012 estimates equal Q1 sales plus midpoint of Q2 guidance. *Adjusted EPS may not be comparable from company to company. **Q2 2012 data correspond to the quarter ending May 2012.

year at the same three companies: Benchmark, Jabil and Plexus. Of those three, only Plexus' increase (8.2%) is above 5% (Table 1B, p. 5). Sales increases at those providers will be overwhelmed by the declines at the other three, particularly Flextronics.

However, when group sales are compared from quarter to quarter, the result conveys stability. *MMI* projects that combined Q2 revenue for the six providers will be nearly flat (-0.8%) versus the prior quarter. Five of the six companies will increase their Q2 sales sequentially, offset by Flextronics' 4.4% decline, if *MMI's* estimates hold true.

Q2 revenue for each provider was estimated by selecting the midpoint of its Q2 sales guidance. Note that in Jabil's case, Q2 data correspond to the quarter ending May 2012.

At Benchmark, Jabil and Plexus, guidance suggests that their non-GAAP EPS for Q2 will improve from the prior quarter. Sequential growth at the midpoint of guidance would be 12% for Benchmark and Jabil and 13% for Plexus. Flextronics' Q2 guidance implies that its adjusted EPS will drop sequentially, and the decline would be 21% at the guidance midpoint. No such conclusions can be drawn from Celestica's and Sanmina-SCI's guidance. Nevertheless, at the midpoint of guidance Celestica's non-IFRS EPS for O2 would be down 8% sequentially, while Sanmina-SCI's non-GAAP EPS would be up 7% (Table 1B).

On a year-over-year basis, Benchmark, Jabil and Plexus again expect adjusted Q2 EPS to grow, based on their guidance. At the midpoint of guidance, non-GAAP EPS would increase 12% from a year earlier at Benchmark and Jabil and 9% at Plexus. These calculated EPS gains at Benchmark and Jabil are substantially higher than the estimated increases in their sales. The Q2 outlook at Celestica and Sanmina-SCI calls for adjusted

EPS declines at both companies. At the guidance midpoint, Celestica's non-IFRS EPS would fall 15% year over year, while Sanmina-SCI's non-GAAP EPS would drop 31%. Flextronics' Q2 guidance does not indicate which direction adjusted EPS will go, but at the guidance midpoint non-GAAP EPS would rise 5% year over year (Table 1B). Contrast this EPS increase at the midpoint with an estimated sales decline of 18.7%.

News

Some new business...Satcon Technology (Boston, MA), a provider of utility-scale power solutions for the renewable energy market, has engaged Sanmina-SCI (San Jose, CA) to manufacture a series of Satcon's solar inverters along with the customer's prepackaged Prism Platform solutions. Manufacturing will be done in Ottawa, Ontario, Canada to comply with Ontario's feed-in-tariff program (June 2011, p. 1-2). Also in the clean tech segment, eSolar (Burbank, CA), a provider of concentrating solar power (CSP) plant technology, has partnered with Sanmina-SCI to design next-generation CSP components....Baidu, a search engine company in China, has tapped Foxconn International Holdings, the handset subsidiary of Hon Hai Precision Industry, to produce a new smartphone, according to published reports....Kimball Electronics Group (Jasper, IN), the EMS unit of publicly held Kimball International, has landed a contract from TRW Automotive (Livonia, MI) to supply a steering electronic control unit for the new Fiat 500L model, which has entered the European automotive market. Kimball's site in Poznan, Poland, will serve as the primary manufacturing facility for the device. In addition, Motorola Solutions (Schaumburg, IL) has awarded the Kimball unit a contract to produce multi-unit chargers for entry-level professional radios. Manufacturing for this multi-year program, which will include about 10,000 units a year, will take place in Reynosa, Mexico....Contract manufacturer PartnerTech (Vellinge, Sweden) and **Safetykleen**, a European supplier of parts-washing services, have signed a three-year framework agreement for the development and manufacturing of products for Safetykleen. PartnerTech has received an initial order, worth an estimated 8.6 million euros (\$11 million) over three years, for a new cleaning system that uses biologically degradable material. The company will provide development services out of Moss, Norway, and deliver complete systems from its unit in Myslowice, Poland. Also, PartnerTech has obtained new orders totaling about SEK 90 million (\$12.6 million) from two defense customers for the supply of mechanical components.

Alliances...Foxconn International Holdings and Taiwan-based Wavs Technical, which specializes in surface coatings for handheld devices, have formed a joint venture for designing and manufacturing plastic molds for handheld devices. A Ways subsidiary, which engages in plastic injection and mechanical assembly for handheld products, took a 50% interest in the venture....EMS provider Firstronic (Grand Rapids, MI) recently formed two alliances. In the first one, the provider teamed up with design firm DornerWorks to market their respective services to customers requiring design and manufacturing support. Through the second alliance, Firstronic and Flight Systems Electronics Group (Lewisberry, PA), a remanufacturing firm, will jointly offer their respective services to customers who need manufacturing as well as remanufacturing and warranty support.

Facility projects...Hon Hai Precision Industry (Tucheng City, Taiwan), also known by its Foxconn trade name,

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intends to establish a production site in China's island province of Hainan, according to published reports. In the Chinese city of Chongging, Foxconn is planning to erect a factory for producing entry-level HP inkjet printers, reported Actionable Intelligence, which cited an HP statement. Based on a report from China's official Xinhua news outlet, Digitimes and China Daily have written that Foxconn will spend some \$210 million to build a plant at Huai'an in Jiangsu province of Eastern China for the purpose of supplying components to Apple. Reportedly, Foxconn has broken ground in Shanghai for the construction of its China headquarters. Finally, Foxconn intends to build a facility in Brazil's Rio de Janeiro state to produce car batteries, solar panels and power-saving street lamps, according to two published reports. The project is said to cost \$1 billion, and wire services identified Brazilian billionaire Eike Batista, who announced the project, as a potential 50% investor in it....Plexus (Neenah, WI) intends to construct a 410,000-ft² manufacturing facility in Neenah, WI, in place of two leased facilities. The new facility is expected to cost about \$50 million and is scheduled for completion in the fall of 2013. Also, the company plans to build a 280,000-ft² plant in Oradea, Romania, to replace its leased facility there. Plexus will spend about \$40 million on the project, which is due to be finished next spring....In Malaysia, Celestica (Toronto, Canada) is investing to establish a global center of excellence for the semiconductor capital equipment market as well as for market segments that require complex electromechanical solutions....Sanmina-SCI is building a PCB facility of about 250,000 ft² in China and is adding manufacturing capacity in India. ...SMTC (Markham, Ontario, Canada) has completed the integration of **ZF** Array (Sept. 2011, p. 4-5) and subsequent expansion at its manufacturing facility in San Jose, CA. Included in the expansion is a new Class 10,000 clean room, which will service a growing demand from medical device OEMs.

People on the move...Chris Cook recently joined **Flextronics** (Singapore) as president, Power and Advanced Manufacturing Solutions. With more than 20 years of management

experience in the semiconductor industry, Cook most recently served as a key member of **Infineon Technologies'** leadership team....**AsteelFlash** (Paris, France) has appointed Chuck Thistle as VP of business development for the Americas. Prior to AsteelFlash, Thistle was corporate VP of business development at EMS provider **Benchmark Electronics**, where he spent 14 years

Last Word

Excess Overtime Redefined

Much has been made of the Fair Labor Association's inspection of **Foxconn** facilities in China on behalf of **Apple**. (See also April, p. 7-8.) The FLA report became a major news story, and all sorts of people chimed in with opinions about it. But what was not covered by media or adequately explored by pundits was the effect this report could have on the EMS industry in China. And the impact on the industry could be significant if other providers in China follow Foxconn in observing the overtime limit specified by Chinese labor law.

The report's central findings concern excess overtime at three Foxconn factories. These factories exceeded the FLA standard of a 60-hour workweek, a maximum also espoused by the EICC (Electronic Industry Citizenship Coalition), and had workers putting in more than the Chinese legal limit of 40 regular hours per week and 36 hours of overtime per month. Note that the 60-hour standard permits 80 hours of overtime per month versus the more restrictive Chinese limit of 36 hours.

Foxconn has agreed to move beyond compliance with the FLA standard to achieve full compliance with Chinese law regarding hours of work by July 1, 2013. The report shows that the lack of compliance with Chinese

law was not an occasional oversight; it was systematic. For example, the FLA found that 77.1% of the workforce at the Longhua campus worked beyond the legal limit between March 2011 and February 2012.

How did Foxconn get away with such widespread flouting of the Chinese legal limit? MMI believes that Chinese authorities had turned a blind eye toward enforcement of their own restriction on working hours. Allowing excess overtime was a win-win of sorts. It gave migrant workers the ability to earn more pay while satisfying the production needs of China's largest employer in the private sector. After all, migrant workers typically go to a company like Foxconn to put in long hours so they'll make more money for themselves and their families. Indeed, 48% of the workers surveyed by the FLA said their working hours were reasonable, and another 33.8% indicated a desire to work even more hours.

Foxconn is not an isolated case. In China, the EMS industry's need to deliver product during periods of peak demand (or the Chinese New Year holidays) combined with a workforce willing to work longer hours is a prescription for more overtime. With Foxconn moving to the Chinese legal limit of 36 hours of overtime per month, the question for the rest of the industry becomes: How much overtime is now deemed excessive?

Last year, Flextronics issued its Supply Chain Sustainability Report, in which the company described its use of the 60-hour workweek standard in its CSER audits of supplier facilities primarily located in China (June 2011, p. 5). It would be unlikely that Flextronics is the only EMS provider (other than Foxconn) to apply the 60-hour standard in China.

Moving from a 60-hour workweek with 80 hours of overtime a month to 36 hours of overtime a month, as Foxconn is doing, is a major undertaking. The company will have to hire tens of thousands of workers, while raising pay to compensate for the lost overtime. Foxconn has a couple of aces up its sleeve. Reportedly, it plans to install a million robots by 2014, the machines taking over some tasks performed by workers. As for the other card, Apple reportedly will share the cost of the increased wages.

MMI would be surprised if Apple and Foxconn executives did not know that Foxconn was regularly exceeding the tougher Chinese limit on overtime. Apple had already conducted its own audits of Foxconn. In requesting the FLA inspection, Apple had to be aware that the FLA would enforce the Chinese limit, even though the Chinese government had looked the other way in the past, and by allowing the FLA to come in, Foxconn had to know that it would be audited against that limit. The two other Apple suppliers on the FLA's inspection list, Quanta Com-

puter and **Pegatron**, must also be onboard with the Chinese limit, or they would not have agreed to open their doors to the FLA.

Where is the Chinese government in all of this? After all, it is a Chinese labor law that is being enforced by the FLA. Whether or not Chinese authorities were involved in the inspection, they are not objecting to its results. Boosting wage rates in this manner meets the government's goal of stimulating domestic demand while becoming less dependent on exports. The Chinese government's tacit approval may signal a greater interest in seeing compliance with its overtime rule.

Already, momentum is building toward compliance with the 36-hour per month overtime limit. At least three major suppliers to Apple appear to be committed to the Chinese limit on overtime, and it would not be a stretch to assume that Apple will be promulgating the limit throughout its supply chain in China. Another boost for the Chinese legal limit can be found in the EICC Code of Conduct, which states: "Workweeks are not to exceed the maximum set by local law." With the spotlight on the Chinese limit, EICC members in the top EMS tier will find it difficult to ignore the fact that Chinese law calls for an average workweek of 49 hours as opposed to the 60-hour maximum permitted by the EICC Code of Conduct.

Whether or not the Chinese government decides to start enforcing its overtime limit, Apple and Foxconn have started a movement in China that cannot be reversed. Once Foxconn raises wages in the next year to make up for lost overtime, other manufacturers in China will have to match Foxconn's wages and hours or lose out on recruitment.

Excess overtime in China is being redefined. And this development will further increase the cost of manufacturing in China.

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