

# The \$50 Billion Club

The gap between the Top 10 EMS companies and their smaller rivals is striking.

By Mike Buetow and Chelsey Drysdale

Determining the size of the largest EMS companies is more difficult than would first appear. Just looking at the major players' annual revenues is recipe for error. Many of these companies also perform original design work, and market self-designed and manufactured products under other companies' brands. Moreover, in many cases, they make products such as bare boards (Foxconn, Sanmina-SCI, Viasystems) or connectors or other components (Vogt Electronic, Foxconn again), yet don't break out those sales from EMS-specific revenues. In some instances, they are subsidiaries of OEM conglomerates, as is the case with Hitachi OMD and Connect Systems International, or a joint venture of far-flung holding companies, as is Integrated Microelectronics Inc. Some have stakes in other independently run EMS companies, raising questions over possible double-counting of EMS sales. Still others are privately held and not required to reveal their finances.

But why should that stop us from trying? This is CIRCUITS ASSEMBLY's first attempt to break down the EMS industry's largest players (Table 1). Every attempt has been made to isolate EMS and related sales. Estimates, where made, are indicated. Estimates

of privately held companies are based on company-supplied figures, CIRCUITS ASSEMBLY interviews, third-party sources such as Hoovers, and other media sources. Most estimates of publicly held companies are based on company-provided guidance for the fourth quarter or, in the case of Taiwanese companies, the month of December, as noted.

Another caveat: While all figures are given in US dollars, currency translations constantly change and can obscure the numbers, in some cases dramatically. The currency conversions we used are shown in Table 2.

One company that has shown up on some other lists – DRS Technologies (recently purchased by Italy's Finmeccanica) – is not listed here. Why? Frankly, because we could not discern the value of its EMS offerings, or even if it truly manufactures on behalf of OEM customers. Another

firm, Aeroflex, clearly assembles product for OEMs, but those programs are secondary to its test and measurement systems – and it's privately held.

By region, the US stood out as home to the biggest EMS companies. A total of 15 base their headquarters there (Table 3), including Flextronics, which is registered in Singapore but based in San Jose, and Fabrinet, which is incorporated in the Cayman Islands but maintains headquarters in San Francisco.

Table 2. Currency Conversions

1 USD =	0.715824 euros
=	7.75075 Hong Kong dollars
=	95.720 Hungary forint
=	3.49871 Malaysia ringgits
=	90.2737 Japanese yen
=	7.13234 Norway kroners
=	1.44590 Singapore dollars
=	7.96878 Swedish kronors
=	33.0425 Taiwanese dollars
=	34.6176 Thailand baht

Table 3. Entries by Nation

US	15
Hong Kong	6
Canada	4
Taiwan	3
Singapore	3
China	2
Sweden	2
Thailand	2
Belgium	1
France	1
Finland	1
Germany	1
Hungary	1
Japan	1
Luxembourg	1
Malaysia	1
Netherlands	1
Norway	1
Philippines	1
Switzerland	1
UK	1

Table 1. The CIRCUITS ASSEMBLY Top 50 EMS Companies, 2008

Rank	Company	HQ Nation	2008 Revenue(\$millions)	Website
1	Foxconn Electronics <sup>1</sup>	Taiwan	\$44,400	fih-foxconn.com
2	Flextronics <sup>1</sup>	US	\$32,400-\$33,400 <sup>E5</sup>	flextronics.com
3	Jabil Circuit <sup>1</sup>	US	\$12,900-\$13,100	jabil.com
4	Celestica <sup>1</sup>	Canada	\$7,490-\$7,740 <sup>E5</sup>	celestica.com
5	Sanmina-SCI <sup>1</sup>	US	\$6,450-\$6,650 <sup>E5</sup>	sanmina-sci.com
6	Elcoteq <sup>1</sup>	Luxembourg	\$4,490 <sup>E5</sup>	elcoteq.com
7	Cal-Comp Electronics/Kinpo Electronics <sup>1</sup>	Thailand	\$3,230 <sup>E5</sup>	calcomp.com.th
8	Venture Corp.	Singapore	\$2,730 <sup>E5</sup>	venture.com.sg
9	Benchmark Electronics <sup>1</sup>	US	\$2,610-\$2,650 <sup>E5</sup>	bench.com
10	Plexus <sup>1</sup>	US	\$1,840-\$1,860 <sup>E5</sup>	plexus.com
11	SIIX <sup>1</sup>	Japan	\$1,490 <sup>E6</sup>	siix.co.jp
12	Asteel	France	\$750 <sup>E3</sup>	asteel.fr
13	Kimball Electronics Group <sup>1</sup>	US	\$732.7	kimball.com
14	Beyonics Technology <sup>1</sup>	Singapore	\$727.2 <sup>B</sup>	beyonics.com
15	Alco Electronics <sup>1</sup>	Hong Kong	\$677.9 <sup>B</sup>	alco.com.hk
16	Zollner Elektronik	Germany	\$675 <sup>E</sup>	zollner.de
17	Nam Tai Electronics <sup>1</sup>	China	\$623	namtai.com
18	Elite Industrial Group <sup>1</sup>	Hong Kong	\$600	elitecorp.com
19	Orient Semiconductor Electronics <sup>1</sup>	Taiwan	\$542.4 <sup>E4</sup>	ose.com.tw
20	Hitachi Computer Products (America), Inc.	US	\$535 <sup>E</sup>	hitachiomd.com
21	3CEMS Group (FIC Group)	China	\$515M <sup>E</sup>	3cems.com
22	Fabrinet <sup>1</sup>	US	\$511M	fabrinet.com
23	Viasystems Group	US	\$504 <sup>E</sup>	viasystems.com
24	Universal Scientific Industrial Co. (USI) <sup>1</sup>	Taiwan	\$490.4	usi.com.tw
25	Enics <sup>1</sup>	Switzerland	\$486.6 <sup>E</sup>	enics.com
26	Jurong Hi-Tech <sup>1</sup>	Singapore	\$485 <sup>B</sup>	juronghitech.com
27	Videoton Holding <sup>1</sup>	Hungary	\$458.1 <sup>E</sup>	videoton.hu
28	Integrated Microelectronics Inc. (IMI) <sup>1</sup>	Philippines	\$454.7 <sup>E5</sup>	imiphil.com
29	Surface Mount Technology (Holdings) Ltd. <sup>1</sup>	Hong Kong	\$406.2 <sup>B</sup>	smthk.com
30	Creation Technologies	Canada	\$392 <sup>7</sup>	creationtech.com
31	CTS Electronics Manufacturing Solutions <sup>1</sup>	US	\$387.1-\$389.1 <sup>E5</sup>	ctscorp.com
32	Neways Electronics International <sup>1</sup>	the Netherlands	\$351.6 <sup>E6</sup>	neways.nl
33	Hana Microelectronics	Thailand	\$345.3 <sup>E5</sup>	hanagroup.com
34	LaBarge <sup>1</sup>	US	\$344.6 <sup>E2,5</sup>	labarge.com
35	Wong's Electronics/WKK Technology <sup>1</sup>	Hong Kong	\$335.7	wongswec.com
36	Computime Ltd.	Hong Kong	\$311.9 <sup>B</sup>	computime.com
37	PartnerTech <sup>1</sup>	Sweden	\$311.5 <sup>E5,9</sup>	partnertech.se
38	Kitron <sup>1</sup>	Norway	\$298.9 <sup>E5</sup>	kitron.com
39	Scanfil <sup>1</sup>	Finland	293.6 <sup>E5</sup>	scanfil.fi
40	VTech Communications <sup>1</sup>	Hong Kong	\$284.4 <sup>E6</sup>	vtech.com
41	V.S. Industry	Malaysia	\$266.8 <sup>B</sup>	vs-i.com
42	On Core Manufacturing	US	\$260 <sup>E</sup>	oncorems.com
43	EPIC Technologies	US	\$255 <sup>E</sup>	epictech.com
44	BreconRidge	Canada	\$250 <sup>E</sup>	breconridge.com
45	SMTC <sup>1</sup>	Canada	\$243.5M <sup>E5</sup>	smtc.com
46	IPTE/Connect Systems International	Belgium	\$229.9 <sup>E5</sup>	ipte.com
47	Suntron	US	\$220 <sup>E</sup>	suntron.com
48	MC Assembly	US	\$215M <sup>E</sup>	mcati.com
49	NOTE <sup>1</sup>	Sweden	\$214.3 <sup>E5</sup>	note.eu
50	Saturn Electronics & Engineering	US	\$200 <sup>E</sup>	saturnee.com

Notes: E = estimated, 1. Publicly held, 2. Includes Pemstar acquisition. 3. Includes Flash Electronics and MRP acquisitions. 4. Based on unaudited revenue through November and company guidance for December. 5. Based on audited revenue through first three quarters and most recent company guidance (or CIRCUITS ASSEMBLY estimates) for Q4. 6. Based on audited H1 revenue and company and CIRCUITS ASSEMBLY estimates for H2. 7. Includes ProWorks and Circuit Service acquisitions. 8. Based on four quarters ended Sept. 30, 2008. 9. Includes Poole, which makes up 3% of sales and is being divested.

US-based companies aren't the only ones taking advantage of favorable tax laws and other conditions outside their home nations. No. 6 Elcoteq, for instance, was re-domiciled to Luxembourg from Lohja, Finland, as of Jan. 1, 2008, while operations of Macao-based Nam Tai, No. 17 on our list, are conducted by its subsidiary, Nam Tai Electronic & Electrical Products Ltd., which is incorporated in the Cayman Islands.

With just one entry, No. 11 SIIX, Japan, the world's third-largest producer of electronics goods behind China and the US, is underrepresented on the Circuits Assembly Top 50. The reasons are well known: Japan has been slow to adopt a contract model, and tends to prefer build product at its own conglomerates' far-flung operations, which are located everywhere from China to Malaysia to the US and Mexico. One such unit, Hitachi OMD, makes our list at No. 20, although it's a somewhat controversial entry, as it is unclear how much of the goods the division produces are for internal Hitachi consumption.

Europe is well represented as a continent, but no individual country stands out. Sweden weighs in with two entrants: No. 27 PartnerTech, a specialist in industrial and medical gear (and close collaborator with No. 21 3CEMS of China), and military and defense-centric No. 49 NOTE – while Germany, the world's fourth-largest electronics producer, has just one.

No doubt the list contains some miscues, for which we apologize in advance. While we may be off base in some areas, what's clear from this exercise is that companies smaller than \$200 million need not apply. Please visit our Website for updated rankings. ■

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