

**Best Export Markets
For
U.S. Electronic Components, 2008**

Best Export Markets for U.S. Electronic Components was compiled by Sonali Jadhav, under the supervision of Maurice Kogon, Director of the El Camino College Center for International Trade Development (CITD) in Hawthorne, California. The report is based largely on 2008 Country Commercial Guides (CCGs) prepared by United States Commercial Service (USCS) posts abroad. All CCGs include a standard chapter "Leading Sectors for U.S. Exports." This report drew from those CCGs which specifically recommended **Electronic Components** as a best prospect for U.S. exports.

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I. Export Market Overview

A. Thermionic, Cold Cathode or Photocathode Tubes (Vacuum, Vapor, or Gas Filled Tubes, Cathode-Ray Tubes, Television Camera) – HS-8540

This Market Brief provides an overview of the world market for Electronic Components falling within the HS 8540 category, based on an analysis of the latest trade statistics and market research.

Export growth: U.S. exports of HS 8540 products fell from \$1.35 billion in 2004 to \$398.7 million in 2007, a decrease of 70.5% over the four-year period.

Leading Export Markets: Mexico is by far the leading market for U.S. exports of HS-8540 products (\$76.6 million in 2007, or 19% of total). Other top markets (all valued above \$17 million) were: Japan (12.23% of total), United Kingdom (9.11%), Canada (7.14%), Germany (5.88%) and Singapore (4.41%). Other significant markets (above \$12 million) were: France (4.37%), Korea (4.07%), China (3.38%), and Netherlands (3.19%).

Fastest Growing Export Markets: The leading markets with both high and sustained growth rates for U.S. exports of HS 8540 products over the latest four years (2004-07 and 2006-07) were: Colombia, Hong Kong, India, Peru, Sweden and Luxembourg. Other significant growth markets over the 2004-07 period were Japan, Singapore and Korea.

Leading Importing Countries: The top foreign importers of HS 8540 products in 2006 were China (\$1.4 billion, or 19.24% of total), Mexico(9.23%),Brazil (8%),United States(7.8%), and Malaysia(7.03%).Other significant importers (all above \$1.6 billion) were Thailand(6.87%), Hong Kong (5.97%), Russia (5.3%), and Poland (3.9%).

World Market Size & U.S. Share: Total world exports of HS 8540 products by all countries reached \$8.3 billion in 2006, down from \$14.08 billion in 2003 (-41.99%). The U.S. had a 7.92% share of the total world market in 2006, topped only by China (18.2%), Korea (16.26%), Japan (9.54%) and Malaysia (8.11%). Other world suppliers with significant market shares were Hong Kong (6.16%), France (4.52%) and Mexico (4.01%).

Best Market Prospects: The markets listed below appear to be particularly promising for U.S. exports of Electronic Components over the next two years, based on recommendations of in-country USCS industry specialists. Specific U.S. export statistics on products in this category are available from the CITD for all countries, including those listed below (Source: U.S. Census Bureau). The CITD also has access to relevant trade contacts, trade opportunities and market research on each country:

- Hong Kong
- Japan
- Thailand
- Mexico
- Singapore
- Germany
- Taiwan
- Israel

I. Export Market Overview

B. Diodes, Transistors and Similar Devices; Photosensitive Semiconductor Devices; Light Emitting Diodes; Mounted Piezoelectric – HS - 8541

This Market Brief provides an overview of the world market for Electronic Components falling within the HS 8541 category, based on an analysis of the latest trade statistics and market research.

Export growth: U.S. exports of HS 8541 products rose from \$5 billion in 2004 to \$8.17 billion in 2007, an increase of 63.1% over the four-year period.

Leading Export Markets: The leading markets for U.S. exports of HS-8541 products in 2007 (all above \$400 million) were: Korea (15.63%), Mexico (12.21%), Hong Kong (9.87%), Germany (8.32%), Philippines (6.4%), Singapore (6.32%) and China (5.4%). Other significant markets (above \$100 million) were: Malaysia (4.78%), Thailand (4.24%), Taiwan (4.19%), Japan (3.71%), Canada (3.35%), UK (2.85%) and Brazil (1.24%).

Fastest Growing Export Markets: The leading markets with both high and sustained growth rates for U.S. exports of HS 8541 products over the latest four years (2004-07 and 2006-07) were: Brazil, France, Spain, Italy, India and Switzerland. Other significant growth markets over the 2004-07 period were Hungary, Belgium, Sweden, UAE and Denmark.

Leading Importing Countries: The top foreign importers of HS 8541 products in 2006 were China (\$13.15 billion, or 23.52% of total), Hong Kong(12.66%),Germany (10.43%), Singapore(8.25%), USA (8.24%), Malaysia (5.04%) and Japan (4.93%).Other significant importers (all above \$1.5 billion) were Mexico(3.12%), Korea (4.66%), Russia (5.3%), and Poland (3.9%).

World Market Size & U.S. Share: Total world exports of HS 8541 products by all countries reached \$8.3 billion in 2006, down from \$14.08 billion in 2003 (-41%). The U.S. had a 7.92% share of the total world market in 2006, topped only by China (18.2%), Korea (16.26%), Japan (9.54%) and Malaysia (8.11%). Other world suppliers with significant market shares were Hong Kong (6.16%), France (4.52%) and Mexico (4.01%).

Best Market Prospects: The markets listed below appear to be particularly promising for U.S. exports of over the next two years, based on recommendations of in-country USCS industry specialists. Specific U.S.export statistics on products in this category are available from the CITD for all countries, including those listed below (Source: U.S. Census Bureau). The CITD also has access to relevant trade contacts, trade opportunities and market research on each country:

- Hong Kong
- Japan
- Thailand
- Mexico
- Singapore
- Germany
- Taiwan
- Israel

I. Export Market Overview

C. Electronic Integrated Circuits and Microassemblies, HS-8542

This Market Brief provides an overview of the world market for Electronic Components in the HS-8542 category, based on an analysis of the latest trade statistics and market research.

Export growth: U.S. exports of HS-8542 products fell from \$42.88 billion in 2004 to \$41.58 billion in 2007, a decrease of 3.0% over the four-year period.

Leading Export Markets: China is by far the leading market for U.S. exports of HS-8542 products (\$6.04 billion, or 14.53% of the total). Other leading markets for U.S. exports of HS-8542 products in 2007 (all above \$2 billion) were: Malaysia (11.13%), Taiwan (10.16%), Singapore (8.94%), Philippines (8.43%), Korea (5.87%), Hong Kong (5.52%), and Canada (5.08%). Other significant markets (above \$1 billion) were: Japan (3.42%), Germany (3.31%), Thailand (2.54%), and Costa Rica (2.43%).

Fastest Growing Export Markets: The leading markets with both high and sustained growth rates for U.S. exports of HS-8542 products over the latest four years (2004-07 and 2006-07) were: China, Taiwan, Singapore, Germany, Costa Rica and Portugal. Other significant growth markets over the 2004-07 period were Italy, Denmark, India and Argentina.

Leading Importing Countries: The top foreign importers of HS-8542 products in 2006 were China (\$107.15 billion, or 29.22% of total), Singapore (12.25%), Hong Kong (11.51%) and Malaysia (7.63%). Other significant importers (all above \$8 billion) were Korea (5.96%), Japan (5.94%), Germany (3.97%), Mexico (2.60%), and Thailand (2.38%).

World Market Size & U.S. Share: Total world exports of HS-8542 products reached \$338.64 billion in 2006 up from \$205.20 billion in 2003 (+65.02%). Singapore was the leading exporter with a 20.57% share of the total world market in 2006. Other world suppliers with significant market shares were United States (15.55%), Hong Kong (10.80%), Japan (10.32%), and Korea (8.61%).

Best Market Prospects: The markets listed below appear to be particularly promising for U.S. exports of Electronic Components over the next two years, based on recommendations of in-country USCS industry specialists. Specific U.S. export statistics on products in this category are available from the CITD for all countries, including those listed below (Source: U.S. Census Bureau). The CITD also has access to relevant trade contacts, trade opportunities and market research on each country:

- Hong Kong
- Japan
- Thailand
- Mexico
- Singapore
- Germany
- Taiwan
- Israel

II. Market Potential Indicators

A. Top 30 U.S. Export Markets for Electronic Components, by Country, 2004-2007 - These tables show the leading and fastest growing markets for U.S. electronic components in the HS-8540, HS-8541, and HS-8542 categories, over the past several years. **Source: U.S Census Bureau.**

- Thermionic, Cold Cathode or Photocathode Tubes (Vacuum, Vapor, or Gas filled Tubes, Cathode-Ray tubes, Television Camera) (HS-8540)
- Diodes, Transistors and Similar Devices; Photosensitive Semiconductor Devices; Light Emitting Diodes; Mounted Piezoelectric (HS-8541)
- Electronic Integrated Circuits and Microassemblies (HS-8542)

B. Top 30 World Importers: Electronic Components, 2003-2006 (HS-8540, HS-8541, and HS-8542) by Country. This table shows the leading and fastest growing world importers of Electronic Components. **Source: United Nations COMTRADE.**

C. Top 30 World Exporters & U.S. Share: Electronic Components, 2003-2006 (HS-8540, HS-8541, and HS-8542), by Country. This table shows the U.S. and competitor-country shares of total world exports of Electronic Components. **Source: United Nations COMTRADE.**

D. Market Sizes & U.S. Share: Electronic Components, 2005-2007, by Country. This table shows each "best prospect" country's total market, total imports, and imports from the U.S., and the U.S. market share for products in this sector. **Source: U.S. Commercial Staff in each country.**

II. Market Potential Indicators

A. Top 30 U.S. Export Markets 2004-2007 Thermionic, Cold Cathode or Photo Cathode Calves and Tubes (HS 8540)

Country	2004	2005	2006	2007	%Change	%Change	%Share
	<i>In 1,000 Dollars</i>				2004-2007	2006 - 2007	2007
Mexico	1,003,551	674,650	331,564	76,678	-92.4%	-76.90%	19.23%
Japan	32,446	41,114	45,763	48,755	50.3%	6.50%	12.23%
United Kingdom	38,392	38,284	36,156	36,328	-5.4%	0.50%	9.11%
Canada	27,136	33,752	28,676	28,489	5.0%	-0.70%	7.14%
Germany	26,790	26,201	19,861	23,432	-12.5%	18.00%	5.88%
Singapore	7,311	8,228	20,749	17,574	140.4%	-15.30%	4.41%
France	24,188	15,912	16,195	17,421	-28.0%	7.60%	4.37%
Korea	15,043	8,069	9,363	16,242	8.0%	73.50%	4.07%
China	17,032	16,488	11,113	13,484	-20.8%	21.30%	3.38%
Netherlands	4,532	6,105	7,967	12,736	181.0%	59.90%	3.19%
Colombia	5,977	12,046	4,489	9,102	52.3%	102.80%	2.28%
Taiwan	6,333	8,655	7,912	8,020	26.6%	1.40%	2.01%
Hong Kong	6,080	5,595	5,214	7,708	26.8%	47.80%	1.93%
India	5,131	4,976	3,496	7,082	38.0%	102.60%	1.78%
Brazil	43,580	46,850	24,582	5,588	-87.2%	-77.30%	1.40%
Australia	9,875	10,396	12,521	5,332	-46.0%	-57.40%	1.34%
Israel	8,728	6,952	6,837	5,072	-41.9%	-25.80%	1.27%
Italy	6,409	5,397	8,307	3,871	-39.6%	-53.40%	0.97%
Sweden	2,882	1,857	1,608	3,667	27.2%	128.00%	0.92%
Luxembourg	4,426	2,271	2,568	3,475	-21.5%	35.30%	0.87%
Turkey	1,841	3,318	4,253	3,399	84.6%	-20.10%	0.85%
Peru	735	774	1,539	3,218	337.8%	109.10%	0.81%
Saudi Arabia	121	3,509	2,591	2,978	2361.2%	15.00%	0.75%
Greece	1,582	7,733	3,727	2,930	85.2%	-21.40%	0.73%
Spain	3,814	2,199	2,334	2,857	-25.1%	22.40%	0.72%
United Arab Em.	975	610	1,008	2,091	114.5%	107.40%	0.52%
Hungary	1,359	2,867	1,153	2,007	47.7%	74.10%	0.50%
Venezuela	808	1,135	2,474	1,920	137.6%	-22.40%	0.48%
Switzerland	1,339	2,068	1,741	1,920	43.4%	10.30%	0.48%
Norway	2,290	1,516	1,495	1,899	-17.1%	27.00%	0.48%
Subtotal :	1,310,707	999,530	627,255	375,274	-71.4%	-40.20%	94%
All Other:	41,240	34,055	33,556	23,505	-43.0%	-30.00%	6%
Total	1,351,946	1,033,586	660,811	398,779	-70.5%	-39.70%	100%

Source: US Census Bureau

II. Market Potential Indicators

A. Top 30 U.S. Export Markets 2004-2007 Diodes, Transistors and Similar Semiconductor Devices (HS 8541)

Country	2004	2005	2006	2007	%Change	%Change	%Share
					2004-2007	2006 - 2007	2007
	<i>In 1,000 Dollars</i>						
Korea	195,733	166,017	282,946	1,277,163	552.5%	351.40%	15.63%
Mexico	820,673	854,272	908,183	997,404	21.5%	9.80%	12.21%
Hong Kong	459,770	594,307	665,225	806,424	75.4%	21.20%	9.87%
Germany	265,369	410,537	525,413	679,496	156.1%	29.30%	8.32%
Philippines	296,392	229,905	269,818	522,759	76.4%	93.70%	6.40%
Singapore	277,382	241,658	558,523	516,230	86.1%	-7.60%	6.32%
China	271,002	241,364	286,935	441,138	62.8%	53.70%	5.40%
Malaysia	367,669	314,187	294,277	390,348	6.2%	32.60%	4.78%
Thailand	326,577	348,255	322,778	346,760	6.2%	7.40%	4.24%
Taiwan	214,344	248,322	287,449	342,394	59.7%	19.10%	4.19%
Japan	375,134	383,899	317,599	302,897	-19.3%	-4.60%	3.71%
Canada	224,432	248,076	267,734	274,023	22.1%	2.30%	3.35%
United Kingdom	236,579	209,829	257,647	232,942	-1.5%	-9.60%	2.85%
Brazil	93,508	86,738	93,308	101,395	8.4%	8.70%	1.24%
France	68,596	55,786	60,603	88,052	28.4%	45.30%	1.08%
Spain	15,660	18,452	48,983	82,466	426.6%	68.40%	1.01%
Italy	30,746	40,873	43,288	74,625	142.7%	72.40%	0.91%
India	24,794	33,577	43,771	73,487	196.4%	67.90%	0.90%
Switzerland	17,266	14,253	17,675	66,972	287.9%	278.90%	0.82%
Ireland	26,284	24,846	102,739	66,124	151.6%	-35.60%	0.81%
Hungary	2,192	32,481	49,315	58,325	2560.8%	18.30%	0.71%
Belgium	38,470	45,767	37,667	57,215	48.7%	51.90%	0.70%
Israel	55,568	52,067	59,975	51,865	-6.7%	-13.50%	0.63%
Netherlands	86,195	74,745	42,592	44,718	-48.1%	5.00%	0.55%
Costa Rica	21,867	18,952	30,724	26,680	22.0%	-13.20%	0.33%
Australia	43,825	41,204	19,180	25,463	-41.9%	32.80%	0.31%
Sweden	13,503	13,357	17,281	22,547	67.0%	30.50%	0.28%
Denmark	15,275	13,475	7,817	20,706	35.6%	164.90%	0.25%
United Arab Em.	11,292	3,676	13,073	19,742	74.8%	51.00%	0.24%
Dominican Rep	12,563	13,907	22,938	18,923	50.6%	-17.50%	0.23%
Subtotal :	4,908,660	5,074,783	5,955,456	8,029,286	63.6%	34.80%	98%
All Other:	100,102	173,524	150,430	141,189	41.0%	-6.10%	2%
Total	5,008,762	5,248,307	6,105,885	8,170,474	63.1%	33.80%	100%
<i>Source: US Census Bureau</i>							

II. Market Potential Indicators

A. Top 30 U.S. Export Markets 2004-2007 Electronic Integrated Circuits and Microassemblies (HS 8542)

Country	2004	2005	2006	2007	%Change	%Change	%Share
	<i>In 1,000 Dollars</i>				2004-2007	2006 - 2007	2007
China	2,648,187	3,119,616	5,589,380	6,040,898	128.1%	8.10%	14.53%
Malaysia	5,185,138	4,748,125	5,530,389	4,630,536	-10.7%	-16.30%	11.13%
Taiwan	3,514,777	3,556,613	3,835,723	4,223,776	20.2%	10.10%	10.16%
Singapore	2,777,306	2,581,017	2,954,421	3,717,236	33.8%	25.80%	8.94%
Mexico	4,626,037	4,678,347	4,648,356	3,618,681	-21.8%	-22.20%	8.70%
Philippines	3,942,315	3,684,698	4,053,102	3,503,913	-11.1%	-13.50%	8.43%
Korea	4,385,268	4,507,457	4,722,607	2,443,076	-44.3%	-48.30%	5.87%
Hong Kong	3,529,030	3,022,426	2,401,643	2,296,081	-34.9%	-4.40%	5.52%
Canada	2,897,511	3,436,149	2,878,407	2,111,891	-27.1%	-26.60%	5.08%
Japan	1,991,665	1,488,253	1,749,253	1,422,592	-28.6%	-18.70%	3.42%
Germany	1,089,327	1,087,462	1,602,659	1,376,835	26.4%	-14.10%	3.31%
Thailand	1,031,280	1,195,200	1,102,764	1,054,832	2.3%	-4.30%	2.54%
Costa Rica	821,986	845,365	1,009,402	1,012,600	23.2%	0.30%	2.43%
Portugal	10,905	11,105	178,154	850,773	7701.7%	377.50%	2.05%
Brazil	574,158	605,428	600,244	522,981	-8.9%	-12.90%	1.26%
United Kingdom	1,091,173	797,586	695,416	450,168	-58.7%	-35.30%	1.08%
Italy	246,969	209,738	307,796	233,412	-5.5%	-24.20%	0.56%
Sweden	90,159	91,580	217,568	232,160	157.5%	6.70%	0.56%
Netherlands	268,518	320,546	249,706	207,844	-22.6%	-16.80%	0.50%
France	295,878	256,130	245,615	207,022	-30.0%	-15.70%	0.50%
Israel	387,440	284,846	269,695	195,790	-49.5%	-27.40%	0.47%
Ireland	437,236	326,230	292,743	149,203	-65.9%	-49.00%	0.36%
Denmark	22,912	23,906	26,681	95,209	315.5%	256.80%	0.23%
Hungary	51,873	88,443	87,821	70,182	35.3%	-20.10%	0.17%
India	65,947	74,682	85,300	64,305	-2.5%	-24.60%	0.15%
Dominican Rep	25,017	38,598	52,421	57,700	130.6%	10.10%	0.14%
Argentina	27,929	26,713	46,432	57,526	106.0%	23.90%	0.14%
Belgium	61,597	67,344	61,908	54,925	-10.8%	-11.30%	0.13%
Australia	77,211	55,462	57,237	53,656	-30.5%	-6.30%	0.13%
Indonesia	40,837	34,786	30,865	46,847	14.7%	51.80%	0.11%
Subtotal :	42,215,585	41,263,853	45,583,705	41,002,650	-2.9%	-10.00%	99%
All Other:	667,478	694,519	693,891	585,106	-12.3%	-15.70%	1%
Total	42,883,064	41,958,372	46,277,596	41,587,757	-3.0%	-10.10%	100%
<i>Source: US Census Bureau</i>							

II. Market Potential Indicators

B. Top 30 World Importers, 2003-2006 Thermionic, Cold Cathode or Photo Cathode Calves and Tubes (HS 8540)

Importers	2003	2004	2005	2006	% Change	% Change	% Share
	<i>In dollars</i>				2003-06	2005-06	2006
China	3,162,713,863	2,971,722,584	1,867,641,988	1,409,613,215	-55.43%	-24.52%	19.24%
Mexico	1,877,042,053	1,693,527,046	1,093,470,168	676,391,197	-63.97%	-38.14%	9.23%
Brazil	259,425,161	406,344,476	467,833,520	585,685,816	125.76%	25.19%	7.99%
USA	825,269,252	881,845,233	781,392,803	572,499,221	-30.63%	-26.73%	7.81%
Malaysia	811,986,940	864,314,497	679,179,344	515,289,677	-36.54%	-24.13%	7.03%
Thailand	914,319,826	965,588,924	711,419,908	503,582,946	-44.92%	-29.21%	6.87%
Hong Kong	513,726,528	537,658,511	299,884,070	437,483,280	-14.84%	45.88%	5.97%
Russia	216,729,716	298,773,357	352,970,411	388,499,471	79.26%	10.07%	5.30%
Poland	431,555,008	469,082,157	334,943,924	287,360,635	-33.41%	-14.21%	3.92%
Rep. of Korea	501,643,360	436,722,766	326,298,772	237,098,879	-52.74%	-27.34%	3.24%
Turkey	897,259,700	1,139,525,518	708,834,026	234,074,512	-73.91%	-66.98%	3.19%
India	226,499,594	238,765,707	169,406,499	168,493,364	-25.61%	-0.54%	2.30%
Germany	395,989,000	339,886,000	195,757,000	159,756,000	-59.66%	-18.39%	2.18%
Japan	224,188,182	198,134,323	158,851,676	149,113,906	-33.49%	-6.13%	2.03%
Hungary	571,128,000	571,828,000	210,178,000	120,345,000	-78.93%	-42.74%	1.64%
Argentina	22,976,985	61,100,068	109,974,505	111,748,968	386.35%	1.61%	1.52%
United Kingdom	510,762,503	450,606,524	186,533,734	105,936,563	-79.26%	-43.21%	1.45%
Czech Rep.	262,755,602	354,759,905	192,455,458	104,517,391	-60.22%	-45.69%	1.43%
Singapore	139,542,903	186,306,916	142,950,690	94,618,696	-32.19%	-33.81%	1.29%
France	432,061,580	266,124,653	147,891,797	85,375,993	-80.24%	-42.27%	1.17%
Italy	222,312,881	169,580,805	97,218,666	73,531,784	-66.92%	-24.36%	1.00%
Belarus	40,178,400	72,816,400	62,149,400	44,120,100	9.81%	-29.01%	0.60%
South Africa	36,965,672	49,343,278	43,338,177	37,205,616	0.65%	-14.15%	0.51%
Canada	30,062,887	31,820,514	38,373,052	36,780,470	22.35%	-4.15%	0.50%
Netherlands	26,955,400	46,172,008	39,729,226	35,913,597	33.23%	-9.60%	0.49%
Spain	415,670,119	320,812,795	108,625,570	32,490,420	-92.18%	-70.09%	0.44%
Slovakia	172,628,888	166,990,715	207,426,983	32,133,969	-81.39%	-84.51%	0.44%
Lithuania	25,746,638	39,425,703	35,469,127	31,157,973	21.02%	-12.15%	0.43%
Iran	116,216,884	125,208,346	150,030,896	24,133,821	-79.23%	-83.91%	0.33%
Australia	24,473,830	26,345,601	15,478,060	20,239,437	-17.30%	30.76%	0.28%
Belgium	104,421,085	57,715,167	16,227,932	12,952,569	-87.60%	-20.18%	0.18%
Subtotal	14,413,208,440	14,438,848,497	9,951,935,382	7,328,144,486	-49.16%	-26.36%	96.04%
All Others	248,848,973	492,439,384	427,837,470	302,319,300	21.49%	-29.34%	3.96%
Total	14,662,057,413	14,931,287,881	10,379,772,852	7,630,463,786	-47.96%	-26.49%	100.00%

Source : Comtrade

II. Market Potential Indicators

B. Top 30 World importers, 2003-2006 Diodes, Transistors and Similar Semiconductor Devices (HS 8541)

Importers	2003	2004	2005	2006	%Change	%Change	%Share
	<i>In dollars</i>				2003-06	2005-06	2006
China	7,526,699,006	9,776,284,583	11,245,893,425	13,159,700,670	74.84%	17.02%	23.52%
Hong Kong	4,080,736,629	5,433,968,155	5,852,131,715	7,081,010,334	73.52%	21.00%	12.66%
Germany	2,344,781,000	3,612,707,000	4,818,144,000	5,836,096,000	148.90%	21.13%	10.43%
Singapore	3,892,632,040	4,635,338,054	4,556,419,132	4,613,561,867	18.52%	1.25%	8.25%
USA	3,370,059,941	3,950,365,893	3,946,559,696	4,608,532,936	36.75%	16.77%	8.24%
Malaysia	2,140,536,683	2,360,390,328	2,255,659,196	2,817,361,534	31.62%	24.90%	5.04%
Japan	1,846,221,604	2,408,744,113	2,504,706,998	2,759,112,855	49.45%	10.16%	4.93%
Rep. of Korea	2,066,805,632	2,350,080,023	2,449,157,251	2,610,118,163	26.29%	6.57%	4.66%
Mexico	1,217,581,332	1,428,415,956	1,508,883,802	1,744,055,030	43.24%	15.59%	3.12%
Spain	211,364,949	270,524,963	395,773,854	1,245,529,138	489.28%	214.71%	2.23%
United Kingdom	860,251,128	1,020,890,817	988,836,523	1,205,189,050	40.10%	21.88%	2.15%
France	802,520,284	937,359,302	852,641,786	916,375,358	14.19%	7.47%	1.64%
Thailand	722,653,419	828,135,468	825,607,690	883,417,166	22.25%	7.00%	1.58%
Italy	452,142,016	537,815,416	597,036,123	817,867,746	80.89%	36.99%	1.46%
Hungary	669,496,000	892,787,000	802,307,000	731,540,000	9.27%	-8.82%	1.31%
Netherlands	453,715,679	526,857,655	689,593,841	647,848,222	42.79%	-6.05%	1.16%
Austria	236,680,137	292,771,125	358,792,244	552,901,048	133.61%	54.10%	0.99%
Belgium	251,309,959	235,226,221	321,995,203	504,709,267	100.83%	56.74%	0.90%
Canada	291,003,163	338,446,984	390,564,781	407,563,363	40.05%	4.35%	0.73%
Brazil	269,231,402	350,363,963	359,710,791	395,880,091	47.04%	10.06%	0.71%
India	165,870,738	207,975,712	258,934,773	359,085,859	116.49%	38.68%	0.64%
Sweden	181,427,691	234,001,001	246,729,367	354,425,755	95.35%	43.65%	0.63%
Czech Rep.	122,693,485	175,557,790	221,793,826	326,058,600	165.75%	47.01%	0.58%
Morocco	189,992,280	310,187,530	359,330,350	325,996,205	71.58%	-9.28%	0.58%
Switzerland	188,245,090	218,827,256	241,635,178	257,989,252	37.05%	6.77%	0.46%
Finland	207,471,504	222,586,813	196,617,146	202,030,652	-2.62%	2.75%	0.36%
Poland	107,598,000	174,596,021	151,009,026	169,731,549	57.75%	12.40%	0.30%
Israel	108,305,000	128,921,000	139,492,000	142,671,000	31.73%	2.28%	0.25%
Ireland	94,813,669	96,041,704	102,666,265	119,296,719	25.82%	16.20%	0.21%
Australia	82,154,728	112,158,853	101,045,788	101,178,413	23.16%	0.13%	0.18%
Turkey	86,006,823	117,949,994	111,498,059	56,530,127	-34.27%	-49.30%	0.10%
Subtotal	35,241,001,011	44,186,276,693	47,851,166,829	55,953,363,969	58.77%	16.93%	93.95%
Others	907,926,867	3,289,686,107	3,301,447,476	3,605,811,693	297.15%	9.22%	6.05%
Total	36,148,927,878	47,475,962,800	51,152,614,305	59,559,175,662	64.76%	16.43%	100.00%

Source : Comtrade

II. Market Potential Indicators

B. Top 30 World Importers, 2003-2006 Electronic Integrated Circuits and Microassemblies (HS 8542)

Importers	2003	2004	2005	2006	% Change	% Change	% Share
	<i>In dollars</i>				2003-06	2005-06	2006
China	41,833,573,279	61,707,150,060	82,202,156,004	107,152,498,819	156.14%	30.35%	29.22%
Singapore	24,412,122,872	32,453,545,142	37,025,284,216	44,937,590,488	84.08%	21.37%	12.25%
Hong Kong	22,225,836,624	30,682,779,562	35,760,902,287	42,227,921,932	89.99%	18.08%	11.51%
Malaysia	21,783,659,546	23,901,337,015	24,985,475,751	27,965,878,862	28.38%	11.93%	7.63%
USA	21,409,760,011	22,988,345,320	21,993,268,700	22,947,234,230	7.18%	4.34%	6.26%
Rep. of Korea	18,536,419,328	20,274,556,542	21,095,412,353	21,865,554,509	17.96%	3.65%	5.96%
Japan	15,349,320,974	18,485,233,321	18,605,204,859	21,794,760,023	41.99%	17.14%	5.94%
Germany	11,339,591,000	13,813,351,000	12,744,594,000	14,547,059,000	28.29%	14.14%	3.97%
Mexico	6,714,042,981	8,674,469,009	8,962,736,069	9,525,835,671	41.88%	6.28%	2.60%
Thailand	5,928,497,445	7,286,918,228	7,983,473,615	8,743,400,358	47.48%	9.52%	2.38%
France	4,364,405,883	5,301,818,782	5,535,107,246	5,838,348,654	33.77%	5.48%	1.59%
Netherlands	7,304,801,724	8,310,097,950	6,981,686,062	4,918,427,624	-32.67%	-29.55%	1.34%
United Kingdom	5,324,961,332	6,959,880,024	5,565,858,141	4,204,595,130	-21.04%	-24.46%	1.15%
Canada	2,529,462,593	3,432,033,593	3,939,998,247	3,699,513,792	46.26%	-6.10%	1.01%
Hungary	2,001,096,000	3,155,941,000	3,133,011,000	3,268,261,000	63.32%	4.32%	0.89%
Brazil	1,470,538,927	2,036,025,231	2,528,648,752	2,912,093,439	98.03%	15.16%	0.79%
Italy	2,457,177,461	2,863,996,228	2,796,000,941	2,870,708,395	16.83%	2.67%	0.78%
Portugal	1,168,189,933	1,276,893,112	1,517,096,126	1,988,790,859	70.25%	31.09%	0.54%
Costa Rica	1,158,117,376	1,131,461,006	1,536,760,406	1,842,740,922	59.12%	19.91%	0.50%
Czech Rep.	1,539,630,102	1,600,569,422	1,635,869,097	1,764,900,788	14.63%	7.89%	0.48%
Ireland	2,460,473,269	2,968,853,479	2,474,776,774	1,640,061,030	-33.34%	-33.73%	0.45%
Finland	1,151,995,008	1,225,010,121	1,407,864,739	1,574,617,746	36.69%	11.84%	0.43%
Belgium	1,190,366,458	1,460,938,416	1,581,036,498	1,363,344,643	14.53%	-13.77%	0.37%
Austria	960,533,309	954,347,086	831,284,167	1,204,350,857	25.38%	44.88%	0.33%
Sweden	858,164,542	1,095,230,088	1,012,796,948	1,178,707,183	37.35%	16.38%	0.32%
Malta	819,596,216	956,770,167	802,880,665	1,062,592,885	29.65%	32.35%	0.29%
Spain	752,200,328	1,181,064,203	1,171,069,361	1,035,965,921	37.72%	-11.54%	0.28%
Poland	721,548,032	925,071,593	816,251,302	993,515,370	37.69%	21.72%	0.27%
Israel	587,814,976	1,114,946,000	949,851,000	976,840,000	66.18%	2.84%	0.27%
Australia	690,305,600	803,389,820	746,840,865	710,603,086	2.94%	-4.85%	0.19%
Subtotal	229,044,203,129	289,022,022,520	318,323,196,191	366,756,713,216	60.12%	15.22%	91.15%
Others	3,912,734,111	29,496,709,335	32,230,044,687	35,589,430,900	809.58%	10.42%	8.85%
Total	232,956,937,240	318,518,731,855	350,553,240,878	402,346,144,116	72.71%	14.77%	100.00%

Source : Comtrade

II. Market Potential Indicators

C. Top 30 World Exporters & U.S. Market Share, 2003-2006 Thermionic, Cold Cathode or Photo Cathode Calves and Tubes (HS 8540)

Exporters	2003	2004	2005	2006	% change	% change	% Share
	<i>in dollars</i>				2003-06	2005-06	2006
China	1,406,586,642	1,703,903,597	1,563,302,621	1,518,591,643	7.96%	-2.86%	18.20%
Rep. of Korea	2,734,352,896	2,765,761,877	1,898,891,693	1,356,657,311	-50.38%	-28.56%	16.26%
Japan	1,670,265,168	1,545,306,327	1,416,908,524	796,268,127	-52.33%	-43.80%	9.54%
Malaysia	788,805,251	1,017,441,093	803,269,979	677,170,372	-14.15%	-15.70%	8.11%
USA	1,612,786,422	1,352,391,734	1,033,585,827	660,810,777	-59.03%	-36.07%	7.92%
Hong Kong	514,476,485	592,457,169	370,486,749	514,239,551	-0.05%	38.80%	6.16%
France	555,777,189	592,630,121	516,937,866	376,833,145	-32.20%	-27.10%	4.52%
Mexico	606,048,544	642,455,622	542,959,387	334,492,805	-44.81%	-38.39%	4.01%
Singapore	391,026,582	465,677,152	348,180,893	302,949,000	-26.50%	4.50%	3.63%
Thailand	319,623,749	360,487,240	224,801,494	234,918,140	-31.06%	8.29%	2.82%
Poland	310,976,992	256,750,828	197,984,648	214,402,896	100.66%	53.38%	2.57%
Hungary	103,740,000	182,475,000	135,721,000	208,168,000	100.66%	53.38%	2.49%
Czech Rep.	291,691,062	511,208,379	260,554,921	196,180,578	-32.74%	-24.71%	2.35%
United Kingdom	613,544,495	537,810,924	285,745,272	175,774,921	-71.35%	-38.49%	2.11%
Germany	981,519,000	774,910,000	490,583,000	157,503,000	-83.95%	-67.89%	1.89%
Netherlands	59,374,846	200,354,401	137,226,281	102,706,235	72.98%	-25.16%	1.23%
Lithuania	165,130,692	178,446,083	170,875,782	68,602,217	-58.46%	-59.85%	0.82%
Brazil	168,418,368	155,070,498	103,479,810	62,214,495	-63.06%	-39.88%	0.75%
Italy	360,616,944	348,083,360	129,063,546	56,133,769	-84.43%	-56.51%	0.67%
Slovakia	168,303,292	169,410,136	85,798,059	48,959,301	42.92%	4.89%	0.59%
Russian	22,197,237	25,202,564	30,244,774	31,723,408	48.22%	-7.57%	0.38%
Canada	14,609,028	14,922,947	23,427,575	21,653,705	48.22%	-7.57%	0.26%
Belgium	42,128,880	51,295,157	28,196,353	14,905,094	-64.62%	-47.14%	0.18%
India	59,156,736	90,257,686	33,317,329	7,256,583	-87.73%	-78.22%	0.09%
Switzerland	4,549,036	5,288,463	5,139,362	6,992,248	-95.61%	-81.02%	0.08%
Spain	87,712,694	55,755,624	20,283,252	3,849,229	504.67%	-2.86%	0.05%
Norway	571,870	2,392,269	3,559,582	3,457,933	-25.10%	-17.92%	0.04%
Australia	3,475,190	3,821,602	3,171,486	2,603,079	-25.10%	-17.92%	0.03%
Sweden	3,593,980	2,725,499	4,575,615	2,496,449	-30.54%	-45.44%	0.03%
Austria	3,000,060	3,794,433	2,232,592	2,419,904	-19.34%	8.39%	0.03%
Turkey	3,463,128	4,318,851	4,258,920	28,589	-99.17%	-99.33%	0.00%
Subtotal	14,067,522,458	14,612,806,636	10,874,764,192	8,160,962,504	-41.99%	-24.96%	97.79%
All Others	13,279,913	267,154,778	243,024,940	184,193,894	1287.01%	-24.21%	2.21%
Total	14,080,802,371	14,879,961,414	11,117,789,132	8,345,156,398	-40.73%	-24.94%	100%

Source : Comtrade

II. Market Potential Indicators

C. Top 30 World Exporters & U.S. Market Share, 2003-2006 Diodes, Transistors and Similar Semiconductor Devices (HS 8541)

Exporters	2003	2004	2005	2006	%change	%change	%Share
	<i>in dollars</i>				2003-06	2005-06	2006
Japan	7,664,510,400	9,395,857,318	9,374,898,903	10,200,941,897	33.09%	8.81%	18.73%
Singapore	4,105,758,871	4,985,855,032	4,945,637,379	6,334,316,643	54.28%	28.08%	11.63%
China	2,406,064,427	3,256,050,858	4,247,974,925	6,135,590,442	155.01%	44.44%	11.27%
USA	4,226,324,152	5,010,255,158	5,248,306,775	6,105,885,494	44.47%	16.34%	11.21%
Hong Kong	3,002,817,423	3,952,470,609	4,262,201,449	5,222,488,333	73.92%	22.53%	9.59%
Germany	2,361,171,000	2,768,374,000	3,067,885,000	4,230,256,000	79.16%	37.89%	7.77%
Malaysia	2,743,988,040	3,391,181,523	3,352,690,152	3,800,525,059	38.50%	13.36%	6.98%
United Kingdom	935,363,169	1,254,297,071	1,312,571,958	1,573,826,772	68.26%	19.90%	2.89%
Rep. of Korea	907,563,648	1,149,118,395	1,232,334,224	1,516,017,764	67.04%	23.02%	2.78%
Malta	1,193,664,771	1,280,910,041	1,018,729,768	1,317,554,312	10.38%	29.33%	2.42%
Thailand	1,361,439,448	1,081,631,814	817,389,171	1,001,234,522	-26.46%	22.49%	1.84%
France	747,366,380	857,363,613	778,528,603	902,155,500	20.71%	15.88%	1.66%
Austria	394,312,462	498,170,888	682,804,219	878,741,265	122.85%	28.70%	1.61%
Netherlands	242,510,819	659,601,682	825,716,922	802,508,757	230.92%	-2.81%	1.47%
Morocco	598,262,713	625,366,820	620,898,525	715,985,061	19.68%	15.31%	1.31%
Mexico	514,578,793	563,400,418	534,248,238	642,796,341	24.92%	20.32%	1.18%
Belgium	193,127,563	180,440,780	279,837,764	511,530,287	164.87%	82.80%	0.94%
Hungary	107,028,000	128,395,000	203,073,000	350,922,000	227.88%	72.81%	0.64%
Switzerland	204,257,022	246,002,081	291,642,970	313,518,844	53.49%	7.50%	0.58%
Sweden	109,617,511	166,722,670	197,057,994	305,132,359	178.36%	54.84%	0.56%
Spain	236,070,438	361,666,690	311,725,046	302,767,224	28.25%	-2.87%	0.56%
Italy	222,265,482	223,004,667	235,982,464	279,508,099	25.75%	18.44%	0.51%
Czech Rep.	35,056,407	41,254,607	134,717,566	269,017,039	667.38%	99.69%	0.49%
India	86,708,559	119,001,342	137,789,458	178,345,669	105.68%	29.43%	0.33%
Canada	128,304,679	113,415,208	116,327,330	134,019,474	4.45%	15.21%	0.25%
Australia	80,982,640	109,832,694	118,327,982	119,534,955	47.61%	1.02%	0.22%
South Africa	31,017,094	59,386,743	90,083,943	103,849,331	234.81%	15.28%	0.19%
Croatia	42,144,806	51,816,126	44,541,888	67,788,692	60.85%	52.19%	0.12%
Finland	38,684,304	45,366,105	47,117,656	59,296,311	53.28%	25.85%	0.11%
Ireland	37,158,995	103,146,947	48,889,995	49,097,529	32.13%	0.42%	0.09%
Russian	37,916,509	58,646,034	32,162,471	37,605,454	-0.82%	16.92%	0.07%
Subtotal	34,996,036,525	42,738,002,934	44,612,093,738	54,462,757,429	55.63%	22.08%	92.09%
All Others	191,207,864	2,838,113,915	3,258,861,228	4,680,278,245	2347.74%	43.62%	7.91%
Total	35,187,244,389	45,576,116,849	47,870,954,966	59,143,035,674	68.08%	23.55%	100.00%

Source : Comtrade

II. Market Potential Indicators

C. Top 30 World Exporters & U.S. Market Share, 2003-2006 Electronic Integrated Circuits and Microassemblies (HS 8542)

Exporters	2003	2004	2005	2006	%change	%change	%Share
	<i>in dollars</i>				2003-06	2005-06	2006
Singapore	32,541,880,822	43,007,154,138	48,572,382,879	61,223,244,726	88.14%	26.05%	20.57%
USA	41,930,339,486	42,911,345,814	41,958,371,506	46,277,596,068	10.37%	10.29%	15.55%
Hong Kong	16,314,875,741	21,731,958,437	25,957,451,581	32,143,860,683	97.02%	23.83%	10.80%
Japan	25,920,859,095	29,711,351,075	29,093,280,827	30,728,278,658	18.55%	5.62%	10.32%
Rep. of Korea	15,469,049,856	20,530,979,227	24,357,055,277	25,613,712,710	65.58%	5.16%	8.61%
China	6,587,864,175	11,223,946,768	14,601,492,150	21,555,168,415	227.20%	47.62%	7.24%
Malaysia	18,872,786,027	19,086,609,365	19,606,176,224	21,031,660,546	11.44%	7.27%	7.07%
Germany	10,793,464,000	13,106,519,000	12,814,208,000	12,653,808,000	17.24%	-1.25%	4.25%
France	5,087,106,213	5,771,519,935	6,784,824,426	7,381,707,423	45.11%	8.80%	2.48%
Thailand	4,626,249,424	4,879,557,867	5,496,005,372	7,074,375,967	52.92%	28.72%	2.38%
Netherlands	7,605,618,386	10,352,015,144	8,371,356,559	6,772,417,509	-10.96%	-19.10%	2.28%
United Kingdom	3,955,664,859	5,230,434,716	6,018,806,973	5,540,624,476	40.07%	-7.94%	1.86%
Ireland	3,493,774,545	4,521,902,056	4,982,262,790	4,419,061,081	26.48%	-11.30%	1.48%
Italy	2,552,908,646	3,071,026,183	2,891,865,590	3,054,243,661	19.64%	5.61%	1.03%
Canada	1,639,373,779	1,947,002,705	2,468,265,738	2,009,233,934	22.56%	-18.60%	0.68%
Portugal	840,410,269	755,463,906	799,196,676	1,492,028,155	77.54%	86.69%	0.50%
Austria	1,029,948,198	1,149,513,052	1,022,624,123	1,298,780,182	26.10%	27.00%	0.44%
Costa Rica	82,061,728	253,956,301	803,344,602	1,210,007,263	1374.51%	50.62%	0.41%
Mexico	1,043,304,416	1,317,433,556	1,156,232,273	1,180,988,849	13.20%	2.14%	0.40%
Belgium	904,408,269	1,059,456,334	1,188,463,543	1,118,498,794	23.67%	-5.89%	0.38%
Czech Rep.	211,200,925	280,497,024	503,958,229	642,069,821	204.01%	27.41%	0.22%
Spain	715,489,858	809,231,077	942,453,182	613,697,797	-14.23%	-34.88%	0.21%
Switzerland	355,432,876	515,913,488	533,280,236	508,611,302	43.10%	-4.63%	0.17%
Hungary	140,282,000	308,087,000	466,567,000	502,830,000	258.44%	7.77%	0.17%
Sweden	330,341,736	470,084,992	438,977,330	479,609,721	45.19%	9.26%	0.16%
Denmark	139,523,933	164,937,711	216,690,478	422,010,178	202.46%	94.75%	0.14%
Poland	148,571,008	190,113,178	214,360,017	201,088,566	35.35%	-6.19%	0.07%
Finland	282,297,792	502,273,306	276,580,049	184,187,517	-34.75%	-33.41%	0.06%
Slovakia	44,985,279	80,158,570	151,668,000	144,084,692	220.29%	-5.00%	0.05%
Australia	86,505,696	102,879,004	110,397,200	113,432,939	31.13%	2.75%	0.04%
Israel	1,050,220,032	1,237,012,000	27,452,000	22,690,000	-97.84%	-17.35%	0.01%
Subtotal	204,796,799,069	246,280,332,929	262,826,050,830	297,613,609,633	45.32%	13.24%	87.88%
Others	411,954,073	24,782,924,645	27,924,752,194	41,026,991,230	9859.12%	46.92%	12.12%
Total	205,208,753,142	271,063,257,574	290,750,803,024	338,640,600,863	65.02%	16.47%	100.00%

Source : Comtrade

II. Market Potential Indicators

II D. Market Sizes & U.S. Share, by Country

The Table below provides comparative data on total market, total imports, and imports from the U.S. for 7 countries considered “best prospects” for U.S. exports of Electronic Components. The countries are listed in alphabetic order, not in rank order. The data are based on local sources and reflect best estimates of USCS commercial officers each country. Statistical accuracy and comparability to other sources (e.g., “USDOC Bureau of Census”) are affected by a number of factors, including lack of published figures in certain markets, variances in data collection techniques, sources of data, and industry definitions.

Electronic Components (Values in \$ Millions)

Country	Total Market			Total Imports			Imports from US			% US Share
	2005	2007	% change	2005	2007	%change	2005	2007	%change	2007
Germany	21,400	25,730	20%	11,800	12,100	3%	1,600	2,500	56%	20.66%
Hong Kong	1,759	6,206	253%	90,991	132,163	45%	5,067	5,794	14%	4.38%
Japan	25,910	24,316	-6%	20,474	23,038	13%	3,970	3,843	-3%	16.68%
Mexico	34,463	48,612	41%	33,353	47,512	42%	12,491	12,840	3%	27.02%
Singapore	1,153	3,770	227%	5,895	7,060	20%	550	590	7%	8.36%
Taiwan	56,140	67,812	21%	38,471	44,212	15%	3,786	4,300	14%	9.73%
Thailand	23,857	29,279	23%	18,469	21,993	19%	2,356	2,402	2%	10.92%

III. Best-Prospect Market Assessments

Following are overviews of “best prospect” markets for Electronic Components, based on observations of USCS posts in each country. The countries appear in alphabetical order. For more detailed market research on Electronic Components in these and other specific markets, see relevant Market Research Reports listed in Chapter V. For general commercial and economic information on individual countries, see the relevant Country Commercial Guides (CCGs).

Germany

Overview

Germany is the largest electronics producer within the EU, and the 5th largest worldwide. The German market for electronic components is expected to grow 8.7% in 2007, reaching a volume of \$25.7 billion. More than 45% of the products and services provided by the electronic components industry is exported; 65% to European countries. Local production has decreased over the last 5 years due to a growing trend of outsourcing to companies in Central and Eastern Europe as well as in South East Asia. Despite a decline in both the total import value and export value in the period 2001-2005, Germany remained by far the largest importer, as well as exporter, in Europe in 2006. In November 2007, semiconductors accounted for 63.8% \$16.4 billion of the total Electronic Components market in Germany. The market for electromechanical components is valued at \$4.1 billion (2006: \$3.4 billion); printed circuit boards/laminated circuits accounted for \$3.0 billion (2006: \$2.6 billion). The market for passive components reached \$2.3 billion. Prime end-user sectors for electronic components are the automotive industry (37%), data processing (23%), industrial electronics (19%), telecommunications (17%), and consumer electronics (4%). As a result of the still ongoing shift of production facilities to Eastern Europe and Asia, the telecommunications sector and consumer electronics sector are expected to be the only industry sectors with a negative growth (both -5.0%) in 2007.

Best Products/Services

Prospects are in the automotive industry (motor management, security and infotainment, including telematics) and on a smaller level, data processing (data storage and infrastructure for mobile networks, e.g., cables, switches, fiber-optic connectors, and fuses).

Resources

Trade Associations:

ZVEI (Electrical and Electronics Manufacturers Association): <http://www.zvei.de>

Trade publications:

[Design & Elektronik](#); [ElektronikPraxis](#); [Elektronik](#); [Elektronik Industrie](#); [Markt&Technik](#)

Customer requirement and legal regulations:

[Guidelines and Forms Version 2.1](#) can be downloaded on <http://www.zvei.de>

Commercial Service Contact:

dagmar.winkler-helmdach@mail.doc.gov

Hong Kong

Overview

Hong Kong's electronic parts and components imports in 2007 were \$132 billion, a 10% increase over 2006. The value of U.S. electronic parts and components exports to Hong Kong was \$5.7 billion in 2007, representing a 5.6% increase over 2006.

Hong Kong imports a wide range of electronic parts and components, particularly for computers, telecommunications equipment, telephone apparatus, toys, games, watches /clocks, and

audio/visual equipment. The growing popularity of the Internet, Mobile commerce, and digitization, as well as new developments and applications in multimedia, will sustain near-term demand for parts and accessories for computers and telecommunications.

Best Products/Services

Best Products include integrated circuits, switches, diodes, transistors, semi-conductors, capacitors, printed circuits, and parts for computers and telecommunications equipment.

Opportunities

China's Five-Year Plan in developing the electronic information industry and its WTO (World Trade Organization) membership will sustain continuous demand for electronic parts and components. The Five-Year-Plan aims to develop -

- 1) Local computer hardware including network equipment and products, digital products, peripherals, spare parts, information security products, and applications;
- 2) Software
- 3) Integrated circuits
- 4) Communication equipment; and
- 5) Digital visual products.

U.S. companies should be aware of the latest developments in Hong Kong's technology and focus on Hong Kong and China's growing demand for high-technology electronics parts and components. Hong Kong plays an important role in U.S. exports to Mainland China due to its geographical proximity to China and its experience in China trade.

In 2007, 70% of Hong Kong's total exports of electronic parts and components went to China, totaling approximately \$89 billion. Hong Kong re-exported a substantial amount of imported electronic parts and components such as integrated circuits (ICs) and micro-assemblies to China for further production.

Resources

Associations:

- The Hong Kong Electronic Industries Association (www.hkeia.org)
- The Hong Kong Printed Circuit Association (<http://www.hkpca.org>)
- Surface Mount Technology Association (Hong Kong Chapter) (http://www.smta.org/chapters/chapters_detail.cfm?chapter_id=100)
- Hong Kong Electronic Packaging & Manufacturing Services Association (www.hkepmsa.org)

For more information about this industry sector, please contact U.S. Commercial Hong Kong Commercial Specialist's Contact:
Fanny Chau, Commercial Specialist
Email: fanny.chau@mail.doc.gov
Tel: 852-2521-3721; Fax: 852-2845-9800

Israel

Overview

The electronic components industry remains one of Israel's strongest sectors, and good export opportunities exist to support Israel's robust manufacturing industry. According to industry sources, the electronic components market increased by 15% in 2006. Active and passive components increased by 12% each, while RF and microwave components marked an 8% increase.

Israel is a major importer of electronic components with imports reaching approximately

\$1 billion in 2006. About \$350 million worth of Israeli electronics imports come from the U.S. making it a very attractive country for U.S. exporters to target. Israel's impressive capability in the electronics industry has attracted a great number of international companies to establish research and development facilities and manufacturing plants in the country. These include Applied Materials, General Electric, HP, IBM, Intel, Microsoft, National Semiconductor, and Vishay, among others.

Most imported components are integrated into various types of systems or subsystems, and then usually exported. Israeli companies purchase electronic components from the U.S. (44%), Europe (44%), and Asia (22%). Recently, companies have started outsourcing their purchasing activities and many use subcontractors to supply them with needed components. In early 2003, the European Parliament adopted the Restriction of Hazardous Substances directive (RoHS), which aims to protect human health and the environment through the restricted use of several hazardous substances, including lead. Generally, lead is introduced into electronic systems and serves as an integral part of electronic products. Exports of electronic products to the European Community accounted for approximately 37% of the total electronic products exports. Therefore, Israeli manufacturers and integrators exporting to European countries will have to comply with this new directive and start using lead-free components and technologies.

There are three key points that influence competition in the Israeli electronic components market:

- **Product's technical features** - Demand for the most updated innovative technologies components is very high. Israeli companies always look for components that can enhance their products' technical features.
- **Technical support** - Providing technical support is very important for the Israeli customer. Bad technical support will negatively influence recurring purchasing decisions.
- **Price** - When quality is not an issue, Israeli companies prefer to purchase inexpensive components from Asian countries. Electronic components imported from the U.S. are more expensive and therefore local companies tend to purchase American components when they need to produce reliable systems for defense, safety and security systems.

Opportunities:

Israel, as a developed technological market is always looking for advanced and innovative technologies, and components to enhance the product's technical features. Developments in the Israeli IT and telecom markets have had a positive effect on the increased demand for electronic components. Israel's purchasing nature is based on two main factors, price and technical support.

Best Prospects/Services:

Israel offers opportunities for U.S. exporters of passive components, active components, RF & microwave, power amplifiers and semiconductors. There are a large number of Israeli companies that represent U.S. firms in this sector, always looking for new-to market U.S. companies with good service and competitive prices that they can represent.

Resources

www.iaei.org.il

<http://elec.co.il/>

Japan

Overview

Japan's electronic components market is the world's second largest and is a leading sector for U.S. export opportunities. The Japanese market continues to show potential from steady demand for digital home appliances, such as flat panel display TVs, DVD players & recorders, portable music players, game consoles and 3G & 3.5G cellular phones.

U.S. exporters should note that because offshore production by Japanese consumer electronic companies is growing rapidly, electronic component exports from Japan to those production centers (such as in China) are outpacing local production in terms of growth. As a result, the total market size appears to be decreasing. Japanese consumer electronics manufacturers' share of world production, however, remains high (Video Camcorders: 86%, Car Audio & Navigation Systems: 59%, TVs: 39%, according to JEITA) and, therefore, Japan should still be considered a very important market for U.S. suppliers.

Best Products/Services

Semiconductors and embedded software for digital home appliances, electronic devices for next generation mobile broadband, such as WiMAX.

Opportunities

- Computer Software Association of Japan
Website: <http://www.ceatec.com>
- SEMI (Semiconductor Equipment and Materials International)
Website: <http://expo.nikkeibp.co.jp/fpd/index.html>

Resources

- CS Japan Contact: Toshihiro Matsuda (Tokyo): Toshihiro.Matsuda@mail.doc.gov
- The Japan Electronics and Information Technology Industries Association (JEITA)
<http://www.jeita.or.jp/english/index.htm>
- Japan Electronic Product Importers Association (JEPIA)
<http://www.jepia.gr.jp/eindex.html>
- Distributors Association of Foreign Semiconductors (DAFS): <http://www.dafs.or.jp/>

Mexico

Overview

As in recent years, Mexico's electronic industry continues to evolve, due in part to the growing competition from Asian countries. The growth of electronic components has been driven by a switch to new product lines including the aerospace, automotive, network equipment, game consoles, printers, high capacity servers, storage media, and consumer electronics industries, which continue to be the largest user of electronic components.

In 2006, about 32% of all electronic components imported to Mexico were from the United States, representing a 3.73% increase from the previous year. Nevertheless, China continues to gain market share and had an increase of 58%, while Japan and Korea had increases of 11% and 75% respectively. Nevertheless, there are competitive advantages for Mexican electronic firms to import components from U.S. suppliers under NAFTA, including short lead times in transportation, virtually 100% duty-free electronic components, and streamlined customs procedures.

In recent years, Mexico's exports of electronic products have considerably increased by almost 20%. In 2006, electronics exports reached \$54.7 billion, almost a 19.3% increase from 2005. The main manufacturing sub-sectors continued to be information technologies (33%) and audio and video (30%). Mexico has two main centers for the electronic industry: Tijuana, Baja California and Guadalajara, Jalisco: Baja California is the Mexican border state with the greatest number of electronics plants (193) employing approximately 91,000 people. According to Baja California's Economic Development Office, in 2006, maquiladoras in the State produced 18 million television sets and computer monitors. The seven largest electronic maquiladoras are Hitachi, JVC, Matsushita, Sanyo, Samsung, Sony, and Sharp. While some of these plants continue to produce conventional television and computer monitor sets; they switched to the manufacture of the latest technologies including flat screen sets: Liquid Crystal Diode (LCD), Digital Light Processing (DLP) and plasma. Nevertheless, conventional televisions still make up approximately 15% of all production and destined for the Latin American, African and Asian markets. Most of these

companies have the same requirements for suppliers: 9000 ISO certification, just-in-time delivery, production capacity and competitive prices.

The Western Region (Jalisco) is focused on the production of High-Tech Electronics, Telecom, and IT & Electronics subassemblies. In 2006, the State of Jalisco's electronics industry consisted of 12 OEM's, 13 CEM's/EMS, 30 design centers, 150 software companies, and more than 300 specialized suppliers. Some of the International OEMs located in this State are IBM, Hitachi, BDT, Kodak, Technicolor, Intel, and HP. CEMs/EMS include, among others: Flextronics, Yamaver, VOGT, Jabil, Mexikor, Sanmina-SCI, and Benchmark. Main products manufactured in the State of Jalisco include: docking stations, PCs, Printers, Paper handling solutions; IP Phones, Mobile phones, telecom servers, TV internet access boxes, Set top boxes; ABS, Air bag systems, Car immobilizers, Car security systems, clusters; Telemetric equipment, Tomographs; Routers & firewalls, Storage Systems, Sliders; Measurement & telemetric equipment, Control Systems; Alarms, Sensors, and Cameras, Handhelds, Juke boxes.

Best Products/Services

The major components and parts imported by the electronics manufacturing industry under HS code 85 during 2006 were: digital monolithic integrated circuits; parts/antenna for transmission for radio and television; monolithic integrated circuits, other than digital; printed circuits, cathode-ray, television picture tubes for color monitors; electrical apparatus; hybrid integrated circuits; insulated electric conductors; diodes exphotosensitive or light-emitting diodes; electrical inductors; electrical conductors; indicator panels incorporating LCD's and cards electrically integrated.

Opportunities

As Mexican manufacturing of electronic products becomes more complex, U.S. companies can find opportunities in new sectors such as batteries, antennas and switches, relays and plugs. Also, U.S suppliers of services related to electronic components such as logistics, scrap management, inventory management, etc., can find opportunities in the Mexican market.

Resources

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Gabriela Hernandez
U.S. Commercial Service Guadalajara
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Gabriela.Hernandez@mail.doc.gov

Singapore

Overview

Singapore's manufacturing sector has emerged as a regional economic powerhouse contributing at least 25% to the GDP. A large component of this sector - electronics - has attracted major foreign investments as well as value-added output and employment. Singapore-based electronics manufacturers have earned 10% global market share for semiconductor wafer foundry output and 25% global market share for printers. The world's top three wafer foundry companies, top three sub-contract assembly-and-test companies, and top four fabless integrated circuit (IC) design companies all have facilities in Singapore.

Best Products/Services

There are increasing opportunities for the electronic manufacturing services (EMS) companies to pursue in the areas of medical devices (diagnostic), aerospace (navigation) and industrial

equipment. Many of the world's top EMS companies such as Flextronics, Solectron and Venture are located in Singapore, an attractive base of high value-added production activities. For 2006, the EMS industry in Singapore is expected to record a manufacturing output of \$3 billion and value-added output of close to \$400 million.

Another electronic component technology that is being developed in Singapore is the Organic Light Emitting Diode (OLED) which may one day replace LCD panels. The current revenue for OLED panels is expected to reach \$5 billion in five years. Opportunities remain strong in the semiconductor, data storage and electronic modules, advanced displays, and components (such as capacitors, diodes and integrated circuits) industries.

Opportunities

The electronic industry fuels the growth of the services sector by creating jobs at all skill levels and creates a robust platform for the development of technology and innovation. It has diversified the economic base, thereby increasing the country's resilience against cyclical fluctuations in the global economy. The precision engineering industry, which supports the EMS companies, is an important pillar of the Singapore economy. Through the supply of components, tooling and equipment, this industry provides integral support to the manufacturing sector across the electronics, transport engineering and medical devices industries.

The Singapore government plans to spend close to \$5 billion over the next five years to foster research and high-end production in industries such as precision engineering and biomedical sciences with the aim of replacing assembly lines that are moving to lower cost countries. Beyond mainstream industries, Singapore is working towards developing high growth potential areas such as photonics, nanotechnology and micro-electrical-mechanical systems. The Government of Singapore hopes to double manufacturing output by 2020 and has aimed to double the current total manufacturing output to \$201 billion, double the current total manufacturing value-added to \$53.7 billion, and raise the current skill profile of manufacturing workers to 50%. As a result of this projected growth, more than 20,000 jobs will be created in the manufacturing and the service sectors. Two U.S. companies with extensive electronics expertise – Hewlett Packard and Texas Instruments, invested approximately \$10 billion in assets.

Resources

Singapore Government Offices

- Singapore Economic Development Board <http://www.sedb.com.sg>

Industry Organizations

- Singapore Electronics Guide <http://www.sg-electronics.com>
- Singapore Manufacturing Federation <http://www.smafederation.org.sg>
- International Enterprise Singapore <http://www.iesingapore.gov.sg>

U.S. Commercial Service, Singapore Contact: CHAN Y K (yiukei.chan@mail.doc.gov)

Taiwan

Overview

Taiwan electronics firms, especially information technology product manufacturers, rely on imports of leading edge components (e.g., integrated circuits) to maintain the competitiveness of their assembly operations. Taiwan's push to maintain international competitiveness will continue to drive demand for imports from U.S. companies because of their superior technology. U.S.-made semiconductors, integrated circuits in particular, are very competitive. U.S. firms face their stiffest competition from Japanese companies, which have led the passive component and display markets for years. Taiwan-produced components are mainly suitable for consumer electronic product applications.

Best Products/Services

- Monolithic digital & hybrid Integrated Circuits (ICs)
- Silicon wafers with dimensions between 8 and 12 inches
- Monolithic digital IC chips and wafers
- Transistors and light emitting diodes
- Chips and wafers for light emitting diodes and transistors
- Integrated circuits for central processing units
- Plugs and sockets for co-axial cables and printed circuits
- Dynamic random access memory integrated circuits

Opportunities

Taiwan is increasingly focusing on production of high value-added electronics, such as notebook computers and handsets, and shifting the manufacture of many low-priced items overseas. This trend has led to continued demand for the import of cutting edge components, providing American firms with great sales opportunities. The U.S. has led the high-end sector and enjoyed billions of dollars of sales to the information and communications industries. U.S. firms are expected to continue as major suppliers of advanced and specialized items due to the excellent performance and reliability of U.S. products.

Resources

- Industry Technology Research Institute (ITRI): www.itri.org.tw
- Industrial Development Bureau, MOEA: www.moeaidb.gov.tw
- Taiwan Electrical and Electronics Manufacturers' Association: <http://teema.org.tw>

Information on major electronics industry trade shows in Taiwan is available at the website www.taipeitradeshows.com.tw.

Firms interested in Taiwan trade shows should contact the Taiwan External Trade Development Council at taitra@taitra.org.tw for detailed information. U.S. firms wishing to learn more about the electronics components market are also encouraged to contact CS Taiwan Senior Commercial Specialist Shirley Wang at Shirley.Wang@mail.doc.gov or visit www.buyusa.gov/taiwan/en/.

Thailand

Overview

Thailand is a strong exporter of electronics components but continues to rely heavily on importing electronic components, as Thailand lacks capacity and research and development to carry out quality local production. More than 80% of raw materials used in the production and assembling processes of Hard Disk Drive (HDD), Integrated Circuit (IC), and consumer electronics appliances are imported every year. Given the reasons, Thailand has become the world's largest manufacturing base for HDD production and top producer in IC production for export.

In 2007, more than 74.3% of total Thailand electronic components imports were IC and Computer Components. Of this, \$9.5 billion are IC (45.5%) and \$6.2 billion are for Computer Components (28.8%) as currently Thailand is the manufacturing base for 4 out of 5 major HDD producers, which are Seagate Technologies, Western Digital, Hitachi Global Storage and Fujitsu. Thailand's Electrical and Electronics Institute (EEI) projects the electronics manufacturing production will increase by 10 to 15% due to the fact that demand remains high for HDD and IC for use in high-technology products such as MP3, external disks, digital cameras, LCD TVs, DVD players, notebooks, personal computers and household appliances.

According to the Semiconductor Industry Association (SIA) annual forecast of global semiconductor sales worldwide sales will surpass \$321 billion in 2010 with a compound annual

growth rate of 7.7% for forecast period of 2007-2010. SIA also forecasted sales of personal computers to grow by 11 to 12%, MP3 and Portable Multimedia Player (PMP) to grow by 20%, and digital TV to grow by 50%.

Best Products/Services

- Integrated Circuit (wafers, dice and chips, substrates and lead frames)
- Computer components (CPU, HDD, FDD, CD Rom Drive, Tape drive, Monitor,
- Printer, LCD Projector, Keyboard, Mouse, Network equipment)

Opportunities

The semiconductor industry has been driven by changing of consumers' lifestyles, which are looking for more sophisticated and high-end products. This has led to the demand for the superior technology and components. In addition, Thailand's Electrical and Electronics Institute (EEI) will soon present a 5-year electrical and electronic industry development scheme aimed at promoting the kingdom as the top production base for electrical and electronics in ASEAN. Becoming a top regional electronics base, Thailand will encourage foreign investors to invest in the industry, particularly production of hard disks, integrated circuits, printed circuit board assemblies, and electronic design automation.

Resources

U.S. Commercial Service

Room 302, 3rd Floor, GPF Witthayu Tower A, Wireless Road, Pathumwan, BKK 10330

Tel: 662-205-5090

Fax: 662-255-2915

Contact: Kritsananan Setasuvana, Commercial Assistant

E-mail: ksetasuv@mail.doc.gov

Trade Events

Trade events, such as trade shows, trade missions and catalog shows, offer excellent opportunities for face-to-face interaction with foreign buyers and distributors. Of the many U.S. and international events held throughout the year, some are vertical (single industry theme) and some horizontal (many industries represented). The events organized or approved by the U.S. Department of Commerce can be especially useful for first-time or infrequent participants – they require less lead time to register and typically involve more handholding.

The Trade-Event Scheduling Web sites listed below allow selective searches for upcoming events by industry, location, type and date. They typically provide the event organizer, event descriptions and costs, and people to contact for more information.

To find upcoming events for U.S. Electronic Components, use industry search terms relating to electronic components, integrated circuits, semiconductors etc.

Schedules for U.S. Government Organized or Sponsored Events

Domestic USDOC Events: http://www.export.gov/comm_svc/us_event_search.html

International USDOC Events: http://www.export.gov/comm_svc/us_event_search.html

USDA (Food & agriculture) Events: <http://www.fas.usda.gov/scripts/agexport/EventQuery.asp>

Schedules for Commercially Organized Events

TSNN (<http://www.tsnn.com/>)

ExpoWorldNet (<http://www.expoworld.net/>)

Exhibition Center - Foreign Trade Online (<http://www.foreign-trade.com/exhibit.htm>)

V. Available Market Research

Electronic Components

The reports listed below provide more detailed information about the market for the Electronic Components in the listed countries, such as demand trends, the competition, business practices, distribution channels, promotional opportunities, and trade barriers. These market research reports are written by resident U.S. commercial staff in each country.

All the reports are accessible online, at no cost, from
<http://www.buyusainfo.net/adsearch.cfm?loadnav=no>

China: Semiconductor Market	China	08/20/2007
France: Laser Optics	France	05/14/2007
Germany: European Passive Components Industry Association	Germany	05/10/2007
Germany: Semiconductors	Germany	09/08/2006
Hungarian Electronics Industry Brief	Hungary	11/09/2007
India: Electronic Components	India	07/17/2007
Japan: Electronic Components and Semiconductor Industry	Japan	04/30/2008
Mexico: Electronics Industry in Western Mexico	Mexico	10/02/2007
Taiwan: Integrated Circuits	Taiwan	05/10/2006

APPENDIX

Products in Electronic Components, by Schedule B Code (HS 8540-8542): 74 items

Schedule B Code	Description
8540110035	Cathode-Ray TV Picture Tubes, Color, Video Display Not Exceeding 50 Cm (20 Inches) Diagonal
8540110070	Cathode-Ray Television Picture Tubes, Color, Having A Video Display Diagonal Exceeding 50 Cm (20 Inches) But Not Exceeding 67 Cm (26 Inches)
8540110080	Cathode-Ray Television Picture Tubes, Color, Having A Video Display Diagonal Exceeding 67 Cm (26 Inches)
8540120000	Cathode-Ray TV Picture Tubes, Black & White Or Other Monochrome
8540202000	Cathode Ray Television Camera Tubes And Other Photocathode Tubes
8540204000	TV Camera, Image Intensifier & Converter Tubes, Nesoi
8540400000	Data/Graphic Display Tubes, Color, With A Phosphor Dot Screen Pitch Smaller Than 0.4 Mm
8540500000	Data/Graphic Display Tubes, Black And White Or Other Monochrome
8540600055	Cathode-Ray Tubes, Having A Video Display Diagonal Not Exceeding 36 Cm (14 Inches), Nesoi
8540600080	Cathode-Ray Tubes, Having A Video Display Diagonal Exceeding 36 Cm, Nesoi
8540712000	Magnetrons Modified For Use In Microwave Ovens
8540714000	Magnetron Microwave Tubes, Nesoi
8540720000	Klystron Microwave Tubes
8540790000	Microwave Tubes, Nesoi
8540810000	Reciever Or Amplifier Tubes
8540890020	Gas And Vapor Electron Tubes, Nesoi
8540890040	Diode, Triode, And Tetrode Type Tubes
8540890060	Light-Sensing Tubes
8540890080	Thermionic, Cold Cathode Or Photocathode Tubes, Nesoi
8540912000	Deflection Coils For Cathode Ray Tubes
8540914000	Cathode Ray Tube Parts, Nesoi
8540990000	Thermionic, Cold Cathode Or Photocathode Tube Parts, Nesoi
8541100040	Unmounted Chips, Dice, Wafers For Diodes Other Than Photosensitive Or Light-Emitting Diodes
8541100050	Zener Diodes
8541100060	Microwave Diodes
8541100070	Diodes, not Photosensitive Or Led, With A Maximum Current Of 0.5 A Or Less
8541100080	Diodes, Other Than Photosensitive Or Led, With A Current Greater Than 0.5 A
8541210040	Unmounted Chips, Dice, Wafers For Transistors Other Than Photosensitive With A Dissipation Rate Of Less Than 1w
8541210080	Transistors,not Photosensitive, With A Dissipation Rate Of Less Than 1 W, Nesoi
8541290040	Unmounted Chips, Dice And Wafers For Transistors Other Than Photosensitive, With A Dissipation Rate Of 1w Or Greater
8541290080	Transistors, not Photosensitive,With A Dissipation Rate Of 1 W Or Greater, Nesoi 25
8541300040	Unmounted Chips, Dice & Wafers For Thyristors, Diacs And Triacs, Other Than Photosensitive
8541300080	Thyristors, Diacs & Triacs, Other Than Photosensitive Devices, Nesoi
8541402000	Light-Emitting Diodes (Led's)
8541406010	Unmounted Chips, Dice Or Wafers For Photosensitive Diodes
8541406020	Solar Cells Assembled Into Modules Or Panels
8541406030	Solar Cells, Not Assembled Into Modules Or Made Up Into Panels

8541406050	Photosensitive Diodes, Nesoi
8541407040	Unmounted Chips, Dice And Wafers For Photosensitive Transistors
8541407080	Photosensitive Transistors, Nesoi
8541408000	Optical Coupled Isolators
8541409500	Photosensitive Semiconductor Devices, Nesoi
8541500040	Unmounted Chips, Dice, Wafers For Semiconductor Devices, Nesoi
8541500080	Semiconductor Devices, Nesoi
8541600025	Mounted Piezoelectric Crystals, Quartz, Designed For Operating Frequencies Not Exceeding 20 Mhz
8541600060	Mounted Piezoelectric Crystals, Quartz, Designed For Operating Frequencies Exceeding 20 Mhz
8541600080	Mounted Piezoelectric Crystals, Except Quartz
8541900000	Diode, Transistor & Similar Semiconductor Device Parts
8542310000	Processors and controllers, whether or not combined with memories, converters, logic circuits, amplifiers, clock and timing circuits, or other circuits
8542320015	Not over 1 gigabit
8542320023	Over 1 gigabit
8542320040	Static read-write random access (SRAM)
8542320050	Electrically erasable programmable read-only memory (EEPROM)
8542320060	Erasable (except electrically) programmable read only memory (EPROM)
8542320070	Other
8542330000	Amplifiers
8542390000	Other
8542900000	Parts