Industry Monitor

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High-tech Sector

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Electronics Industry Boom to Continue in 2004

Japan's electronics industry in 2004 is expected to continue to experience a boom in most areas. The global economy should continue to expand, and the trend toward digitalization should fuel demand for the whole range of products, from consumer home electronics to personal computers and mobile phones. Growing demand for such items should in turn give a strong boost to electronic components, electronic devices and semiconductor manufacturing equipment. According to JEITA, the sector's trade body, production of the electronics' sector should rise to ¥20.3 trillion, up from an estimated ¥19.1 trillion in 2003. Of the total, electronic devices and components will account for 49.5%, with industrial electronics and consumer electronics representing 38.0% and 12.5%, respectively. While mobile phones, digital cameras, flat panel televisions and DVDs were the main demand drivers in 2003, flat panel televisions and DVDs are likely to fuel demand in 2004, followed by mobile phones. But, demand for personal computers is unlikely to grow at the same pace as in 2003. Consequently, demand is likely to shift from mobile devices to digital consumer electronics.

Telecommunications – FTTH Networks to Expand

In the telecommunications sector, we should see continuing growth of both fixed-line and wireless broadband networks. In fixed-line broadband networks there will be considerable progress in FTTH, where network expansion will continue at a brisk pace. In music on the Internet, we should see an accelerated spread of VoIP networks. In backbone networks, demand for digital transmission equipment between stations should see a substantial increase. In mobile phones, the shift toward 3G phones will accelerate.

Broadcasting – Service Area to Expand, Massive Ripple Effect to Emerge

In Japan, digital terrestrial broadcasting started in the three major metropolitan areas (Tokyo, Nagoya, and Osaka) in December 2003 and plans call for expanding the service area starting in 2006. Investment for switching to digital terrestrial broadcasting is expected to total ¥1.2 trillion, of which regional TV broadcasters will account for 80%. The direct economic impact (including receivers) of the switch to digital terrestrial broadcasting is estimated at 40 trillion yen, with the indirect impact projected at ¥220 trillion.

Electrical Measuring Instruments – Set for Full-Fledged Rebound

The demand for precision equipment in 2004 is expected to increase to ¥298.7 billion, up from an estimated ¥262.0 billion in 2003, according to the electrical measuring instrument manufacturers' association. Demand for conventional electrical measuring instruments should rise from an estimated ¥154.0 billion in 2003 to ¥165.0 billion in 2004. Demand for SOC testers is likely to increase to ¥41.0 billion to ¥53.5 billion. The aggregate demand for semiconductor and IC measuring instruments is expected to reach ¥133.1 billion, up from an estimated ¥108.0 billion in 2003. Demand will be driven by measuring instruments for mobile phones, digital home electronics, IP items, and car electronics. Production in 2007 is forecast at ¥400.2 billion.

Semiconductors – Another Boom Year Ahead

The global demand for semiconductors in 2004 is likely to be up 19.4% year-on-year to $191.9 billion, according to WSTS. It will be the second consecutive year of double-digit growth. In Japan, demand is likely to be up 12.3% to around seven trillion yen. Semiconductor manufacturers are operating at full capacity from around the middle of 2003 and as a result we should expect to see some producers unveiling capacity addition plans. Despite this, a strained supply-demand balance is expected to continue for sometime. Regarding technology, 65nm design rule products started appearing from the middle of 2003 and 90-nm mass production lines also started coming on stream. As a result, the focus of R&D is expected to shift to the 65-nm design rule. In wafer processing equipment, now the 300-mm wafer processing unit accounts for half of the total, up from 35% last year.

Semiconductor Production Equipment – Also a Boom Year Ahead

The New Year is likely to turn out to be a boom year for semiconductor production equipment manufacturers. Orders in 2003 (cumulative to November) rose 31% year-on-year to ¥1.07 trillion. The SPE association expects this momentum to accelerate in 2004.

Business Machines – Slow Growth but Shift to Digital and Full-color Models

Demand for business machines in 2004 is likely to be up 1% to ¥1.7 trillion, according to JBMIA, an association of business machine manufacturers. Domestic demand is projected to grow 1.3% to ¥588 billion. Exports should grow 1.8% year-on-year to ¥1.12 trillion. Full-color copying machine demand will be up nearly 20%, with its share of total demand topping 30%.

Computers – Shift to Linux Systems to Continue

In computer hardware, the demand for servers which started picking up from around the middle of 2003 is expected to continue to expand at a double-digit rate reaching 450,000 to 500,000 units in 2004. Despite pressure on prices, demand for high-end servers and open system servers (Linux) is likely to increase strongly. We could also see a new market emerging for IA-64 servers. There will be increasing competition to win orders for e-government systems and security systems, particularly among major vendors. The trend toward integrating corporate systems is likely to continue, with the emphasis shifting to web-based systems.

Personal computer demand should increase by a double-digit figure underpinned by the replacement demand from the corporate sector and growing interest in the consumer sector for PCs supporting the AV function and other new functions.

In software, demand for PC software is likely to be up 3.4% to ¥750 billion in the current fiscal year ending March, 2004. Although corporate IT spending is likely to be sluggish, investment in security systems should expand.

Electronic Components – Steady Growth

Production of electronic components in 2004 is expected to increase 2.8% year-on-year to ¥3,040,096 million. Transformer parts will see a negative growth due mainly to an increasing overseas production shift. Production growth of passive components will turn positive and production of connectors and other components will be higher than 2003. Production of passive parts will be up an estimated 1.6% to ¥870,576 million and that of connectors will rise 3.4% to ¥836,600 million. Output of printed circuit boards should climb 4.5% to ¥831,080 million. Production of flexible PCBs will be up sharply, rising 22.0% to ¥205,233 million. Production of other electronic components, including switching power supplies, tuners and memory parts, is expected to increase 3.1% to ¥408,730 million.

Consumer Electrical Goods – Prices Bottom Out

The continuing decline in prices of consumer home electrical appliances (white goods) seems to have finally been arrested. At the same time there is growing demand for high value-added items such as non-fluorocarbon refrigerators, washer-dryers, cyclone-type cleaners. Among the items manufacturers are betting on in 2004 are air conditioners (sales likely to top 7 million units), air cleaners (sales expected to top 2 million units) and dishwashers.

HDD Shortages Expected – Following Shortages of Flat Panels

Rising production of LCD televisions, HDD recorders and other digital consumer electronic items is causing shortages of parts. First it was the flat panel and now shortages are expected to spread to hard disk drives. While production growth of HDDs is expected to be largely in line with the increase in production of notebook PCs, there is additional demand to be met for use in digital home electronic items. Shortages of the 2.5” type could be particularly acute toward the end of the fiscal year (March 2004).

IT Equipment-related Markets – Longer-term Outlook

The IT equipment-related market is expected to be up 13% between 2002 and 2010 and reach ¥10 trillion, according to Fuji Kimera Research Institute, a high-tech marketing and consulting firm. Among the major product categories, the institute forecasts a negative growth for computers and OA devices, with demand declining from ¥3,204.2 billion in 2002 to ¥3,033.8 billion in 2010. On the other hand, the outlook for displays is bright, with double-digit growth rates forecast through 2010 and output expected to increase from ¥178.2 billion in 2002 to ¥294.4 billion in 2010. In peripherals, demand for I/O devices is likely to increase from ¥447.0 billion to ¥549.4 billion. Demand for external memory devices is projected to grow from ¥865.7 billion in 2002 to ¥1,247.7 billion in 2010 and that for external recording media from ¥210.8 billion to 524.5 billion during the same period.

Basic Electronics Industry Statistics

	Prod	Ship.	Inv.	Capacity utilization	H. Elec. machinery	Cons. appliances	Electronics Sector	Cons. electronics	Industrial electronics	El. devices	Semicon (Production)	Consumer electronics (sales)
Jan.	90.9	95.2	83.9	72.0	1,953	1,255	14,010	1,302	5,837	6,871	3,140	336
Feb.	88.8	92.8	81.6	85.2	2,091	1,439	15,026	1,420	6,573	7,033	3,192	234
Mar.	88.6	88.7	84.4	107.7	3,155	1,691	19,029	1,748	9,561	7,720	3,456	266
Apr.	86.6	92.6	82.7	96.2	1,788	1,677	14,103	1,783	5,261	7,059	3,171	216
May	92.0	96.2	81.1	97.0	1,857	1,707	14,721	1.952	5,501	7,269	3,307	205
June	92.6	96.2	81.1	115.9	2,003	2,039	16,003	1,954	6,481	7,569	3,449	229
July	91.3	90.4	92.6	106.4	2,023	1,924	15,859	1,823	6,206	7,830	3,545	247
Aug.	91.2	95.8	87.0	60.5	1,771	1,165	14,332	1,577	5,593	7,362	3,388	230
Sept	94.1	96.4	82.7	74.3	2,495	1,313	18,078	2,314	7,335	8,430	3,761	209
Oct.	98.6	105.3	80.3	75.2	2,005	1,397	16,942	2,473	6,100	8,370	3,698	225
YoY	8.7	10.2	-7.4	-6.5	2.8	-11.4	9.2	17.3	8.1	7.8	2.7	-18.8

Base year 2000 = 100 (seasonally adjusted); 100 million yen, YoY: Year-on-year percentage change

Source: Ministry of Economy, Trade and Industry, Japan Electronics Industry Association and other trade associations