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# High-tech Sector

Broadband Networks Expand Rapidly in Japan

Spread of Broadband Networks Could Give a Significant Boost to the Economy According to government statistics, use of all the three major types of broadband networks (ADSL, CATV and optical fiber) is increasing rapidly. Of particular note is the 17-fold increase in FTTH. Subscribers to Internet access through cell phones increased by 5.93 million from the end of last year to 58.43 million.

According to Nikkei NEEDS database estimates, a 100% diffusion of broadband networks will translate into an additional four trillion yen demand for personal computers and increase communications service demand by an annual \(\frac{\pmathbf{1}}{1.4}\) trillion. To cope with an expanding user base, telecommunications carriers will have to invest an additional \(\frac{\pmathbf{5}}{500}\) billion in infrastructure. The ripple effect will also spread to corporate capital investment and lift personal consumption. The number of subscribers to broadband networks is expected to increase by 4.53 million in 2003 to 13.65 million. The number is expected to double by 2007. DSL is expected to continue to dominate the market for the foreseeable future, due mainly to the high cost of optical fiber lines. But optical fiber lines could start capturing a growing market share in the future.

Mobile Phone-related Services to Grow

According to a recent report by Nomura Research Institute, mobile phone-related services are likely to increase to  $\frac{1}{2}$ .5 trillion in the next five years. The e-commerce sector will account for  $\frac{1}{2}$ 1.47 trillion while the contents business will represent  $\frac{1}{2}$ 1.05 trillion yen in 2007.

Market for Advertising on Mobile Phones Doubles – Growth to Continue The demand for advertising on mobile phones doubled in 2002 to about \$5,000 million as large corporations put up ads on mobile phone networks concurrently with advertising in regular print media. The market is expected to top \$8,000 million in 2003.



Electric Power Deregulation to Continue

An advisory committee to the Ministry of Public Management, Home Affairs, Posts and Telecommunications recently recommended steady deregulation of the electric power generation industry, with the aim of shifting to a completely free market by 2009. The report envisions deregulation to reach 63% in 2005, when deregulation will extend to smaller users (over 50kw). Deregulation of electricity sales to homes is to start in 2007.

Silicon Wafer Demand to Grow 5% in 2003 – Growth to Accelerate in 2004

Demand for silicon wafers is expected to increase 5% year-on-year in 2003 to 5 billion square inches, according to Gartner Japan. Demand is expected to pick up from the third quarter after the current adjustment comes to an end in the second quarter. Demand growth should accelerate to about 20% in 2004, the high-tech research firm forecasts. With Japan recording only a marginal growth in demand, the Asia-Pacific region will lead demand growth.

Measuring Instruments Demand to Pick Up from Second Half

Demand for measuring instruments is likely to have bottomed out in 2002, according to the Japan Precision Instrument Manufacturers Association. It expects demand to grow 11.7% in 2003 to ¥199 billion, with the growth becoming stronger in the second half. Demand for optical measuring instruments, which has been slack, should also grow 5.6%, according to forecasts. The association expects demand for measuring instruments for the telecommunications sector to increase by a double-digit figure. Demand for AV-related measuring instruments is likely to be up 11.1%.

Consumer Electronics – Shift to Digital Devices to Accelerate Japan's consumer electronics manufacturers are accelerating the shift to digital home electronics as evidenced, among others, by rising production of PDP televisions and digital tape recorders and network-compatible devices. The shift is expected to be become pronounced in 2003 and give a strong boost to consumer electronics demand.

Japan's PC Market Likely to Resume Growth in 2003

Japan's personal computer market is expected to grow by roughly 5% in 2003 to \(\frac{\pmathbf{1}}{1.47}\) trillion, according to JEITA, a trade body. The demand growth will be fueled by the spread of broadband networks, use of the PC as a video device as new functions are added, spread of IP phones and tax incentives on IT investment.



### Outlook for Consumer Electronics Markets

According to forecasts released by JEITA, demand for consumer electronics, led by digital consumer electronic devices, including PDP and LCD TVs and DVD players, will increase 3.8% to \(\frac{1}{2}\)1.96 trillion. Total output of the electronics industry is expected to increase 3.6% to some 20 trillion yen. Sales of PDP as well as LCD televisions (2 million units) are expected to more than double in 2003. PDP televisions still account for a small share (2-3% in volume) of the total market. Sales of DVD players in 2003 should also more than double to 2 million units, according to the trade body. Sales of refrigerators are expected to increase by about 200,000 units to an estimated 4.6 million units. Sales of clothes driers should see moderate gains this year. Another growth area will be IH cooking heaters, where the demand is expected to reach half a million units.

#### **Outlook for the Electronics Sector**

Production in the electronics sector in 2003 is likely to increase 3.6% to some \(\frac{4}{2}\)0 trillion, according to JEITA. Electronic components will account for \(\frac{4}{3}\).1 trillion (up 1.9%) and electronic devices \(\frac{4}{6}\).1 trillion. Industrial electronics will represent \(\frac{4}{8}\).9 trillion and consumer electronics an estimated \(\frac{4}{1}\).9 trillion.

## Consumer Electronics Manufacturers Betting on Three Items in 2003

The three consumer electronic devices Japanese manufacturers are betting on in 2003 are: PDP televisions, DVD players and digital cameras. Hitachi, Matsushita and Pioneer, the three leading suppliers of PDP televisions, are planning to double output. In DVD recorders, Matsushita is planning to double output. Pioneer's plans see output of DVD recorders tripling in 2003. In digital cameras, Canon plans to boot output from 4.5 million to 7.5 million units. Other leading suppliers, Fuji Film, Olympus and Nikon, have also drawn up plans to aggressively boost production

# How Do Electronic Components Manufacturers View the New Year?

In a recent survey of 66 leading electronic component manufacturers by an industry daily, 39 expected demand to grow by less than 10%, 19 saw demand as likely to be flat and only one respondent felt demand would jump over 20%. However, 17 have drawn up plans to boost sales by 10%-20%, 30 less than 10%. Business plans at 8 firms see sales remaining largely flat. Only 2 firms expect sales to rise more than 20%.



Yamada Denki Poised for Solid Growth

Yamada Denki, a consumer electronics chain, is expected to see sustained growth in 2003 and beyond. In the current term to March 2003, consolidated net sales are expected \pmu800 billion. With aggressive expansion strategy expected to continue, sales could top one trillion yen in the fiscal year ending March 2004.

South Korea Turning Into a Major Supplier of Batteries South Korea is expected to become a major supplier of batteries by 2005, capturing a 30% share of the global market. Its global market share was just 2.5% in 2000. The country has been investing aggressively in R&D and production facilities in this area.

South Korean Electronics Sector Set for Solid Growth in 2003

The electronics industry in South Korea is expected to see exports in 2003 jump 13.1% and domestic demand to grow by 10.7%. Exports of IT and industrial electronics products are expected to increase 13.4% while domestic demand should rise by 5.8%. In electronic components, exports are likely to be up 17.1% and domestic demand is expected to rise 15.7%. The growth will be somewhat slower in consumer electric equipment, with exports expected to increase 4.3% and domestic demand 5.7%.

#### General Economy

Deflation – How Individual Product Prices Were Affected Consumer prices slipped in 2002 to register a fourth consecutive decline. But the price declines were not uniform. Price declines in electric power rates and consumer electrical equipment were steeper. Electric power rates were 4.2% lower. Prices of consumer electrical goods fell by double-digit figures. The average price of the notebook PC fell 27.5% and that of video games was down 21.8%. The decline in telephone rates has largely bottomed out. On the other hand, the average price of a hamburger has gone up some 12%.

New Car Sales Plunge for the Second Year in a Row Automobile sales (excluding mini cars) in 2002 declined 2.3% year-on-year to 3.96 million units, according to the Japan Automobile Dealers Association. Total sales, including mini cars were 5.79 million units, a decline of 2.0%. Honda reported record sales for the second consecutive year, Toyota sales were down 2.2%, truck sales fell 4.8% and mini car sales were off 1.2%.



Housing Starts Decline in November

Housing starts in November declined 6.7% from the same month a year ago to 98,664 units, according to government statistics. Housing starts in the condominium sector fell 13.5% and were also lower in the rental (down 4.6%) and owner-occupied housing (off 4.8%) sectors.

Household Spending Plunges in November

Household spending in November averaged \(\pmax307,580\), a 3.4% decline in real terms, according to government statistics. Spending on home refurbishing and rent fell 12.9%, and travel and communications expenses were down 8.1%, as consumers held back on car purchases. On the other hand, consumers spent 9.4% more on furniture and household items. Real income at \(\pmax437,724\) was down 4.2% in real terms.

#### **Basic Electronics Industry Statistics**

|       | Prod. | Ship. | Inv.  | Capacity     | H. Elec.  | Cons.      | Electronics | Cons.       | Industrial  | El.     |
|-------|-------|-------|-------|--------------|-----------|------------|-------------|-------------|-------------|---------|
|       |       |       |       | utilization. | machinery | appliances | Sector      | electronics | electronics | devices |
| Oct   | 99.2  | 103.2 | 102.9 | 68.8         | 2,037     | 1,683      | 15,311      | 1,847       | 6,803       | 6,661   |
| Nov   | 98.5  | 104.0 | 98.4  | 69.7         | 2,026     | 1,624      | 15,443      | 1,695       | 7,233       | 6,515   |
| Dec.  | 101.6 | 105.6 | 95.8  | 66.3         | 2,010     | 1,601      | 15,310      | 1,411       | 7,488       | 6,411   |
| Jan.  | 100.0 | 106.3 | 92.3  | 65.0         | 1,920     | 1,358      | 13,562      | 1,093       | 6,342       | 6,127   |
| Feb.  | 101.4 | 106.9 | 90.8  | 77.0         | 2,123     | 1,736      | 14,969      | 1,365       | 7,184       | 6,421   |
| Mar.  | 104.8 | 110.3 | 85.6  | 91.7         | 3,009     | 1,887      | 19,197      | 1,582       | 10,386      | 7,228   |
| Apr.  | 108.7 | 114.4 | 84.2  | 77.2         | 1,849     | 1,797      | 14,411      | 1,470       | 5,760       | 7,182   |
| May   | 117.2 | 123.2 | 87.9  | 80.9         | 1,818     | 1,872      | 15,451      | 1,649       | 6,324       | 7,478   |
| June  | 115.4 | 121.2 | 85.8  | 86.2         | 1,875     | 2,078      | 16,176      | 1,691       | 6,881       | 7,604   |
| July  | 113.7 | 118.0 | 90.8  | 86.3         | 2,015     | 2,060      | 16,056      | 1,775       | 6,285       | 7,997   |
| Aug   | 117.1 | 123.5 | 89.9  | 72.6         | 1,841     | 1,297      | 14,736      | 1,482       | 5,937       | 7,318   |
| Sept. | 116.2 | 120.9 | 93.9  | 84.9         | 2,465     | 1,555      | 17,659      | 1,762       | 8,117       | 7,780   |
| Oct.  | 117.3 | 125.6 | 93.5  | 80.6         | 1,942     | 1,577      | 16,161      | 2,030       | 6,169       | 7,962   |
| Nov.  | 112.7 | 120.0 | 89.5  | _            |           | _          | _           | _           | _           |         |
| YoY   | 14.4  | 15.4  | -9.0  | 17.2         | -4.6      | -6.4       | 9.1         | 10.2        | -5.1        | 22.9    |

Base year 1995 = 100; 100 million yen, YoY: Year-on-year percentage change

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

