

Growth against economic headwind



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World electronic equipment sales grew an estimated 3.7 percent in 1Q'12 compared to the same quarter in 2011 (Chart 1). This was a slight improvement over the prior quarter and based upon Chart 2, it appears that we may have passed the low point of the current business cycle.

Although end market demand is improving it is doing so at a very modest pace. Inventory levels increased in the first quarter throughout the supply chain (Chart 3). This seasonal inventory buildup is typical in years when moderate Christmas consumer electronics sales are followed by tepid post-holiday demand.

First quarter growth in the electronics supply chain varied significantly by product type (Chart 4). While total electronic equipment sales rose 3.7 percent, SEMI equipment, military and business equipment sales declined. This drop was offset by a surge in revenues by storage devices, i.e. hard disk drives, which saw higher prices and a sales recovery from Thailand's flooding driving their 1Q'12 financials.

All the electronic component categories were still negative in 1Q'12 but the large EMS and ODM companies reported strong

increases.

The second quarter of 2012 started off weaker than we had hoped. April normally shows a seasonal drop in electronic equipment sales (Chart 5) but this year the April decline was larger than in prior years. Fortunately normal seasonality should now drive growth into late autumn.

This year's recovery will not be robust. Semiconductor shipments were weak in the first quarter (Chart 6) and SEMI fab equipment shipments (Chart 7) will be well below their 2011 levels.

Continued economic turmoil and weak demand in Europe and relative strong Asian currencies are limiting electronics exports by the normally strong SE Asian manufacturers.

As it appears now 2012 will experience ongoing growth from its first quarter trough, but worrisome signs due to the still-unstable world economic situation create reason for caution.

End Markets

Computers & Peripherals

- Worldwide PC shipments rose 2.3 percent y/y to 87.1 million units in 1Q12. — IDC
- Global tablet PC sales to double y/y to 119 million units in 2012. — Gartner

- Worldwide hardcopy peripherals shipments declined 7.4 percent to 28.5 million units in 1Q12. — IDC
- PC gaming hardware market to hit \$23.6 billion in 2012. — Jon Peddie Research

Mobile Communications

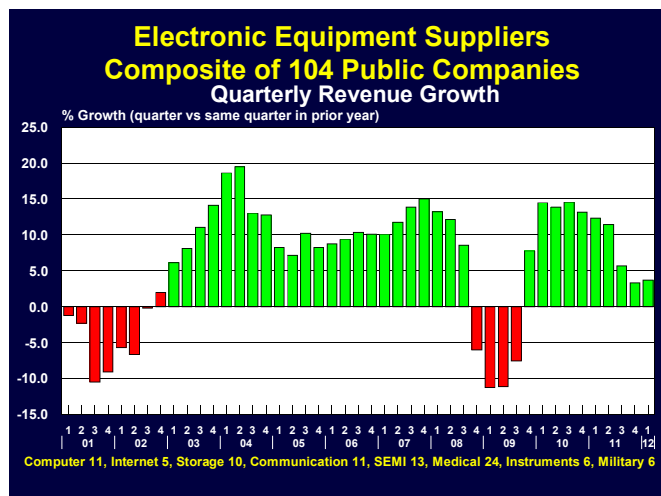
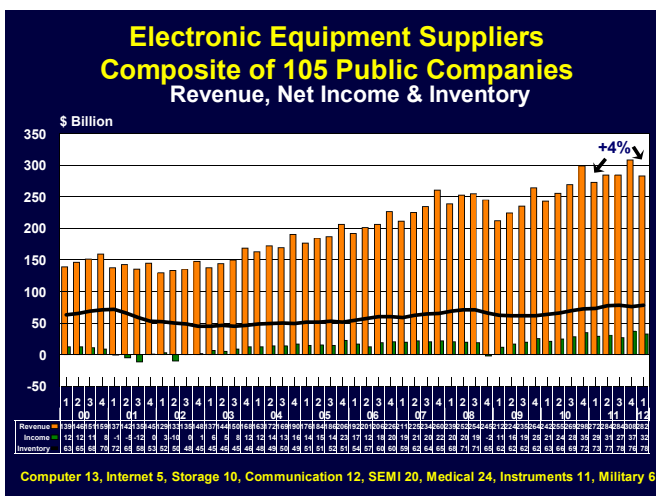
- Worldwide mobile phones sales declined 2 percent y/y to 419.1 million units in 1Q12. — Gartner
- Worldwide smartphone shipments declined 1.5 percent y/y to 398.4 million units in 1Q12. — IDC
- 4G device sales are expected to grow 294 percent y/y to 87 million units in 2012. — ABI Research

Other

- Worldwide set-top box unit shipments grew 13.7 percent y/y to \$13.3 billion in 2011. — Infonetics Research
- Automotive infotainment market to grow 3 percent y/y to US\$33.5 billion in 2012. — IHS

EMS, ODM & Related Assembly Activities

Global electronic contract manufacturing services market is projected to reach US\$672 billion by 2018. — Global Industry Analysts



A-Laser purchased MicroLine 1120 P UV laser cutting system from LPKF.

Asteelflash and Adetel formed a JV called "Electronics & Design Manufacturing Adetel Group & Asteelflash Group" (EDMAA).

Badger Technologies added Aegis' manufacturing operations software to its Farmington, NY factory.

Celestica began volume production of SolarBridge Pantheon microinverters in Dongguan, China.

CTS

- appointed John Dudek as VP, General Counsel and Assistant Secretary.
- Automotive received three pedal module production orders totaling US\$ 17 million from Japanese and Chinese vehicle manufacturers.

Electronic Manufacturing Solutions

installed a DEK Horizon 03iX with Hawkeye 750 post print verification. EMS-Electra SRL added advanced machinery and equipment financed by the European Regional Development Fund.

Firstronic

- formed a design and manufacturing support strategic alliance with DornierWorks.
- formed a manufacturing and remanufacturing service and warranty support strategic alliance Flight Systems Electronics Group.

Flextronics

- received AS9100C Aerospace and Defense quality certification at three U.S. facilities.
- acquired Stellar Microelectronics.
- plans to develop design centers in China's interior.

Foxconn/ Hon Hai

- is targeting 10 percent motherboard market share (about 30,000 motherboards/ month) in India by the

end of 2012.

- and Eike Batista plan to build \$1 billion car battery/ solar panel factory in Rio de Janeiro, Brazil.
- is building a research and development center in Shanghai's Pudong District.
- Foxconn and Apple will share the initial costs of improving labor conditions at the Chinese factories that assemble iPhones and iPads.
- was ranked 156th on Forbes list of world's biggest companies.

Hansatech added Europlacer's iineo-II pick-and-place in Poole, Dorset.

IMI is spending \$14 million in 2012 to increase plant capacity in Europe and focus on automotive electronics manufacturing.

Innokas Medical added a new PCB assembly line at its Kempele plant.

Inovar added an Electrovert Aquastorm 200 in-line cleaning system.

Microart Services added a 10,000 SF expansion and its sixth SMT line in Markham, ON, Canada.

Nortech Systems Aerospace Systems achieved AS9100:2009 (Rev C).

PartnerTech obtained SEK 90 million (10.1 million euro) in orders from two customers in the defense industry.

Plexus is building a 410,000 SF manufacturing facility in Neenah, Wisconsin.

PRIDE Industries purchased a XD7600NT Ruby FP X-ray inspection system from Nordson DAGE.

Quanta Computer

- indirectly invested US\$10 million in Tech-Front Computer and Tech-Full Computer.
- plans to increase its Chongqing notebook shipments from 30 percent to 50 percent by end of 2012.

Saline Llectronics added a Juki Automation Systems' FlexSolder W510 in

Saline, Michigan.

Sanmina-SCI

- and Thales delivered the 8th active phased array radar system to the Royal Danish Navy.
- Suzhou, China facility achieved ISO 13485 certification for medical devices.
- began manufacturing Satcon Technology solar inverters in Ottawa, Ontario.
- added JTAG's boundary scan tools for prototype testing in Haukipudas, Finland.

Scanfil EMS purchased production and office facilities in Sievi, Finland from Sievi Capital.

Senior Systems Technology named Brian McDonnell, Business Development Manager, for Northern California.

SMS Electronics received the Queens Award for Enterprise in International Trade.

SMTC

- appointed J. Randall Waterfield to its Board of Directors.
 - completed integration of ZF Array and subsequent expansion in San Jose.
- Star Engineering received ISO 9001/2008 re-certification.

Suntron closed its Sugarland, Texas facility.

Technical Manufacturing achieved ISO 9001:2008+AS 9100C certification.

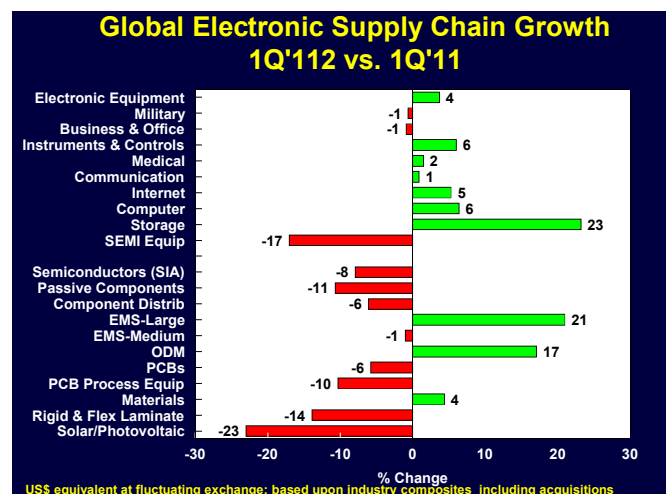
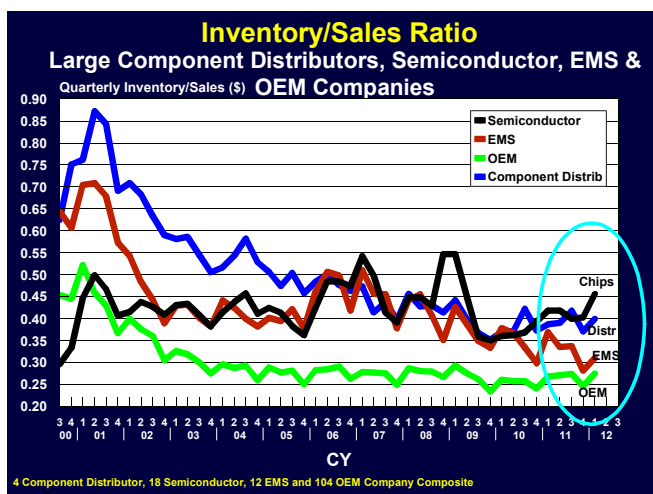
UVAX Concepts invested in a SIPLACE SX platform in Valencia, Spain.

Zentech Manufacturing received ISO 13485 certification.

PCB Fabrication

Global electronic contract manufacturing services market is projected to reach US\$672 billion by 2018.— *Global Industry zPCB Fabrication*

China PCB production value is projected



to grow 9 percent to US\$27.75 billion in 2012.— *TPCA*

German PCB market is projected to grow 4.2 percent to 1.4 billion euros in 2012 and its IC market is expected to decrease 1.3 percent to 712 million euros.— *ZVEI PCB and Electronic Systems*.

Global Flexible PCB industry is expected to grow 5.91 percent to US\$6.81 billion in 2012.— *IEK*

AT&S is building a new site in Chongqing, China.

Caledon Controls, Vast Films and Triangle Labs created a “least expensive” interconnect structure (PCB).

Canadian Circuits added a MICROCRAFT flying probe tester.

Eltek received an \$838,000 frame order from a U.S. medical device manufacturer for flex-rigid PCBs for advanced medical devices.

Gold Circuit temporarily closed its plant in China’s Jiangsu Province after experiencing a fire which is estimated to have cost 15 percent of sales.

Graphic’s founder REX Rozario received a Lifetime Achievement Award and was named Entrepreneur of the Year.

GSPK Circuits earned Queen’s award for outstanding development in International Trade.

Icape Group received US\$1 million PCB order for inverter electronics from a European solar panel manufacturer.

IPC President and CEO John Mitchell began tenure.

Murrietta Circuits

- achieved NADCAP certification
- hired Ray Young as its manufacturing manager

Optiprint invested 8.5 million euros to build and equip a 2,000 m2 building at its Berneck, Switzerland facility.

P. D. Circuits named EMC3 Group’s

Mike Guild, “Sales Person of the Year.”

Panasonic developed mass production technology for its ALIVH®-F resin circuit board using polyimide film.

PCB Flexible Circuits added an Orbotech Paragon™-9800i LDI system.

Phoenix United Associates appointed Ted Hersey as territory sales manager.

R&D Circuits installed a Chemcut CC8000 cupric chloride develop-etch-strip system, Chemcut 2330 cupric chloride etcher and two circuit board dryers in South Plainfield, New Jersey.

Royal Circuits installed a Micronic 86 drilling machine.

San Francisco Circuits received ISO 9001:2008 registration.

Sunstone Circuits completed ITAR registration.

TTM Technologies

- boosted wages in China.
- Santa Ana facility received AS9100 quality system certification and Nadcap accreditation for electronics manufactured for the aerospace industry.

Ventec Holdings Europe acquired Option Technologies.

Viasystems acquired DDi for \$268 million.

Vulcan Flex Circuit received MIL-P-50884 recertification.

Yamashita Materials developed a flexible circuit with thin film shielding material for high frequency telecommunication.

Materials & Process Equipment

Global advanced electronics materials market is projected to increase from \$30.7 million in 2011 to more than \$5.5 billion in 2016 and almost \$26 billion in 2021.— *BCC Research*

3M and Nordson entered a joint agreement for materials and dispensing

systems.

Air Products appointed Kevin Michaelis VP Information Technology & CIO; Richard Boocock VP Global Operations and Joseph Pietrantonio VP Environment, Health, Safety & Quality, and Corporate Chief Engineer.

Aqueous Technologies named Lisa Kocks Director of International Sales.

Assembléon appointed Jeroen de Groot CEO.

Balver Zinn opened an application and training center in Balve, Germany.

Cobar Solder Products named Northern Electronics Automation as its representative in New England.

CVD Equipment moved its Ronkonkoma, NY facility to Central Islip, NY.

CyberOptics promoted Wai Shun Loh to Product Engineering Manager.

Daicel commercialized hot melt nylon film for vacuum packaging of assembled circuit board and semiconductor devices.

Datec transitioned from ISO 9001:2008, AS9100 Revision B standard to Revision C standard.

Dymax named Rob Kleinschmidt Eastern U.S. Regional Sales Manager.

Edwards opened a \$3.5 million NA HQ and manufacturing facility in Sanborn, NY.

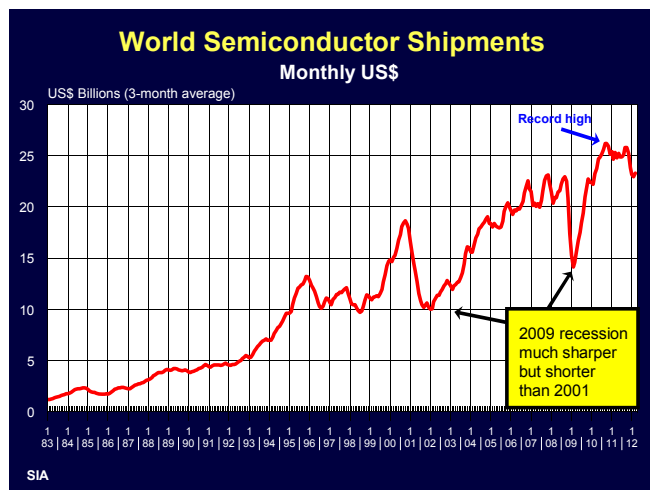
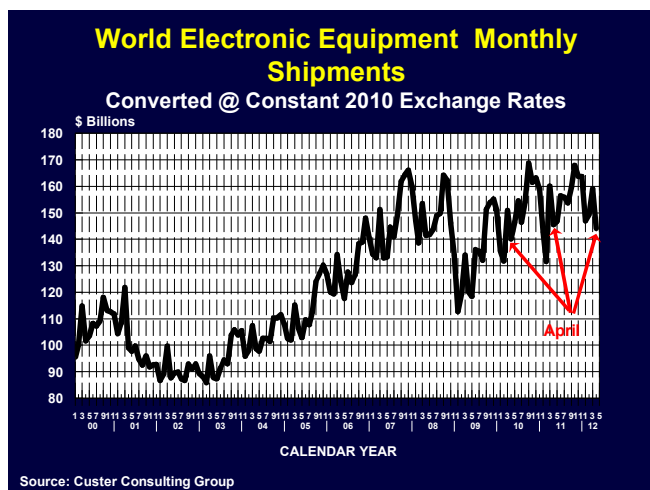
FLEXcon opened a 20,000 SF tech center in Spencer, Massachusetts.

Hitachi Chemical plans to increase Malaysian production of dry film photoresist for PCBs by March 2013.

Indium is investing \$10 million to expand manufacturing operations in Oneida County, NY.

Kaneka began construction of a new 600 tons/ year polyimide film plant on premises of Kaneka Malaysia Sdn. Bhd. in Pahang, Malaysia.

Koh Young delivered its 3000th in-line



system – a Zenith 3D AOI system— to Hitachi Mito Works.

Manz opened 20,000 m2 PV and PCB fab in Suzhou, China.

Microscan celebrated 30 years of technology innovation in Auto ID and Machine Vision.

Park Electrochemical appointed Karen Kujawski as VP of Human Resources and Risk Management.

Rogers named Helen Zhang as President of Asia.

SIPLACE

- appointed Eduardo Terrassi Country Manager for Brazil.
- named EASY as its new representative company for the state of Amazonas
- switched focus to new product introduction, changeover, production run and new maintenance concepts.

SmtXtra moved to 12,000 SF head office in the Doncaster, UK.

Sumitomo Bakelite withdrew from flexible circuit business and transferred manufacturing subsidiary Sumitomo Bakelite Vietnam to Sumitomo Electric.

Surface Technology International added Gen3 Systems conformal coating production equipment.

Toray introduced its ultrathin copper foil formed on PET carrier film made by a vacuum evaporation process.

Uyemura named George Gallager Applications Specialist.

Veeco appointed CEO John Peeler to Chairman of the Board.

Vitronics Soltec moved production of its XPM line from Camdenton, Missouri to Suzhou, China.

Yxlon

- named Ragnar Vaga Regional Sales Manager for Nordic countries and Russia.
- appointed Nordic SMT and Sincotron

Finland as partners for its FeinFocus product line in Nordic electronics market.

Semiconductors & Other Components

Worldwide semiconductor revenue increased 1.8 percent in 2011 to US\$306.8 billion.— *Gartner*

Worldwide semiconductors sales increased 1.5 percent m/m and decreased 7.9 percent y/y to \$23.3 billion in March 2012.— *SIA*

Global DRAM industry revenue is forecast to grow 3.3 percent y/y reach \$30.6 billion in 2012.— *IHS iSuppli*
North American-based chip-gear makers' average worldwide bookings expanded 10.7 percent sequentially to \$1.48 billion in March.— *SEMI*
Semiconductor photomask market is projected to grow from \$3.12 billion in 2011 to \$3.35 billion in 2013.— *SEMI*
 Worldwide semiconductor probe card sales grew 17 percent in 2011 to US\$1.17 billion.— *VLSI Research*

Global automobile sensor market is expected to reach nearly \$15.2 billion by 2012.— *GII*

Global cellular baseband processor market grew 15 percent y/y to \$15.1 billion in 2011.— *Strategy Analytics*
Mobile handset semiconductors including processors, RF, power management and wireless connectivity grew to more than \$30 billion in 2011.— *ABI Research*

Top 10 MEMS players had combined revenue of \$4.7 billion in 2011. □
 — *IHS iSuppli*

