

**The European Electronics Industry
West European Electronics Production – 2000-2014**

Contents & Sample Pages



The European Electronics Industry West European Electronics Production 2000-2014

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The European Electronics Industry West European Electronics Production 2000-2014

Report Outline

This report provides an overview of electronics production in Western Europe for the period 2000 to 2014 for 13 major product groups. In addition to providing data on Western Europe the report also provides a breakdown for 16 countries allowing the user to look in more depth and allow country and regional comparisons.

The report is part of RER's emarketforecasts.com database which brings together market and production data on 53 countries globally. In addition to published reports, including the industry benchmark series the Yearbook of World Electronics Data, information can be provided on individual countries or tailored to meet customers specific requirements. The database is also unique in providing historical data back to 1995 and for selected countries to 1985.

Pricing/Delivery

Annual subscription

The report is priced at £995 and includes a 12 month subscription to European Electronic Markets Forecast (see below).

Multi-user Licence

For companies wishing to distribute the report/newsletter to more than 5 users requires a multi-user licence. The cost is £1,990 for an annual subscription.

Delivery

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The newsletter is also emailed but can be provided in hardcopy format if requested.

European Electronics Market Forecasts (EEMF)

Updated monthly, European Electronic Markets Forecast is the ideal solution to enable you to track, with minimum time and cost, the key issues and opportunities impacting the European electronics industry. From originally researched articles to the latest company developments and market analysis EEMF utilizes over 30 years of industry and market research experience to provide not only reliable but objective analysis and news on the European and global electronics industry.

Summary of Contents

Market analysis on the principal segments of the European & global electronics industry

In-depth market overviews. Recent coverage has included photovoltaics, EMS, domestic appliances and security.

Industry News: The latest industry and company news covering research & design, communications, automotive, distribution, manufacturing and semiconductors.

Financial data on the leading European companies, including trends and market outlook are also covered along with general business trends.

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Why Subscribe ?

By bringing together production data and regular company and market developments your organisation can obtain an independent and cost-effective analysis of electronics output in Western Europe.

The report is unique in providing both historical and forecast data for 16 individual countries as well as summary data for Western Europe.

By providing the report in spreadsheet format the user can manipulate the data to meet their specific requirements, from tracking developments across a single product group to looking at developments for a specific country or region.

The combination of the report and newsletter allows you to cost effectively provide support to a wide range of functions within your organization including:

- Business development.
- Sales.
- Marketing.
- Financial and general management.

The service is also an essential reference for organisations monitoring developments in the strategically important technology sector including:

- Management and business analysts.
- Trade and industry associations.
- Government bodies.
- Academia.

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1 Introduction

The following report provides data for electronics production in Western Europe for the period 2000-2014. The forecast is based on the data published in the Yearbook of World Electronics Data which was fully revised in February 2011.

The report is part of RER's marketforecasts.com database which brings together market and production data on 53 countries globally. In addition to published reports, including the industry benchmark series the Yearbook of World Electronics Data, information can be provided on individual countries or tailored to meet customers' specific requirements. The database is also unique in providing historical data back to 1995 and for selected countries to 1985.

Report Outline

Section 2 provides an outline of the key highlights from the most recent survey.

Section 3 provides data on electronics production in Western Europe for the period 2000-2014. Information is provided by major product group and geographically.

Section 4 provides statistical data on the 16 countries covered in the report.

The final section provides information on exchange rates against the Euro, a brief outline of the methodology and a definition of the product headings.

All the data in Sections 3 and 4 are provided in spreadsheet format to allow the user to manipulate the data for their own specific requirements.

This report is primarily a statistical analysis. To support the forecasts and to provide the user with the latest company and market developments the report includes a 12 month subscription to European Electronic Markets Forecast.

SAMPLE PAGES (2010 Report)

2 Key Trends

Based on its latest survey of the West European electronics industry Reed Electronics Research estimates that electronics production fell by an estimated 14.0%, with electronics equipment declining by 12.9% to Euro 112.0 billion and component production by 17.6% to Euro 33.8 billion (in constant 2008 exchange rates equipment production declined by 11.6% and components by 14.9%).

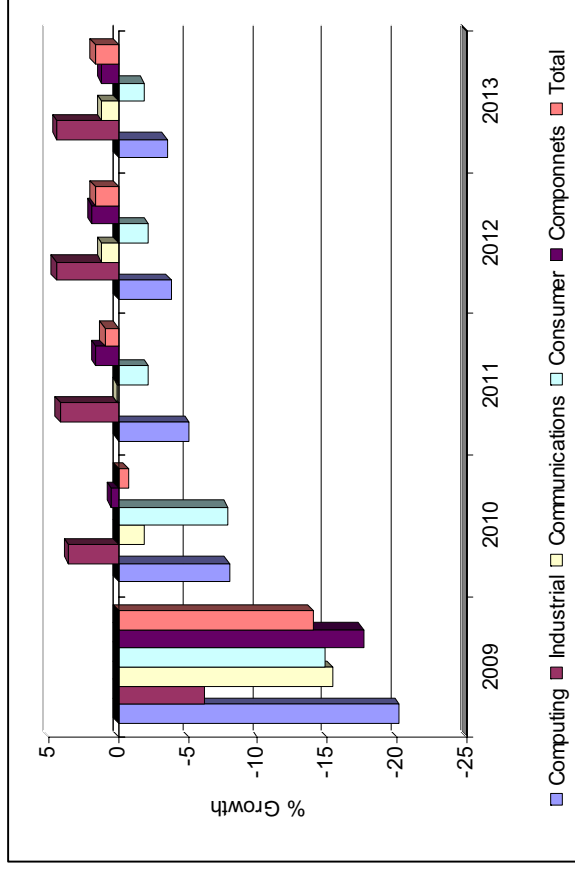


Figure 2.1 West European Electronics Production - % Growth by Sector 2009-2013

Source: Reed Electronics Research

4 Country Data

4.1 Austria

Table 4.1 Austrian Electronics Production by Product 2000-2013

Euro Millions	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
EDP	651	630	580	580	595	550	470	430	390	328	321	308	299	290
Office Equip	26	21	19	12	2	1	1	1	1	1	1	1	1	1
C&I	375	349	368	382	418	445	495	550	583	548	562	584	613	644
Medical	136	140	179	174	179	172	163	148	147	146	150	155	162	169
Industrial	72	85	85	85	85	105	105	118	115	109	111	115	119	123
C&M	147	151	139	147	179	157	157	170	170	156	156	159	162	165
Telecomms	510	403	314	300	302	298	325	299	291	268	262	269	274	280
Consumer-Video	427	345	215	110	-	-	-	-	-	-	-	-	-	-
Consumer-Audio	73	39	35	27	19	12	10	4	2	2	2	2	2	2
Consumer-Personal	13	13	12	12	12	12	12	11	10	10	10	9	9	9
Actives	792	687	548	439	459	519	561	699	628	535	543	553	562	566
Passives	671	612	572	600	528	500	472	442	394	329	327	328	329	328
Other	300	278	247	232	200	175	123	83	73	64	62	60	58	56
TOTAL	4193	3753	3313	3100	2978	2946	2894	2955	2804	2495	2508	2544	2591	2632

Table 4.2 Summary of Austrian Electronics Production by Major Product Group 2000-2013 (Euro Millions & %)

Euro Millions	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Computing	677	651	599	592	597	551	471	431	391	329	322	309	300	291
Industrial	583	574	632	641	682	722	763	816	845	803	823	855	895	936
Communications	657	554	453	447	481	455	482	469	461	424	419	428	436	445
Consumer	513	397	262	149	31	24	22	15	12	12	11	11	11	11
Components	1763	1577	1367	1271	1187	1194	1156	1224	1095	928	932	941	949	950
TOTAL	4193	3753	3313	3100	2978	2946	2894	2955	2804	2495	2508	2544	2591	2632

%	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Computing	16.1	17.3	18.1	19.1	20.0	18.7	16.3	14.6	13.9	13.2	12.8	12.2	11.6	11.1
Industrial	13.9	15.3	19.1	20.7	22.9	24.5	26.4	27.6	30.1	32.2	32.8	33.6	34.5	35.6
Communications	15.7	14.8	13.7	14.4	16.2	15.4	16.7	15.9	16.4	17.0	16.7	16.8	16.8	16.9
Consumer	12.2	10.6	7.9	4.8	1.0	0.8	0.8	0.5	0.4	0.5	0.5	0.4	0.4	0.4
Components	42.0	42.0	41.3	41.0	39.9	40.5	39.9	41.4	39.1	37.2	37.2	37.0	36.6	36.1
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 4.3 Breakdown of Austrian Electronics Production by Equipment/Components 2000-2013

Euro Millions	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Equipment	2430	2176	1946	1829	1791	1752	1738	1731	1709	1567	1576	1603	1642	1682
Components	1763	1577	1367	1271	1187	1194	1156	1224	1095	928	932	941	949	950
Total	4193	3753	3313	3100	2978	2946	2894	2955	2804	2495	2508	2544	2591	2632

%	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Equipment	58.0	58.0	58.7	59.0	60.1	59.5	60.1	58.6	60.9	62.8	62.8	63.0	63.4	63.9
Components	42.0	42.0	41.3	41.0	39.9	40.5	39.9	41.4	39.1	37.2	37.2	37.0	36.6	36.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

SAMPLE ISSUE OF EUROPEAN ELECTRONICS MARKETS FORECAST

European Electronic Markets Forecast

Industry Overview – European Automation Industry

A report published by IMS Research in May 2010 estimated that global sales of industrial automation electronic equipment (including electric motors) dropped by around 14.3% in 2009, from US\$87.4 billion in 2008 to US\$74.9 billion. However IMS Research reported that sales during the first quarter of 2010 probably grew by 25% more than a year before and an equally strong second quarter was expected. Even a flat second half of the year will result in close to double-digit revenue growth for most product areas.

It may take more time for European consumption to recover, since capital investment in the traditional end-user industries is still low, capacity utilization is below average and credit is still difficult to get, especially for the smaller companies. The current financial instability associated with the sovereign debt of some European countries may also hinder the necessary cash flow that is required by industry to invest in modern and energy efficient production equipment.

Included in IMS's market estimates are PLCs, PACs, CNCs, other controllers, HMIs, input/output devices, network devices, DCSs, industrial computers, machine safety equipment, electronic drives, motion controllers and electric motors.

In 2008, IMS Research estimated that 10 companies accounted for just over a half of industrial automation equipment revenues (see opposite).

The major and other significant suppliers are briefly reviewed below and their European production facilities are highlighted.

The market leader, Siemens, has two divisions addressing the market, both with extensive production facilities in Europe. The Drive Technologies Division, with headquarters in Nürnberg,

Global Automation Electronics Market 2008

	Market Share (%)
Siemens	16
ABB	8
Schneider Electric	6
Rockwell Automation	5.5
Emerson Electric	5
GE	4
Mitsubishi Electric	3.5
Eaton Electrical	2
Honeywell	1.5
Omron	1.5
Others	47

Source: IMS Research

Germany had sales in FY 2009 of Euro 7,526 million, a 10.8% decline compared with 2008. The Motion Control Systems Group has production facilities in Erlangen, Bocholt, Chemnitz, Neustadt and Maroldsweisach, Germany and Congleton, UK. The Large Drives Group has production facilities in Erlangen, Nürnberg, Berlin, Ruhstorf, Bad Neustadt and Uerdingen, Germany; Drasov, Mohelnice and Frenstal, Czech Republic; Vienna, Austria; Cornella, Spain; Subotica, Serbia, and Sibiu, Romania.

Siemens' Industrial Automation Division, with headquarters in Nürnberg, Germany had sales in FY 2009 of Euro 7,039 million, a 19.1% decline compared with 2008. The Industrial Automation Systems Group has production facilities in Nürnberg, Amberg, Fürth, Chemnitz and Karlsruhe, Germany; Genoa, Italy; and Ninove, Belgium. The Control Components & Systems Engineering Group has production facilities in Amberg and Fürth, Germany; Kartal, Turkey; and Trutnov, Czech Republic. The

Continued on page 2

Sensors & Communication Group, which is currently undergoing some rationalisation, has production facilities in Nürnberg, München, Berlin and Karlsruhe, Germany; Haguenau, France (recently expanded with a new 10,000 sq m production line facility for flowmeters); Nordberg, Denmark (recently has announced 100 - 250 redundancies, because production of electronic and magnetic ultrasonic flowmeters will be moved to other locations); Gothenburg, Sweden; Sibiu, Romania; Vienna, Austria; and Zagreb, Croatia. Siemens Flow Instruments in Stonehouse, UK will shut permanently by December 2010 (production is being transferred to France and China).

Effective 1 January 2010, ABB reorganized its automation divisions to align their activities more closely with those of its customers. Under the realignment, the business units from the Automation Products and Robotics divisions were regrouped into two new divisions - Discrete Automation and Motion, and Low Voltage Products. The Process Automation division remained unchanged except for the addition of the instrumentation business transferred from the Automation Products division.

If the divisional realignment is applied to 2009 data, ABB Process Automation is the bigger of the automation divisions and would have had sales of US\$7.8 billion (Euro 5.6 billion) and about 28,200 employees. The division has its global headquarters in Houston, Texas and in Europe it has production facilities for control systems products in Västerås, Sweden and Minden, Germany and instrumentation and analytical products factories in Stonehouse, Didcot, St. Neots and Workington, UK; Gottingen, Minden and Frankfurt, Germany; Rijswijk, Netherlands; Lenno, Italy; and Västerås, Sweden.

The new Discrete Automation and Motion division, with headquarters in Zurich, Switzerland, includes products and systems targeted at discrete manufacturing applications, such as robotics and PLCs, and providing motion in plants, such as motors and drives. If the divisional realignment is applied to 2009 data, the division would have had revenues of US\$5.4 billion (Euro 3.9 billion) and about 17,700 employees. In Europe, ABB manufactures LV Drives in Helsinki, Finland and Ladenburg, Germany; MV Drives in Turgi, Switzerland, PLCs in Heidelberg, Germany; and Industrial Robots in Västerås, Sweden. ABB's Global Robotics Business has established its headquarters in Shanghai's Kanggiao Free Trade Zone.

The French-based Schneider Electric, headquartered at Rueil-Malmaison, Paris, helped by a number of strategic acquisitions, including Telemecanique

(1988), Modicon (1996), Berger-Lahr (2006), Elau (2006), and VA TechElin EBG Elektronik (2006), has grown to be a major player in the automation market. In 2009, the company's Automation & Control Business had revenues of Euro 4,252 million, a 21.3% decline from 2008 on a like-for-like basis.

In 2000, Schneider Electric formed a joint venture, Schneider Toshiba Inverter, 60% owned by Schneider, with 40% owned by Toshiba. A subsidiary, Schneider Toshiba Inverter Europe SAS, was established at Pacé sur Eure, to develop, produce and market all Schneider Electric and Toshiba general-purpose inverters. Subsequently an agreement was made with the Finnish drives manufacturer Vacon, for them supply certain drives to the joint venture. Schneider Electric's other automation products factories in France include Carros (PLCs), Agriers, Angoulême, Ales, Valence, Shiltigheim, Dijon, and Bourguebus. However Schneider Electric is currently rationalising its production in France. In Germany, Schneider Electric has production facilities for drives and motors at Lahr, and drives and controllers at Marktheidenfeld, and for drives in Vienna, Austria.

With headquarters in Milwaukee, Wisconsin, USA, Rockwell Automation is a leading global provider of industrial automation power, control and information solutions, with sales in FY 2009 of US\$4,333 million (Euro 3,107 million), a 24% decline from 2008. The company has organized its products and services into two operating segments: Control Products & Solutions (60.2% of sales in FY 2009) and Architecture & Software (39.8% of sales in FY 2009). Control Products & Solutions include motor control and industrial control products, whilst Architecture & Software includes control platforms that perform multiple control disciplines and monitoring applications. Products are largely sold under the Allen-Bradley brand name. In Europe, Rockwell has manufacturing facilities in Katowice, Poland - a new facility opened in 2007 - (MV drives, motor control centres, servo motors & safety interlocks); Kempen, Germany (drive systems & relays); and Bletchley (assembly of drives), Crewe (assembly of servo drives), Maldon & Horsham (ICS Triplex safety shutdown systems), UK.

Emerson Electric, with headquarters in St. Louis, Missouri, USA, has grown to be a diversified global manufacturing company, with revenues in FY 2009 of US\$20.9 billion (Euro 15.0 billion). Emerson has had a long-time R&D, manufacturing and sales presence in Europe, where it employs more than 25,000 people and over 70 manufacturing locations across the region.

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Emerson Process Management, which accounted for 30% of the company's sales, had sales in FY 2009 of US\$6,233 million (Euro 4,398 million), a 6% decline on 2008. Process Management provides measurement, control and diagnostic capabilities for automated industrial processes. Under the Rosemount brand name, pressure and flow measurement products are manufactured in Europe in Wessling, Germany; temperature measurement products are manufactured in Karlstein am Main, Germany; level measurement products are manufactured in Slough, UK; and analytical products are manufactured in Hasselroth, Germany. Tescom pressure control systems are made in Selmsdorf, Germany and Tartarini products (regulators) come from Bologna, Italy. A facility in Gothenburg, Sweden produces tank gauging systems. Emerson Process Management, under the Fisher brand name, manufacture control valves and actuators at Hengelo, Netherlands; Cernay, France; and Székesfehérváf, Hungary.

Emerson Industrial Automation, which accounted for about 18% of company sales, had sales in FY 2009 of US\$3,698 million (Euro 2,652 million) - although only a small proportion is accounted for by electronic equipment - a 24% decline on 2008. Control Techniques manufacture drives at Newtown, Powys, UK and the French-based motor manufacturer Leroy Somer manufacture drives at its electronics factory in Agriers, France.

In December 2009, the joint venture GE Fanuc Automation Corporation, which had been established in 1986, was dissolved. The Software, Embedded and Control Systems business became part of GE, now trading as GE Intelligent Platforms, and the CNC division becoming part of Fanuc Ltd.

GE Intelligent Platforms, whose products include PLCs, PACs, operator interfaces and motion control products, has its headquarters in Charlottesville, Virginia, USA, but has no production facilities in Europe. Similarly the Japanese-based Fanuc does not manufacture any of its CNC controls or industrial robots in Europe.

Mitsubishi Electric's Industrial Automation Systems Business, which accounted for 19.2% of the company's sales, had sales in the year ending 31 March 2010 of Yen 733 billion (Euro 5,621 million), but this also includes automotive electrical equipment, car electronics, circuit breakers, distribution transformers and UPSs, as well as factory automation systems. In October 2006, Mitsubishi Electric acquired a 15% stake in the Swedish company Beijer Electronics Automation AB, which had been Mitsubishi Electric's agent in Sweden, Norway and Finland since

the 1980s. Under the deal, Beijer was granted distribution rights for Mitsubishi Electric's agencies in Denmark and the Baltic States and those not already held in Finland.

In the late 1980s, Beijer Electronics launched its own range of HMIs, which it had developed, and these are sold through its own sales force in domestic markets and exported through Mitsubishi Electric. The Beijer Group, with headquarters in Malmö, Sweden had a turnover in 2009 of SEK1,089 million (Euro 102 million) of which 39% was accounted for by HMI products. HMI products are manufactured in Europe at the company's subsidiary in Unterensingen, Germany.

Eaton Corporation is a diversified group producing a broad range of industrial and commercial products, with sales in 2009 of US\$11,873 million (Euro 8,513 million), of which about a half are for "Electrical" products. In December 2007, Eaton acquired the German Moeller Group, based in Bonn, a leading supplier of components for commercial and residential building applications and industrial controls for industrial equipment applications. Moeller had sales in 2007 of Euro 1.02 billion. Automation products, including PLCs, HMIs and remote I/O Systems, are produced in the main factory in Bonn. Eaton's Electrical Group established a strategic alliance with the Finnish manufacturer in 1998, which has led to the entire Vacon drives product line being available under Eaton's name.

Honeywell International Inc is a diversified technology and manufacturing company, with sales in 2009 of US\$30.9 billion (Euro 22.16 billion). The company has four business units: Aerospace, Automation and Control Solutions (ACS), Speciality Materials and Transportation Systems. Honeywell ACS, which had sales in 2009 of US\$12.6 billion (Euro 9.03 billion) manufactures environmental and combustion controls, sensing controls, security and life safety products and services, scanning and mobility devices and process automation (Honeywell Process Solutions - HPS) and building solutions and services. Honeywell HPS, which had sales in 2009 of about US\$2.5 billion (Euro 1.8 billion), has a European manufacturing facility in Newhouse, Scotland. Other parts of Honeywell ACS have manufacturing facilities in Mosbach, Neuss and Schonaich in Germany.

Omron's Industrial Automation Business, accounting for 39% of the company's sales, had sales in the year ending 31 March 2010 of Yen 206.2 billion (Euro 1,581 million), a 24% decline compared with the previous year. Omron has established two manufacturing facilities in Europe, Omron Manufacturing of the Netherlands BV, in Den Bosch, manufactures PLCs, whilst Omron Manufacturing of

Germany GmbH, in Nufringen, manufactures sensors and safety systems.

Bosch Rexroth is part of the Bosch Group and was created in 2001 through the merger of Bosch Automationstechnik and Mannesmann Rexroth. Bosch Rexroth, which had sales in 2009 of Euro 4,146 million (a 30% decline on 2008), operates in three business areas: Drive and Control Technology, Packaging Technology and Solar Energy. In its Drive and Technology business it includes a wide range of electrical, hydraulic, pneumatic and mechatronic components and systems. Bosch Rexroth has its headquarters in Lohr, Germany and has over 20 manufacturing locations in Germany, including a drives factory in Erbach, and production facilities in Austria, Denmark, France, Hungary, Italy, Netherlands, Romania, Slovenia, Spain and Sweden.

The diversified Parker Hannifin Corporation, with sales in 2009 of US\$10.3 billion (Euro 7.4 billion) operates with three business segments: Industrial, Aerospace and Climate & Industrial Controls. The Industrial segment, with sales of US\$7.63 billion (Euro 5.47 billion) comprises a Fluid Connectors Group, a Filtration Group and an Automation Group, with a range of pneumatic and electromechanical components and systems, including drives, electric actuators, HMIs and servo motors, drives and controls. In Europe, the company has production facilities in Littlehampton, UK (previously Eurotherm/SSD Drives); Cinisello Balsamo, Milan, Italy (previously SBC Elettronica SpA); and Offenberg, Germany (previously Hauser Elektronik GmbH).

The Japanese company Yokogawa Electric Corporation was one of the pioneering industry leaders in Distributed Control Systems. In the year ending 31 March 2010, Yokogawa had sales of Yen 316.6 billion (Euro 2,428 million) of which 81% was accounted for by Industrial Automation and Control. Yokogawa has its European headquarters at Amersfoort, Netherlands and Rota Yokogawa GmbH & Co KG, based in Southern Germany at Wehr, designs and manufactures flowmeters - the company has been designated as Yokogawa's Centre of Excellence for flowmeters.

The Japanese motion controls and robotics company, Yaskawa Electric Corporation, with sales in the year ending 31 March 2010 of Yen 224.7 billion (Euro 1,723 million), established a manufacturing facility in Cumbernauld, Scotland in 1998. The facility now produces inverter and servo drives.

Since its foundation as Sueddeutsche Elektromotorenwerk in 1931 at Bruchsal in the north region of Germany, SEW has grown from a regional

business into a leading supplier of electric motors, gear boxes and drives equipment worldwide, with more than 13,000 employees and sales of around Euro 1.5 billion. Electronic drives are manufactured at SEW-Eurodrive's headquarters in Bruchsal.

The family-owned company Festo, with headquarters in Esslingen, Germany, has grown to become a leading supplier of pneumatic and electric automation products, employing around 13,500 globally and with sales in 2009 of Euro 1.3 billion, down from Euro 1.7 billion in 2008. Festo manufactures electric automation products at its main factory in Esslingen and Pieterlen, Switzerland. Electro-mechanical actuators are produced at St. Ingbert, near Saarbrücken, Germany.

Converteam was formed in 2006 when Alstom sold its Power Conversion Division to a management team backed by Barclays Private Equity. The company, which had sales in 2009 of Euro 1,153 million, manufactures LV and MV AC drives, as well as motors, generators and control systems. The company has its headquarters at Massy, France, with French production facilities in Palaiseau, Belfort and Ludres, with a rotating machines factory in Nancy. Converteam's main UK sites are in Kidsgrove (where it makes drive products), Glasgow (large system drives and MV switchgear) and Rugby (mainly generators and specialist motors).

In 2009, Invensys plc formed Invensys Operations Management, by merging three of its industrial automation businesses - Invensys Process Systems, Wonderware and Eurotherm into a single division. IOM, which had sales in 2009 of £1,009 million (Euro 1,132 million), comprises Eurotherm control and measurement instrumentation, Foxboro distributed control and process instrumentation, IMServ carbon and energy management, InFusion enterprise control, Triconex safety shutdown and critical control and Wonderware real-time operations management. IOM has its headquarters in Plano, Texas and in Europe has manufacturing facilities in Worthing, UK (temperature controllers); Tychy, Poland (thyristors and data acquisition); Guanzate, Italy (temperature controllers); Soultz, France (intelligent valve positioners); Stuttgart, Germany (buoyancy level).

Baldor Electric Company, with headquarters in Fort Smith, Arkansas, manufactures electric motors, power transmission products, drives and generators, and had sales in 2009 of US\$1,524 million (Euro 1,093 million). In Europe, Baldor UK Ltd designs and manufactures motion controllers

and servo drives in Bristol, using a contract manufacturer.

The Swiss family-owned Endress + Hauser Group is a major supplier of process measuring instruments and process automation. The Group, with headquarters in Reinach, Switzerland, had sales in 2009 of Euro 1,096 million. European production facilities are located in Reinach, Switzerland; Nesselwang, Gerlingen, Waldheim, Maulberg, Stahnsdorf and Kassel, Germany; Pessano, Italy; Cernay, France; and Manchester, UK.

Other significant manufacturers of electronic automation equipment include:

Aberle Automation GmbH & Co. KG (2008 sales - Euro 42 million) - Lingarten, Germany (Control systems)

ABM Greiffenberger Antriebstechnik GmbH (2009 sales Euro 63 million) - Marktredwitz, Germany (Motors, drives and controllers)

AMK Arnold Müller GmbH & Co. KG - Kirchheim/Teck, Germany (Motors, drives, controllers & automation systems)

Ansaldo Sistemi Industriali SpA (2009 sales - Euro 231 million) - Milan, Italy, with additional production at Genoa, Monfalcone & Montebello Vincentino, Italy (Motors, generators, drives, power electronics)

Baumüller Group (2008 sales - Euro 119 million) - Nürnberg, Germany, with additional production at Bad Gandersheim & Kitzingen, Germany, Slov Konjice (Slovenia); and Brno, Czech Republic (Motors & drive systems)

Beckhoff Automation GmbH (2009 sales - Euro 236 million) - Veri, Germany (Industrial PCs, I/O devices, motion control systems)

Bernecker+Rainer Industrie-Elektronik Ges. mbH (B&R Automation) (2008 sales - Euro 300 million) - Eggesberg, Austria (Motors, drives, PCs, HMIs)

Comau SpA (2008 sales - Euro 1,123 million) - Grugliasco (TO), Italy (Industrial robots)

Danaher Motion GmbH - Düsseldorf, Germany (Motors, drives, controllers)

Danfoss Motion Controls Division (2009 sales - Euro 567 million) - Graasten, Denmark (Drives)

Etel SA (2006 sales - Euro 56 million) - Môtiers, Switzerland (Motion control systems)

Fagor Automation (2009 sales - Euro 70 million) - Mondragón, Spain, with additional production at Eskoriatza & Usurbil, Spain CNC systems, motors & drives, encoders)

Carlo Gavazzi Automation SpA (2009/2010 sales - Euro 99 million) - Lainate (MI), Italy. European production at Belluno, Italy; Kaunas, Lithuania; Hadsten, Denmark; and Malta (Sensors, timers, motor controllers, relays, safety devices, fieldbus systems)

Gefran SpA (2009 sales Euro 88 million) - Provaglio d'Isèo, Italy, with additional production at Gerenzano, Italy and Pleidelsheim, Germany (Drives & motion control, sensors, automation components)

Hanning Elektro-Werke GmbH & Co. KG (2009 sales - Euro 84 million) - Oerlinghausen, Germany, with additional production at Eggesin, Germany and Vilnius, Lithuania (Motors, drives and actuators)

Hirschmann Automation & Control GmbH - Neckartenzlingen, Germany (Industrial Ethernet products, mobile machine control systems)

Jetter AG (FY 2010 sales - Euro 30 million) - Ludwigsburg, Germany (Controllers, motion systems, HMIs, industrial PCs)

KEB Group (Karl E. Brinkmann GmbH) (2008 sales - Euro 177 million) - Barntrup, Germany (Motion control products & systems)

Keba AG (2009 sales - Euro 109 million) - Linz, Austria (Controllers, I/O devices, HMIs, drives)

Kuka AG (2009 sales - Euro 902 million) - Augsburg, Germany, with additional production at Takson/Füzesgyarmat, Hungary (Industrial robots)

Lenze GmbH & Co. KG (2008/2009 sales - Euro 505 million) - Aerzen, Germany, with additional production at Exertel, Germany and Asten, Austria (Drives, industrial PCs, HMIs)

Metso Automation (2009 sales - Euro 527 million) - Helsinki, Finland (Control valves, process automation systems)

Moog Inc - Industrial Controls (2009 sales Euro 345 million) East Aurora, New York, USA. European production in Tewskesbury, UK; Boblingen, Germany; Casella and Flero, Italy; Ringaskiddy, Ireland (Controllers, servo drives)

National Instruments Corp (2009 sales - Euro 485 million) - Austin, Texas, USA. European production in Debrecen, Hungary (PACs, motor drives & controllers, HMIs, data acquisition, T&M instruments)

NUM - Teufen, Switzerland. Production at Cuggino, Italy (CNC controls, drives)

Phoenix Contact GmbH & Co. KG - Blomberg, Germany (PLCs, industrial computers, HMIs, I/O systems, drives)

Physik Instrumente GmbH & Co. KG (2008 sales - Euro 66 million) - Karlsruhe, Germany, with additional production at Thuringia, Germany (Actuators, positioning systems, motion controllers)

Pilz GmbH & Co. KG (2008 sales - Euro 165 million) - Ostfildern, Germany (Sensors, control systems, HMIs, motion control & drives)

Schleicher Electronic GmbH & Co. KG (2006 sales - Euro 232 million) - Berlin, Germany (Controllers, HMIs, I/O systems, data loggers)

Staübli AG (Sales > CHF 1 billion) - Pfäffikon, Switzerland. Robot production at Faverges, France; Drives production (Deimo SpA) at Brescia, Italy (Industrial robots, drives, connectors, textile m/c's)

Stöber Antriebstechnik GmbH & Co KG (2008 sales - Euro 88 million) - Pforzheim, Germany (Motors & drives)

Vacon Oy (2009 sales - Euro 272 million) - Vaasa, Finland, with additional production at Naturns, Italy (Drives)

Graham Weaver

Market notes

- The European market for consumer electronics is expected to grow by 3.1% in 2010 and attain a total market volume of Euro 64.5 billion, according to figures released by the *European Information Technology Observatory* (EITO) based on current data from the market research institute GfK. LCD TVs accounted for around half of the total at Euro 32 billion, up 13% year on year while unit shipments are forecast to reach 61.5 million an increase of 25%. Blu-ray players, digital cameras and hi-fi systems are also seeing an increase in turnover. However, sales for games consoles, MP3 players and navigation devices are on the decline. According the report, the strongest growth in sales among the major EU countries in 2010 was in Italy at a rate of 4.8% to Euro 6.5 billion and Germany at a rate of around 3% to Euro 13.4 billion. The consumer electronics markets in Spain and France are slightly negative with declines of 0.5% to Euro 5 billion and 1.3% to Euro 9.6 billion, respectively. The UK, Europe's second-largest CE market, is expected to decline by 11% to around

Euro 10 billion the third year where sales will have declined by over 10%.

- According to *IDC Energy Insights* Plug-in Electric Vehicles (PEVs) will become commercially available in 2011, and by 2015 there will be more than 2.7 million PEVs plugged into the global grid, with 885,000 PEVs in North America and more than 780,000 PEVs in Europe.

- The worldwide hardcopy peripherals market (single-function printers, printer-based multifunctional systems (MFPs), and single-function digital copiers (SF DC)) experienced double-digit growth in both units and shipment value in the second quarter of 2010. According to *IDC* the total market grew 20% year over year in Q2 2010 to 29 million units while shipment value increased 14% year over year to US\$13.3 billion. This is the third consecutive quarter of year-over-year unit growth and the first double-digit growth for both units and shipment value since early 2000. In Western Europe, the region recorded a 12.3% year over year growth in Q2 2010, the first positive trend since Q3 2007. There were 5.6 million units shipped in the region. Western Europe is the third largest region, accounting for 19% share of the total market. Shipment levels are still lower than in 2007 and 2008, as the market will take some time to fully recover. CEMA region experienced significant year over year growth in the overall market in the second quarter, increasing 23.1% to 3.4 million units. CEMA represents 12% of the worldwide market.

- Despite the potential impact that the tablet PC market may have on the standalone e-reader market, global e-reader shipments will grow from 12 million units by the end of this year, to 35 million in 2014, according to *In-Stat*.

Western European mobile phone market growth sustained by Smartphones in Q2 2010

The Western European mobile phone market grew 1.5% year on year to 43.3 million units in Q2 2010, according to figures released by *IDC*. The healthy smartphone growth offset the fall in traditional devices. Smartphone shipments increased to 14.6 million units, 60% up on last year's second quarter, to represent 34% of total shipments, compared with 28% in Q1 2010. Traditional mobile phones declined 14% year on year to 28.7 million units, from 33.5 million a year before.

Within the smartphone segment and from an OS perspective, Android led the growth in most Western European countries. Shipments increased 450% year

**Top Western European Mobile Phone Vendors, Total Shipments and Market Share, Q2 2010
Smartphones and Traditional Phones (Units in Millions)**

Vendor	2Q10 Unit Shipments	2Q10 Market Share	2Q09 Unit Shipments	2Q09 Market Share	2Q10/2Q09 Change
1. Nokia	16.2	37%	15.3	36%	6%
2. Samsung	10.7	25%	12.2	29%	-12%
3. Sony Ericsson	3.9	9%	5.1	12%	-24%
4. LG	3.0	7%	4.9	11%	-39%
5. Apple	2.8	6%	1.7	4%	64%
6. Research in Motion	2.6	6%	1.2	3%	117%
Others	4.1	10%	2.2	5%	75%
Total	43.3	100%	42.6	100%	2%

**Top Western European Mobile Phone Vendors, Shipments and Market Share,
2Q10 Smartphones (Units in Millions)**

Vendor	2Q10 Unit Shipments	2Q10 Market Share	2Q09 Unit Shipments	2Q09 Market Share	2Q10/2Q09 Change
1. Nokia	5.8	40%	5.0	55%	16%
2. Apple	2.8	19%	1.7	19%	65%
3. Research in Motion	2.6	18%	1.2	13%	117%
4. HTC	1.4	10%	0.7	8%	100%
5. Sony Ericsson	0.8	5%	0.1	1%	700%
6. Samsung	0.6	4%	0.3	3%	100%
Others	0.6	4%	0.1	1%	500%
Total	14.6	100%	9.1	100%	60%

Source: IDC European Quarterly Mobile Phone Tracker

Note: Vendor shipments are branded shipments and exclude OEM sales for all vendors.

on year and market share jumped from 4% in Q2 2009 to 15% in Q2 2010, becoming the fourth biggest operating system among smartphones, with a very small gap to BlackBerry OS and the iOS. IDC believes Android will become the second biggest smartphone OS in Western Europe by as early as Q1 2011. The popularity of devices from HTC, Sony Ericsson, and Samsung contributed to strong awareness of Google's OS.

The traditional-phone segment although declining 14% year on year and 7% sequentially has been supported by the popularity of feature phones, despite the impact of smartphones. But the price gap between high-end feature phones and smartphones is decreasing, and consumers are increasingly considering smartphones for their next upgrade rather than a feature phone. LG was the most affected by this trend, with its traditional-phone segment declining 63% year on year due to the lack of a strong product replacement of its successful LG Cookie.

Strong smartphone sales helped Sony Ericsson regain third position from LG, despite the 24% year-on-year decline in total shipments. While its smartphone shipments increased 700% year on year, traditional phones dived 40% from last year's second quarter. Sony Ericsson does not have a portfolio of touchscreen feature phones and the low-end tier continues to be dominated by Nokia, Samsung, and LG. While Sony Ericsson succeeded with the Android smartphones X10 and X10 mini, LG suffered from a lack of smartphones in the portfolio and low sales of traditional phones.

Mergers & Acquisitions

- The Japanese company **NPC Inc** has acquired the insolvent German company **Meier Solar Solutions GmbH** (MSS) a manufacturer of photovoltaic systems in a deal valued at Euro 8.8 million. MSS, which employs 110 people, has two factories in Germany plus 12 offices globally.

- **Tyco Electronics Ltd** has entered into a definitive agreement to sell its mechatronics business located in Nieferrn, Germany to **L. Possehl & Co. mbH**. The business designs and manufactures customer-specific components, primarily for the automotive industry, and is expected to generate sales of approximately US\$100 million in the current fiscal year.

- The Austrian **Miba Group**, a strategic partner to the international engine and automotive industry, has acquired **EBG and DAU**, producers of power electronics components, as of 1 September 2010. EBG and DAU, which employs around 130 people generates annual sales of Euro 30 million, and has production sites at two locations in Kirchbach and Ligist, Austria. EBG and DAU are specialists in passive electronic components such as resistors and cooling systems for power electronics.

- **BAE Systems** has entered into a definitive agreement to acquire **OASYS Technology**, a privately owned company specializing in the design and manufacture of electro-optical systems and subassemblies for aerospace, defense, industrial and commercial markets. OASYS Technology employs 65 people at its 40,000 sq ft design and manufacturing facility in Manchester, New Hampshire, USA. Upon successful closing, OASYS Technology's operations are expected to be integrated with the BAE Systems business headquartered in Nashua, New Hampshire.

- The French aerospace and technology group **Safran** has announced that it has entered into a definitive agreement with **L-1 Identity Solutions**, a leading identity management provider in the United States, for Safran to acquire the operating and holding company of L-1 and its biometric and enterprise access solutions, secure credentialing solutions and enrollment services businesses, for a total cash amount of US\$1.09 billion. These businesses had 2009 revenue of US\$436 million and recorded a backlog of US\$1.1 billion at end of 2009. The transaction would create an industry-leading provider of solutions for the fast-growing high-tech homeland security market and generate strong growth in revenue and earnings, while yielding significant operating synergies.

- **3M** has entered into a definitive agreement to acquire **Attenti Holdings SA** from an investor group led by **Francisco Partners**, for a purchase price of US\$230 million in cash. Based in Tel Aviv, Israel, Attenti is a leading supplier of remote people monitoring technologies used for a variety of offender monitoring applications, such as people awaiting trial or on probation; and to assist eldercare facilities in monitoring and enhancing the safety of patients.

- **H.C. Starck GmbH**, headquartered in Goslar, Germany, has signed a contract to sell its global "Conductive Polymers" Business Unit to **Heraeus**, Hanau, Germany. The Business Unit, which is based in Leverkusen, sells liquid polymer chemicals under the brand name "Clevios." Due to their highly conductive nature, these chemicals are used in a wide range of applications, primarily in the electronics industry. The transaction is expected to be completed in the fourth quarter of 2010. The parties have agreed to keep the purchase price confidential. By selling its Clevios business, H.C. Starck has completed a further step towards focusing on the company's core areas of business, namely "Refractory Metals" and "Advanced Ceramics". The company is one of the world's leading suppliers in both areas which offer above-average growth potential in high-tech industries such as telecommunications, medical engineering, power engineering, aerospace and automotive engineering.

Communications

Nortel announces Ericsson as successful acquirer of Multi Service Switch business

Nortel Networks Corporation announced that it, its principal operating subsidiary Nortel Networks Limited (NNL), and certain of its other subsidiaries, including Nortel Networks Inc. and Nortel Networks UK Limited (in administration), have concluded a successful auction of substantially all of the assets of Nortel's Multi Service Switch businesses globally with Ericsson emerging as the winning bidder with a purchase price of US\$65 million.

Under the terms of the agreements, Ericsson's purchase includes substantially all assets of the MSS business globally including the associated Data Packet Network (DPN) and Services Edge Router (Shasta) product groups. These agreements also include substantially all customer contracts and certain intellectual property related to the MSS business.

The sale is subject to relevant court and regulatory approvals, including Canadian and US court approvals.

Automotive

German car manufacturer's support integrated standard

German car manufacturers Audi, BMW, Daimler, Porsche and Volkswagen have agreed to support a modular connector system for electric vehicle charging. The core of the connector system has been

European passenger car production

European passenger car production fell by 1.4% year on year in August at 0.789 million units, according to the latest figures from *J.D. Power*. In Western Europe production fell by 9.9% in August, while output in CEE rose by 19.2% resulting in the region's share of the total reaching 35.4% for the month.

Units Million	August 2010	August 2009	8 Months 2010	8 Months 2009
West Europe	0.510	0.566	7.853	6.798
Central and Eastern Europe	0.279	0.234	3.232	2.641
Total	0.789	0.800	11.085	9.439

Source: *J.D. Power* (www.jdpowerforecasting.com)

submitted for standardization under the designation IEC 62196-2 Type 2 for single- up to three-phase charging with alternating current (AC). An extension for direct current (DC) is currently being developed.

The companies are jointly working on the next steps of standardization and are actively looking for a dialog with other OEMs, utility providers and network operators.

Axeon attracts new investment

Europe's leading supplier of lithium ion batteries for electric vehicles, power tool and mobility applications, Axeon, has raised £5 million of new equity to support the next development phase of the business.

The new funding will be deployed in the following key areas: Expansion of the electric vehicle (EV) technology development centres in Europe; early-stage planning of production capacity in North America; and growth of the existing power tool and mobile product business.

EV Plug Alliance announces availability of products and new members

The EV Plug Alliance has announced that Citelum, DBT, FCI, Leoni, Nexans, Sagemcom, and Tyco Electronics have joined Legrand, Scame, Schneider Electric, Gewiss, Maréchal Electric, Radiall, Vimar, Weidmüller France and Yazaki Europe as members of the EV Plug Alliance. Established at the end of March 2010 by Schneider Electric, Legrand & Scame, the EV Plug Alliance aims to promote the use of a high-safety plug and socket-outlet solution for Electric Vehicle charge infrastructure.

Early July 2010, the Alliance completed the test of products from several partners. The entire test file defined in the project of the IEC draft standard CD

62196-2 has been passed successfully. EV Plug Alliance products are now available on the market.

Installed on the infrastructure side, the plug and socket-outlet system endorsed by the Alliance ensure compatibility between multiple suppliers' products. It allows electric vehicles and plug-in hybrids to recharge up to 22 kW in single or three-phase. The socket-outlet and the plug fitted with a shutter offer the highest level of safety against accidental contact with electric parts and are fully compliant with the forthcoming IEC standard for EV plug and socket-out.

ABB and GM to collaborate on electric car battery research

ABB, the global power and automation technology group, and General Motors have signed a non-exclusive memorandum of understanding to cooperate on a research and development project that will investigate uses for electric vehicle batteries once their useful life in the vehicle is over.

The project will examine the potential of reusing spent lithium-ion battery packs from GM's electric car, the Chevrolet Volt, as a means of providing cost-effective energy storage capacity, which will improve the efficiency of electrical systems as they evolve into smart grids.

According to GM, the Volt's battery will still have significant capacity to store electrical energy, even after its automotive life.

Economical grid storage is often identified as a key "enabler" technology of smart grids that will drive the wider use of a variety of applications, including: managing the intermittency of wind and solar resources; mitigating spikes in electricity demand; providing backup power; allowing cheaper off-peak power to be used during peak periods.

ABB is currently at work on more than 20 projects around the world examining all aspects of the smart grid, from energy storage to network management, metering and communication, distribution automation and home automation systems.

Production

Sony to realign its LCD TV manufacturing operations for Europe

As part of its on-going initiative to enhance its manufacturing efficiency to improve the profitability of its LCD TV business, the Japanese company Sony has announced that its relevant European subsidiaries have agreed to sell the company's Barcelona technology centre, which manufactures LCD TVs for the European region, to the Spanish companies Ficosa and COMSA EMTE.

Following the transaction, the Barcelona technology centre will be divided into two new companies, one focusing on manufacturing and the other focusing on development and engineering. The manufacturing company will be wholly-owned and operated by Ficosa, while the development and engineering company will be a 50/50 joint venture between Ficosa and COMSA EMTE. It is intended that the new companies will assume employment of the majority of the 1,100 employees at the Barcelona technology centre.

Sony will source LCD TV production to the new manufacturing company for two years after completion of the transfer. Both the new manufacturing and engineering companies will concurrently develop new businesses.

The transfer is planned to be completed by the end of December 2010, subject to certain regulatory and other approvals.

Established in 1949, Ficosa International SA is a multinational corporation devoted to the research, development, production and commercialization of systems and parts for automobiles. It is headquartered in Barcelona, Spain and employs 6,800 people. Ficosa is present in 19 countries around the world including Europe, North America, South America and Asia.

COMSA EMTE SL is the second-largest Spanish unlisted group in the infrastructure, services, engineering and systems sector. The group has a presence in 13 countries and employs 9,000 people.

Kitron reports new orders

Norwegian EMS provider Kitron ASA's subsidiary Kitron AB in Karlskoga, Sweden, has received new orders from BAE Systems AB of about NOK 26 million. The orders concerns manufacturing and technical service of complex control systems for the Archer project. Deliveries will take place in 2011 and 2012.

Incap to outsource Helsinki sheet-metal business

Finnish EMS provider Incap Corporation and Lankapaja Corporation have signed a letter of intent regarding the sale of the sheet-metal business of Incap's Helsinki plant. The intention is to sign the actual agreement so that the sheet-metal production at the plant will be transferred to Lankapaja on 1 January 2011.

Incap's Helsinki plant is specialised in the manufacture of sheet-metal mechanics and final assembly. If the agreement is concluded, the personnel of Incap's sheet-metal mechanics will transfer to the service of Lankapaja as continuing employees. The sheet-metal machining centres of the plant would also be transferred to Lankapaja, who would continue production at Incap's current premises for the time being according to the preliminary plan.

The planned sale of business is consistent with Incap's strategy, and if concluded, will enable the specialisation of the Helsinki plant into an final assembly plant. Incap's goal is to increase the share of deliveries of large-scale product packages to customers both in the energy efficiency and well-being industries. At the same time, the company's resources for focusing in final assembly will be enhanced further.

Incap will not completely give up sheet-metal manufacture, as the company will retain its mechanics manufacturing at the company's Vaasa plant.

Lankapaja has 75 years of experience in metal manufacture. Lankapaja has several manufacturing units, of which the sheet-metal unit is one of the largest in the company. The company currently employs 100 persons at the approximately 12,000 sq m plant in Nummela.

Samsung to increase capacity in Poland

According to a report in the *Korea Times*, Samsung plans to invest US\$75 million next year to expand its domestic appliance manufacturing operations in

Poland. Capacity of refrigerators and washing machines at the plant, which was acquired from Polish white goods manufacturer Amica Wronki in December 2009, will be increased to two million units by 2013 up from the current 500,000.

Elcoteq enters into personnel negotiations in Finland

Elcoteq has entered into personal negotiations in Finland. The negotiations will address the restructuring of the company's activities in Finland and the possibility of temporary lay-offs, shifting to part-time works or the termination of employee contracts on production or financial grounds. The company estimates that personnel reductions, if any, could concern maximum of 25 employees totally in all three companies.

Elcoteq has currently approximately 130 employees in Finland. The number of personnel worldwide is roughly 10,000.

Siemens and National Semiconductor align to advance ultrasound technology

Siemens and National Semiconductor Corp have announced a wide-ranging strategic alliance to advance ultrasound technology. The strategic alliance brings together Siemens' leadership in ultrasound technology with National's energy-efficient analog semiconductor capabilities. National will provide leading-edge power management, signal path and transducer solutions while working closely with Siemens. Based on the companies' collaboration, Siemens' ultrasound systems will be able to provide next-generation imaging quality, while, at the same time, be more energy efficient.

Ultra Manufacturing & Card Systems acquires Extec hybrid microelectronics team

Ultra Electronics, Manufacturing & Card Systems, a leading UK contract electronics manufacturer operating in the aerospace, security, transport and energy markets, has acquired Extec Integrated Systems, the company being integrated into Ultra's CEMS business.

As part of Ultra, the Extec business will be known as Ultra Electronics, Manufacturing & Card Systems, Microelectronics, Portchester. The focus of the facility will continue to be on the design and manufacture of thick-film hybrid microcircuits, for which it has been

an important specialist supplier to the Ultra Group, as well as to many other major aerospace players, for many years. The unit employs around 50 people at its facility in Portchester, and will continue to operate as an integrated business with Ultra Manufacturing & Card Systems.

The Microelectronics Portchester facility joins Ultra's existing CEMS operations in Cambridge and Weymouth. The Portchester facility will extend the capacity and reach of Ultra whilst increasing the scope of its offerings to industry sectors demanding high reliability products. Ultra CEMS' capabilities now include PCB and SMT, thick film hybrids and turn-key product assembly and test for high-reliability applications in aerospace, defence, security and other professional electronic markets.

tbp electronics and Technolution collaborate

Dutch EMS provider tbp and fellow Dutch development company Technolution have formed a joint venture, Techno-tbp vof, which will offer customers the opportunity to work with a single company from design through to manufacture.

The collaboration builds on a long standing relationship between the two companies.

Sagem Defense Securite and Elbit Systems to form joint venture

Sagem Defense Securite, a part of the French Safran group and the Israeli company Elbit Systems Ltd have signed a Memorandum of Agreement regarding the intended establishment, by early 2011, of an equally owned joint venture for the tactical unmanned aircraft systems (UAS) market for France and designated international markets.

The intended joint venture will be a French corporation, located in Eragny and Montluçon, France. It will be formed by the equal contributions of assets from the two parent companies.

The new company's portfolio will comprise newly developed products, as well as current and derivative products, from Sagem and Elbit Systems.

The new company will be able to offer a wide range of products for the tactical UAS market.

Scanfil plc acquires 32.96% of shares of Kitron ASA

Finnish investment company Scanfil plc has undertaken a strategic investment and taken a

32.96% stake in the Norwegian EMS provider Kitron in a transaction valued at NOK 143.9 million (around Euro 18.0 million).

Kitron ASA is an electronics manufacturing company with production facilities in Norway, Sweden, Lithuania, Germany and China. Kitron's turnover in 2009 was NOK 1,730.7 million and currently employs around 1,100.

Scanfil Plc principal investment is the 100% ownership of the Finnish company Scanfil EMS Group. Other strategic investments include iLOQ Oy (18.7 %), IonPhasE Oy (40.0 %), Panphonics Oy (40.0 %) and Lännen Tehtaat Oy (8.6 %).

The investment in Kitron ASA is part of a move by Scanfil to strengthen its position and commitment to the international EMS market.

Elcoteq changes its organizational structure

Elcoteq, Europe's largest indigenous EMS provider, will launch a new organizational structure effective 1 October 2010 in order to better support the execution of its new, redefined strategy introduced in early 2010. The new organization enables:

- Improved centrally managed customer care for its global customers together with improved local presence to serve local and smaller businesses close to customers
- Stronger service orientation to support customers' short term needs and long-term requirements

In the new organization, the two current Strategic Business Units (SBU), Consumer Electronics and System Solutions, are combined into one Business Segment named EMS (Electronics Manufacturing Services). The EMS business concentrates on serving its customers in Engineering, Manufacturing and Fulfillment services globally. The Business Segment will concentrate on serving the existing product segments and actively seeking for new segments with focus on value adding services rather than high material content.

Currently the EMS business represents approximately 90% of Elcoteq's net sales.

The AMS (After Market Services) Business Segment concentrates on providing its customers with reverse logistics, configuration, repair, refurbishment and other after market services. By concentrating these services into its own separate Business Segment the company targets to establish stronger and more

focused management for its AMS business. Elcoteq aims to expand both geographical footprint and its service offering in the AMS business. Currently the AMS business represents approximately 10% of Elcoteq's net sales.

Both Business Segments have a profit and loss responsibility and they are responsible for managing and developing their customer relationships and service offerings. Business Segments are supported by various Group level functions including New Sales and Group Operations. New Sales -function concentrates on identifying new business opportunities outside current business scope, providing centralized business intelligence services and supporting the Business Segments in acquiring new customers in targeted segments. Group Operations-function is responsible for managing and operating the global factory network, supply chain and sourcing.

To expand and balance its customer base and hence decrease the impact of volume fluctuations in single customer or product program to whole company's business, are essential objectives in Elcoteq's redefined strategy. By providing full scope of Life Cycle Services to customers, with special emphasis on growing After Market Services supported by Engineering and Fulfillment services, the company aims also to stabilize its electronics manufacturing business. While strategic direction evolves towards high value added service business instead of high material content business, the company shifts its focus on improving the profitability and stability instead of pursuing aggressive top line growth.

According to its redefined strategy Elcoteq's vision is to be the Life Cycle Services Partner of choice for high-tech product and service companies. By altering its organization to better support this strategy and to fully utilize the market opportunities, Elcoteq aims to provide company's customers with comprehensive global AMS and EMS solutions where, by 2013, no single customer represent more than one third of total sales and the relative weight of AMS customers will increase.

UTC Fire & Security considering closing Irish facility

UTC Fire & Security is entering a consultation period with staff with one of the options a proposal to transfer all of the manufacturing functions performed at the Dublin facility to other UTC Fire & Security locations that manufacture similar product lines.

The proposed redundancies will affect approximately 195 permanent employees over a phased period of approximately 13 months.

In March, 2010 UTC bought the security business of GE in Dublin and is now in the process of merging this with UTC Fire & Security.

UTC has two other operations in Ireland which are unaffected Pratt & Whitney Airmotive Ireland and UTRC.

EU approves Foxconn purchase

The EU has approved the acquisition of Dell's Polish unit by the world's leading EMS provider Foxconn.

HP to create 700 jobs in Scotland

Hewlett-Packard is to create 700 new jobs at its plant in Erskine near Glasgow. The company is setting up an IT service hub at its Renfrewshire facility with the help of £7m in government funding.

Last year HP announced it was cutting 700 manufacturing jobs at the plant and transferring the work to the Czech Republic. These jobs will be gone by October but the new posts should see the plant back to employing about 1,300 people.

BAE Systems to cut 946 jobs

UK aerospace and defence group BAE Systems has announced that it plans to cut 946 jobs at sites across the UK. The company blamed the job losses on the changes in the defence programme announced in December, together with "other workload changes". 740 jobs will be cut from English sites in Brough, Chadderton, Farnborough, Samlesbury and Warton. A further 206 jobs will be cut across 12 sites in the UK by the end of 2011.

In a separate move BAE Systems' Swedish branch BAE System Hägglunds has given dismissal notices to 100 white collar and 50 blue collar employees in Örnsköldsvik, Sweden.

Jabil invests in Hungary

According to a report in the *Budapest Business Journal* Jabil Hungary plans to spend HUF 1.8 billion on the expansion of its production capacities, supported by HUF 380 million of EU funds from the Economic Development Program. The electronic manufacturing services provider will expand in order to meet increasing demand for mobile handset production.

Jabil is also planning to create a technology competence center, with a total cost of HUF 1.2 billion, including HUF 400 million of EU money. With

this investment, Jabil Hungary will create a training and knowledge center to develop new equipment and production technologies to increase competitiveness and added value.

Eolane acquires NCF

French EMS provider Eolane has reported that it has acquired fellow French EMS Group NCF. Under the terms of the transaction Eolane has acquired 100% of NCF's French subsidiaries, 85% of its Moroccan and 50% of its Tunisian subsidiary.

The new company will have sales in the region of Euro 270 million in 2010 and employ some 2,300 people. The merged company will have some 400 customers (Eolane 250/NCF 150) with Railways the largest market accounting for 25% of sales, Defence 19%, Industry 16%, Automotive 11%, Avionics 9%, Medical 6%, SMC Communications 5% and Other 9%.

TQ Group partners with IE Qualize

The German EMS provider TQ-Group has acquired a majority stake in the Leipzig smart metering specialist IE Qualize. The move will allow TQ to expand into the market for intelligent metering systems as part of the group's strategy to expand its range of products and customers in the renewable energy sector. IE Qualize gains access to TQ's 90 man strong development team and production locations in Germany, Switzerland and China.

Alois Dallmayr to build Hungarian development centre

Alois Dallmayr will build a development and technological centre in Tolna, Hungary through an investment of more than HUF 300 million to develop vending machines. The 1,600 sq m development centre, to be implemented with 40% EU and government funding, is to offer intelligent technical solutions to Alois Dallmayr Kaffee OHG's Hungarian and Central and Eastern European subsidiaries.

Huawei's Hungarian workforce to reach 1,000 by year end

According to a report in the *Napi Gazdasag* the Chinese-based telecom company Huawei Technologies is planning to increase its workforce in Hungary to 1,000 by the end of 2010 up from original plans of 700. The company is also reportedly looking to outsource some production to EMS providers and have identified the Hungarian operations of Elcoteq and Foxconn.

EMS financial round up

- **Jabil Circuit** has reported net revenue for the fourth quarter of fiscal 2010 of US\$3.9 billion and compared to US\$2.8 billion for the same period of fiscal 2009. Net revenue for the fiscal year was US\$13.4 billion compared to US\$11.7 billion for fiscal 2009. In the fiscal fourth quarter the company's EMS segment reported a 10% growth over the prior quarter and was up 41% year on year. Within the EMS segment Computing & Storage declined 2% sequentially but increased by 31% year on year, Industrial, Instrumentation & Medical increased by 15% sequentially and 61% year on year, Networking increased 7% sequentially and 44% year on year and Telecommunications increased 17% sequentially and 14% year on year. The company's Consumer segment reported an 18% increase in revenues sequentially in the fiscal fourth quarter and 41% year on year. Within the Consumer segment Mobility increased by 25% sequentially and 40% year on year while Digital Home Office increased by 10% sequentially and by 42% year on year. Aftermarket Services declined 4% sequentially and by 1% year on year. Jabil management indicated that it expects net revenue for its first quarter of fiscal 2011 to range from US\$3.9 billion to US\$4.0 billion.

- The UK **Stadium Group** has reported that its EMS business achieved sales of £21.10 million in the first six months of 2010 up from £15.36 million in the same period a year earlier. Sales from the UK operations increased by 29% from £6.34 million to £8.17 million while the Asian operations increased by 43% from £9.02 million to £12.93 million. Stadium has continued to invest in its UK and China facilities, and gained ISO 13485 (Medical) accreditation at the company's Rugby facility during the period. The site was also approved by a major Continental European automotive OEM for the production of in-car data communication equipment. This will enter production in 2011.

Semiconductors

Over 150 fab projects lead to strong 2010 and 2011

The World Fab Forecast released at the end of August by the industry association SEMI indicates a 133% increase in equipment spending for front end fabs this year and about 18% growth in 2011. Worldwide installed fab capacity (without discretetes) is expected to grow by 7% in 2010 and another 8% in 2011. Fab construction spending will increase by 125% in 2010 and an additional 22% in 2011. The data reveals that for both 2010 and 2011, over 150 fab projects will

contribute an estimated US\$83 billion in spending. The projects tracked include construction projects and equipment spending for high volume, smaller capacity, MEMS, and discrete, including LED, fabs.

Most of the current investments in construction assure additional capacity for the future. *The World Fab Forecast* has identified a total of 54 construction projects underway in 2010 and the result is about US\$4.5 billion in construction spending. About half of these projects are for LED facilities (mostly in China). In 2011, fewer but larger fabs will carry higher construction costs, of about US\$5.5 billion.

Spending on equipping fabs will increase by 133% in 2010 to an estimated US\$34 billion. This is a record growth rate, off of the historic low of 2009. Compared to 2008 spending, 2010 total equipment spending will be only 27% higher. Compared to 2007, 2010 spending will be 11% lower. The World Fab Forecast report predicts spending in 2011 to increase 18%, bringing total spending to US\$39 billion, finally surpassing 2007 spending levels.

SEMI's World Fab Forecast also provides details of facilities beginning operations in 2010 and 2011. By the end of 2010, about 22 facilities will begin operations. Analyzed by sector, half of these are LED, six are foundries, three are analog and two are logic. No new Memory fabs will begin operation in 2010. In 2011, another 28 facilities are expected to begin operations, including four Memory fabs.

Worldwide installed fab capacity (without discretetes) is expected to grow by 7% by the end of 2010 to 14.4 million 200 mm equivalent wafers per month (wpm), and by another 8% in 2011 to 15.8 million wpm. The memory sector accounts for the largest share of worldwide installed capacity, about 41% in both 2010 and 2011. Foundry capacity follows having grown their market share from 24% in 2009 to 26% in 2011.

Maxim to acquire Phyworks for US\$72.5 million

US analog chip company Maxim Integrated Products Inc. has acquired Phyworks Ltd for approximately US\$72.5 million in cash.

The acquisition expands Maxim's portfolio in the optical networking front. Phyworks' transceivers and transimpedance amplifiers span the entire spectrum of data rates, from 1- through to 10-Gbps. Founded in 2001, Phyworks is a fabless company, based in Bristol, UK

ON Semiconductor expands capacity at Belgium wafer fab

ON Semiconductor, the US-based semiconductor company, has announced plans to expand production capacity at its 6-inch (150mm) wafer manufacturing facility in Oudenaarde, Belgium, by approximately 40% with a total equipment investment in 2010 of Euro 12.3 million. The Belgium factory specializes in the manufacture of application specific high-voltage technologies for the automotive and industrial industry, and in integrated and discrete standard products for a wide range of market segments.

ON Semiconductor's Oudenaarde, Belgium, site employs approximately 500 people. In addition to the manufacturing teams, there are local teams focused on product research and development, IC design, sales and marketing for the company's Automotive, Industrial and Foundry business units, as well as business and support staffs. ON Semiconductor also operates a site in Vilvoorde, Belgium, where an additional 50 automotive business unit employees work.

Elonics raises £6.1 million Series B investment

Elonics Ltd, a fabless mixed-signal semiconductor company specialising in the design and development of multi-band radio frequency (RF) IC products, has announced the closing of a £6.1million of Series B investment round led by Scottish Equity Partners ('SEP') and supported by Octopus Ventures ('Octopus'), a division of Octopus Investments, alongside a number of existing investors.

The investment will allow Elonics, which was founded in 2003, to accelerate the expansion of the overseas sales team with the opening of regional offices in Taiwan and China. In addition, the company will be embarking on a major recruitment drive aimed at bolstering its engineering team at its main UK base in Livingston, Scotland.

ST signs loan agreement with the EIB

The European Investment Bank (EIB) has signed a Euro 350 million loan contract with STMicroelectronics in support of the company's industrial and R&D programmes concerning new generation semiconductor circuits.

This loan represents a new stage in the EIB's financing of Europe's competitiveness in the research and innovation field and an additional opportunity for

ST to further increase its financial flexibility and strengthen its already very robust capital structure.

The research programme is focused on developing the next generations of electronic chips with the aim of: creating innovative and economically competitive technologies meeting the needs of the digital economy (multimedia and communications convergence, digital nomadism); reducing the power consumption of IT and telecoms equipment and improving energy efficiency.

The project financed covers the full product development cycle from technology platform research to design. It will be carried out over three years at ST's sites in Rousset, Crolles, Grenoble and Tours (France).

Semi market notes

According to *iSuppli* the price of discrete components-including bipolar power, power MOSFETS, small signal, and rectifiers-are forecasted to decline in price during the first quarter of 2011 on the back of softening demand. ASPs for all discretives are expected to continue to move upward in 2010 until supply comes into balance with the heavy demand situation. Still, *iSuppli* warned that even when discrete prices begin to decline, buyers may still have some challenges obtaining parts. As has been the situation in recent quarters, delivery lead times for discretives will continue to extend well beyond normal parameters, possibly by as much as 20 weeks or more in some cases.

According to *Gartner*, worldwide semiconductor capital spending is projected to approach US\$36.9 billion in 2010, a 122.1% increase from 2009 spending of US\$16.6 billion. In 2011, semiconductor capital equipment spending will grow 4.9%.

Renewable Energy

REC to discontinue module operations at ScanModule AB

REC has decided to initiate a process with the trade unions with the intention to discontinue the operation at the 150 MW module plant in Glava, Sweden. The plant will continue the production of modules at somewhat reduced capacity utilization until the end of 2010.

A closure of the REC plant in Glava is expected to affect approximately 300 employees. REC will take measures to support these employees in seeking new job opportunities.

The operations of REC's 180 MW solar cell plant in Narvik, Norway, will not be affected. The solar cells produced in Narvik will be used in the manufacturing of REC Peak Energy Modules, partly in REC's Singapore facility and partly through contract manufacturing arrangements. Consequently, REC expects to maintain its current capabilities for supply of modules and at the same time improve its overall cost position.

Global solar photovoltaic demand up 54% in Q2

After a weak start in 2010, Q2 2010 global photovoltaic (PV) demand soared to 3.82 GW, up 54% Q/Q, according to a report issued by *Solarbuzz*, an international solar energy market research and consulting company. The PV industry remains on target to deliver over 15 GW installations this year.

According to the company Q2 2010 global market demand was only 2% less than the global market's previous quarterly peak (3.92 GW in Q4 2009).

Total industry revenues were approximately US\$17.2 billion in Q2 2010, compared to US\$12.0 billion in Q1 2010 and US\$6.2 billion in Q2 2009.

Germany, at 2.30 GW, accounted for 60% of global demand in Q2 2010. The next largest country market was Italy, which grew 127% quarter on quarter, was still just 11% of the size of the German market. France and the US also put in strong performances.

On the supply side, polysilicon, wafer, and cell manufacturers reached capacity utilization rates of between 75% and 87%. Despite an increase of 495 MW in wafer supply over the past quarter, wafer capacity represented the most constrained part of the industry chain. Among cell manufacturer shipments, the Top 5 were represented by First Solar, Suntech Power, JA Solar, Yingli Green Energy and finally Trina Solar. Among the Top 12 cell manufacturers in Q2 2010, six Chinese manufacturers accounted for 55% of shipments, up from 43% a year ago.

Both upstream and downstream module inventories in MW terms held almost perfectly steady at the end of Q2 compared to the prior quarter end.

After six quarters of declines in factory gate prices, there were modest rises in short term contract prices in Europe. However, weighted average factory gate modules prices are still down 24% in US dollar terms from one year ago. First-tier Chinese cell and module manufacturers that had priced competitively in the first six months of the year moved in to a forward sold

position, which, in turn, allowed European factory gate prices to rise 2-4% by the beginning of Q3 2010. A strong yen is helping to ensure that Japan remains one of the best markets to place product.

Looking ahead into 2011, the most challenging quarter will undoubtedly be Q1 2011. Leading European markets, including Germany, will face large reductions in tariffs at the beginning of the year. Even with careful phasing of projects and price reductions, market demand is projected to be less than 50% of module production. As a result, the analysis forecasts end Q1 2011 upstream and downstream module inventory days to increase significantly by the end of that quarter

The emergence of the UK following the introduction of the solar photovoltaic (PV) feed-in tariff (FIT) programme in April 2010 could offset the uncertain prospects for the dominant German market in 2011 and at the same time propel the UK into the mainstream of global PV market activity. With FITs as high as 41.3 pence per kWh paid over 25 years, the foundations are in place for rampant PV market growth in 2011. Government incentives yield immediate installed PV system Internal Rates of Return between 8% and 11% over the next 12 months. Despite this, the UK market is already exposed to significant potential policy risks—more so than most other European markets—even though the FIT is only six months old.

Six market segments are emerging; five are on-grid, and one off-grid. 2010 demand has already seen rapid growth in residential installations, with the South East and South West regions accounting for 45% of the English part of the market in MW terms. In addition, an emerging pipeline of large scale commercial, agricultural and industrial projects are currently going through the application and permitting processes, ready to impact 2011 demand.

With several big name national utility and retail brands entering the UK market, they join a fast growing downstream installer network that exceeds 500 companies. The leading wholesalers and installers, constituting a group of eighteen companies, are well-positioned to serve the burgeoning market. Back in 2009, the top 3 of these accounted for 60% of shipped wholesale volumes.

The fragmented end-market, together with the diversity of the installers and wholesalers, is further complicated by the 60 module suppliers that have already gained the accreditation necessary to enter the market. This downstream picture sets extreme challenges for solar companies to operate profitably in the UK.

Asia Pacific Electronics**Research & Design**

- **HP** will reportedly invest around US\$112 million to expand its R&D operations in Taiwan. The new centre will focus on designing and developing next generation desktop PCs, notebook PCs, and printers.
- US chipmaker **Qualcomm** and the Ministry of Economic Affairs (MOEA) of Taiwan has signed a Letter of Intent to establish a R&D centre in Taiwan. The new R&D centre is projected to be dedicated to advancing mobile phone chipset solutions.
- To expand its business in the rapidly-growing Indian auto market, the Japanese automotive systems and components supplier **DENSO Corporation** will establish a technical centre in Gurgaon, India, by the end of 2011. DENSO's investment in the new technical centre will total approximately Yen 3 billion (approximately US\$35.5 million). The new technical centre will be established as part of DENSO Sales India Pvt Ltd (DSIN), which will be renamed DENSO International India Pvt. Ltd. (DIIN).

Equipment/Manufacturing

- According to a *Nikkei* report the Japanese company **Panasonic** is intensifying its marketing and production operations in China, the world's largest flat-panel TV market, to take advantage of rising interest in 3-D TVs and large-screen models. In terms of production Panasonic is transferring equipment from a plasma panel factory in Amagasaki, Hyogo Prefecture, Japan to a factory operated by a local joint venture in Shanghai with SVA Electron Co. and other firms. The transfer will serve to upgrade an existing production facility in Shanghai, which went online in 2002. Panasonic plans to increase its panel output capacity in China to 120,000 units per month in fiscal 2012 from the current 25,000 units (calculated in terms of 42-inch screens). It plans to raise the number of plasma TVs assembled in the country to 2.5 million in fiscal 2012 from the 1.4 million estimated in fiscal 2010.
- The Japanese company **Canon** plans to spend approximately US\$175 million to build a new inkjet printer plant in Thailand. Canon's second Thai inkjet printer factory will be located in Nakhon Ratchasima, 170km northeast of the existing facility in Bangkok, and employ some 5,000 workers. It is due to come online in October 2011. The plant will focus low-priced products and will have an annual production capacity of 5.5 million units, increasing Canon's total inkjet printer output 40% to 27 million units a year. In addition to its Thai operations Canon also produces printers in Vietnam with annual production of around 13.5 million units.
- According to a report in the *Economic Daily News of Taiwan*, TV manufacturer **TPV** plans to invest NT\$30 billion (approximately US\$950 million) to NT\$50 billion (US\$1.6 billion) in establishing global operational headquarters, R&D centre and manufacturing factories in Taipei County, Taiwan. TPV plans to invite **AUO** to establish factories inside the premises of the new operating headquarters.
- According to a *DigiTimes* report **Foxconn** has started construction of a handset-assembly plant in a 138-square kilometer business park surrounding the international airport in Zhengzhou City, northern China, with volume production scheduled to begin in first-quarter 2011. Initial monthly capacity is reported to be 100,000 units per month with this eventually rising to 300,000.
- French aerospace and technology group **Thales**, **Shanghai Electric Corporation** (SEC) and **Shanghai Automation Instrumentation Co** (SAIC) have just signed a Joint Venture agreement that will enable the creation of an urban rail signalling company for the Chinese market. This Joint Venture agreement includes a significant transfer of technology from Thales that will authorise the JV to master the know how in order to design, test and deploy the Thales SelTrac Communication Based Train Control solution (CBTC) in China.
- **Compal Electronics** will establish a production base in Chengdu of Sichuan Province, western China, with an initial annual production capacity of 10 million notebooks, according to a China-based *Sichuan Daily* and reported by *DigiTimes*.

Displays

- **Samsung Mobile Display** is investing around US\$ 2.1 billion at a production facility in Tang Jung, situated in southern part of Seoul, in a bid to meet surging AM-OLED (Active Matrix Organic Light Emitting Diode) demand. The plant is slated for operation in July 2011.

Components

- According to a *Nikkei* report the Japanese company **Sumida** plans to set up an appliance and automotive coil factory in China's Jiangxi Province this year.

- **STATS ChipPAC** has officially opened a new manufacturing facility to process 300mm wafers using embedded wafer-level BGA (eWLB) technology

- According to *Nikkei* the Japanese company **Alps Electric** plans to invest as much as Yen 3 billion to install production lines for capacitive-type multitouch touch screens at its main Nagaoka Plant in Niigata Prefecture, Japan and at its Chinese manufacturing subsidiary, Ningbo Alps Electronics Co., in Zhejiang Province.

- **Toshiba Industrial Products Asia Co** has officially opened its new industrial motor manufacturing and sales base in Vietnam. The new facility will manufacture high-efficiency industrial motors rated at 100 horsepower or less. In FY 2015, the plant will ship up to 1.2 million motors a year to the global market, and is expected to provide employment for approximately 500 people.

- The Japanese company **Showa Denko KK** will spend Yen 5.5 billion to boost production capacity of hard disks at its plant in Singapore. The new production line will have the capacity to produce two million hard disks per month. This is in addition to the three million increase in capacity announced in April this year. When the new line is completed in July 2011 the company will have the global capacity to produce 27 million hard disks a month.

- **Renesas Electronics**, as part of a move to strengthen its Power Device business will strengthen both its front-end and back-end line manufacturing by doubling the production capacity of its 8-inch wafer lines from FY 2010 to FY 2012 and by increasing production capacities at its two plants in Malaysia as well as by expanding manufacturing outside Japan through subcontractors in China.

- Taiwan-based IC substrate maker **Kinsus Interconnect Technology** will start production at its new plant in Suzhou, China in the fourth quarter of 2010. The Suzhou plant will mainly fulfill orders from the wire-bonding chip scale packaging (CSP) segment, while its Taiwan plant focuses on production of flip-chip (FC) CSP substrates.

- US-based **Fairchild Semiconductor** has entered into a memorandum of understanding (MOU) with Sichuan Changhong Electric Co Ltd - one of the largest manufacturers of consumer electronics devices in China. The strategic partnership enables the companies to collaborate further on product development. Changhong has committed to fulfilling purchasing target plans for Fairchild's leading-edge power and mobile components through December 2015. Fairchild's devices are designed into a broad range of Changhong products including LED TVs, PDP TVs, LCD TVs, CRT TVs, set-top boxes, refrigerators and air conditioners.

- **Inventec** has announced that it will form a joint venture with GaAs semiconductor maker **WIN Semiconductors** to produce polycrystalline silicon (poly-Si) solar cells. Inventec and its subsidiaries will invest a total of NT\$1.65 billion (US\$52.71 million) for a 55% stake in the new company, which is expected to have an initial capacity of 180MWp and begin production in the first quarter of 2011 in Taoyuan, Taiwan.

- An application by **Taiwan Semiconductor Manufacturing Company** (TSMC) to fabricate on 0.13-micron technology at its Songjiang 8-inch fab in Shanghai was approved by the Investment Commission of Taiwan's Ministry of Economic Affairs (MOEA) on 29 September 2010. TSMC's has recently announced a budget of up to US\$225 million to invest in the Shanghai fab, with the funds mainly to expand capacity. According to the *DigiTimes* report monthly capacity at the 8-inch facility will reach 50,000 wafers by the end of 2010, and grow further to 60,000 in 2011.

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