

# European Electronic Markets Forecast

## Market Update: Central & Eastern European electronics production

At over US\$55 billion in 2008 Eastern Europe accounted for around 18% of the overall European electronics production, according to the latest figures released by *Reed Electronics Research (RER)*. Looking forward production in Eastern and Central Europe is expected to continue to increase its share European electronics output however with the majority of volume manufacturing in Western Europe now relocated to low cost locations and combined with the scaling back of operations in response to the current downturn, in particular for volume products, the rate of growth will ease when compared to prior years.

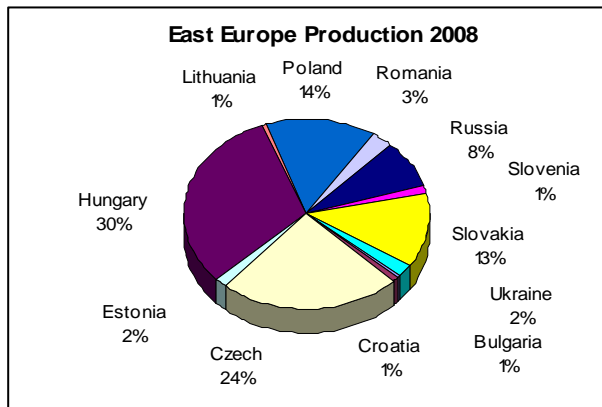


Figure 1 Central & Eastern European Electronics Production by Country 2008

Source: *Yearbook of World Electronics Data Volume 4 2009/2010, Reed Electronics Research.*

After growth of 9.0% in 2008 output slowed in the final quarter of the year and with a marked downturn in the first half of the year electronics production is forecast to fall by 7.8% in 2009. Uncertainty still remains regards the outlook for the final months of 2009 but current indicators point to sequential growth

from Q3 onwards with momentum picking up in the first half of 2010.

In terms of importance the four major countries in the region Hungary, the Czech Republic, Poland and Slovakia accounted for 82% of electronics output in 2008. Russia, as one of the emerging BRIC economies, is forecast to show strong growth as it recovers from the current downturn. With the government looking to increase inward investment output should show strong growth, in particular, in areas such as TVs and PCs.

### Hungary

After a decline in 2001 Hungarian electronics output increased year on year in the period to 2008, the country the largest electronics producer in Central and Eastern Europe. Output however is forecast to decline by 10% in 2009 as the major overseas OEM and EMS companies scale back operations to meet lower demand.

The computer, mobile communications and video consumer segments are the most important accounting for 81% of the total in 2008. In 2008, 5.2 million sets were produced, of which the majority were exported to the EU. The company is also a major producer of DVDs, with production rising to 6.6 million in 2008. Output is forecast to fall by 9.7% in 2009 the downturn in demand for mobile phones a key contributing factor.

### Czech Republic

Foreign direct investment (FDI) has been a major factor in the dramatic growth in the Czech electronics industry. Between 2000 and 2008 electronics output has increased from an estimated US\$1.9 billion to US\$13.7 billion. The computer segment has been the major beneficiary in the recent surge in FDI. In 2000 computing accounted for 10% of electronics output. By 2008 this had risen to 52%. The Taiwanese

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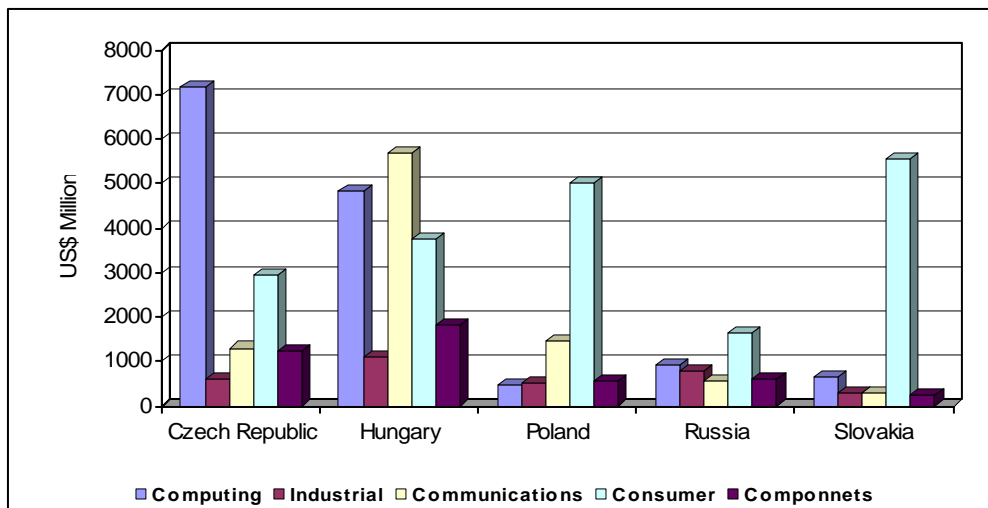


Figure 2 Electronics Output by Segment 2008

Source: Yearbook of World Electronics Data Volume 4 2009/2010, Reed Electronics Research.

company Foxconn (Hon Hai Industries), the world's largest EMS provider, is one of the Czech Republic's leading exporters.

The production of colour TVs has also developed into a key segment with 4.2 million produced in 2008 up from 3.3 million a year earlier and from 1.7 million in 2005.

**Poland**

The electronics industry is heavily dependent on the production of TVs (estimated 61% of output in 2008). Poland is now one of the principal manufacturing hubs for TVs in Europe, the country benefiting from a series of recent investments in new capacity. In 2008, an estimated 10.1 million TVs were produced in the country up from 9.3 million in 2007 and 8.9 million in 2006.

The decision by Dell to transfer the production of computers from Ireland to a facility in Poland should boost the long term prospects for computer production in the country. The phased transition is expected to take place during 2009. In 2008 computing accounted for only 5.6% of overall output.

**Russia**

Since 2000 the Russian electronics market has increased from US\$5.3 billion to US\$21.1 billion with communications, computing and consumer electronics driving growth. More recently the control and instrumentation and medical and industrial markets have also expanded rapidly in-line with the surging economy. The recession in 2009 will see the market show a double-digit decline before resuming growth in

2010 although at lower levels than before the downturn.

In 2008 production of electronic products in Russia was estimated to be US\$4.5 billion and is forecast to fall to US\$4.1 billion in 2009 as the industry is impacted by declining demand. As highlighted output is expected to show strong growth in the longer-term with both EMS and OEMs looking to establish operations in the country although this will be dependent on the recovery in the market and a stable economy.

**Slovakia**

Following a series of investments by overseas manufacturers Slovakia is emerging as a key manufacturing base for TV production in Europe with an estimated 8.8 million TVs produced in 2008, up from 2.1 million three years earlier. The country also produces DVD players, with over three million produced in 2008, and started the production of digital cameras in 2007.

Across the five countries computing, communications and consumer, primarily TV production accounted for the majority of output as highlighted in Figure 2.

Industrial is expected to increase its overall share of the total moving forward but unlike the situation in Western Europe the industry for the immediate future will continue to be focused on the volume production of computing, communications and consumer.

Electronic Manufacturing Services (EMS) will continue to be a major factor in the growth of the electronics industry in CEE. All of the leading global EMS

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### Forthcoming Editorial Features

#### European Telecommunications Industry

An overview of the latest developments in the European telecommunications industry with the focus on the major players.

companies have established manufacturing plants in the region with the most important location Hungary. In addition smaller and medium sized EMS companies have also established plants or joint ventures in the region.

In 2008 Hungary accounted for 47% of total EMS revenues which were valued at Euro 14.6 billion (*The European Electronic Manufacturing Services Industry 2008-2013, RER August 2009*), followed by the Czech Republic 31% and Poland 11%. The large "Group One Global Suppliers" Foxconn, Flextronics, Jabil, Sanmina-SCI, Elcoteq, and Celestica dominate the region and serve primarily the 3C markets of consumer, communications and computer markets which accounted for an estimated 89% of CEE EMS revenues in 2008.

CEE is an integral part of the European and global electronics industry acting as a key centre for volume production in particular for computing, communications and consumer goods. As such it is also increasingly being influenced by the medium and long-term manufacturing strategies of the major EMS and OEMs. The first months of 2009 saw a dramatic reduction in headcount across the industry although more recent indicators point to an upward trend in employment and investment. However, the downturn highlights that the region will face increased competition in the future.

Although the current downturn has eased wage inflation rising costs in the longer-term are expected to result in some companies reevaluating their production strategies. Production of volume products could be transferred to plants in Asia to reduce costs and it is expected that companies will also look to transfer production to lower cost locations within the region. Offsetting this will be the benefits of lower import duties by manufacturing within the EU, the growing importance of manufacturing locally to reduce carbon emissions and the move by West European companies to transfer the production of industrial products to the region.

*RER has published its survey on the Central and Eastern European electronics industry since 1991 as the Volume 4 of the Yearbook of World Electronics Data. Covering 12 countries the report provides production data for the period 2006-2009 and market data for the period 2006-2012. For further information please contact anita.caird@rer.co.uk or call +44 1235 227310.*

### Market notes

- The market for smart meters in Europe has been boosted through the introduction of the EU's third Energy Package. The two Directives and three Regulations are the latest acts to achieve an

integrated EU-wide energy market and to enhance consumer protection measures. More importantly, both the gas and electricity Directives stipulate that the Member States ensure the implementation of 'intelligent metering systems that shall assist the active participation of consumers' in the gas and electricity supply markets respectively. The electricity Directive sets a timeline of 80% coverage by 2020 and every European household equipped with smart meters by 2022.

- The Electronic Components and Systems interest group within the German electronics industry association *ZVEI* are reporting that there could be a serious supply shortage for passive components in the near future. The situation, which is in response to companies cutting back production in response to the current downturn, could lead to production interruptions, the group says. Affected are all groups of passive components including resistors, capacitors, inductors, quartz crystals, resonators and SAW components.

- According to *iSuppli* Portable Navigation Devices (PNDs) will continue to lead the navigation market in 2009, with 114 million units in use by the end of the year, compared to 57.8 million smart phones. However, by 2014, usage of navigation-enabled smart-phones will rise to 305 million units, exceeding the 128 million PNDs.

- According to *Point Topic* global broadband connections grew by just 3% in the second quarter compared to the previous three months, adding 12.9 million subscribers, to reach a global total of 444.3 million. Growth over the past 12 months has been 14%. Point Topic says IPTV growth remained strong during the quarter, at 11%, reaching 26.9 million. In the past twelve months, broadband subscription in Europe grew 13% overall, to reach 135 million, which included an impressive growth of 29% in the Eastern European territories. Eastern Europe saw the biggest increase in the number of broadband subscribers during the second quarter, by nearly 6%, to reach 25.1 million lines.

- Shipments of so called 'green' mobile handsets is expected to increase dramatically over the next few years on the back of consumer pressure and government regulation, according to a report from UK market research company *Juniper Research*. According to the company global sales of such environmentally sustainable models could reach 485 million units by 2014.

- According to US-based research group *Forward Concepts* the 3G Netbook category is going to demonstrate 124% compound annual growth rate

## Western European mobile phone market shows signs of recovery

The Western European Mobile Phone market recorded another quarter of year-on-year declines in the second quarter of 2009. According to the IDC, handset vendors shipped 42 million units to Western Europe, down 6% from Q2 2008. The second quarter results are an improvement on the 14% decrease in Q1 2009, but the crisis will continue to impact the region.

The switch from traditional mobile phones to converged mobile devices continued to be a major trend in Western Europe. Traditional mobile phones declined 12% during the quarter to 33.2 million units, and converged mobile devices (commonly known as smart phones) experienced a healthy 25% increase during the quarter to 8.8 million units, when compared to the same period last year.

The first six months of the year were very challenging to both vendors and operators in Western Europe. The market was hit hard by the financial crisis, and demand mobile for phones slumped at unprecedented levels. Since Q2 2008 the market has been suffering from negative growth, with the bottom line being hit in Q1 2009. Despite the slight improvement in the second quarter of 2009, we will continue to see negative growth throughout the coming quarters, with full market recovery being seen only in 2011.

For the full year, IDC believes that the Western European market will decline 10%. Demand for converged mobile devices will continue to grow, but will not be strong enough to reverse the overall market decline as they represent only 21% of total shipments. On the other hand, traditional mobile phones will continue to decline, though at a lower rate, as vendors adjust their portfolios, bringing more features to the low-end devices.

Among the biggest handset vendors, it is important to point out that Korean manufacturers continue to perform better than Scandinavian phone makers. For the first time, Samsung and LG together shipped more devices to Western Europe than Nokia. Nokia continues to be the market leader, with 36.3% market share, but the gap to Samsung, the second biggest vendor with 28.9% market share, continues to diminish. On the other hand, LG continues to challenge Sony Ericsson's market position, and the success of its touch screen handsets allowed LG to get 11.5% market share, the highest ever in Western Europe.

### Top Western European Mobile Phone Vendors, Shipments and Market Share, 2Q09 (Units in Millions)

Vendor	2Q09 Unit Shipments	2Q09 Market Share	2Q08 Unit Shipments	2Q08 Market Share	2Q09/2Q08 Change
1. Nokia	15.3	36%	19.0	43%	-19%
2. Samsung	12.2	29%	10.9	24%	12%
3. Sony Ericsson	5.1	12%	6.2	14%	-18%
4. LG	4.8	11%	2.8	6%	71%
5. Apple	1.4	3%	0.2	0%	600%
6. Research in Motion	1.2	3%	0.8	2%	50%
Others	2.0	5%	4.7	11%	-57%
Total	42.0	100%	44.6	100%	-6%

Source: IDC

(CAGR) reaching 34 million units in 2014 and a 45% 3G/LTE attachment rate, Forward Concepts said. Meanwhile smartbooks and mobile internet devices (MIDs) are set to ship with near-ubiquitous 3G/LTE connectivity. Forward Concepts projects these devices to grow at a 176% CAGR reaching 63 million units in 2014. LTE networks are due to emerge in 2010 and are set to be the fastest growing air-interface technology. The attachment of netbooks and

smartbooks/MIDs via LTE is set to reach 5 million and 4.1 million connections, respectively, in 2014.

- Worldwide PC shipments are now expected to reach 285 million units in 2009, a 2% decline on 2008's 291 million shipments, according to the latest forecast from US research group Gartner. Gartner's previous forecast made in June had called for a 6% unit decline in 2009. Netbooks continued to grow strongly in Q2

but faced increasing competition from lower-priced mainstream notebooks, Gartner reported. Gartner further said that netbooks also continued to put tremendous downward pressure on PC prices in general and consumer mobile PC prices. Netbook shipments are now forecast to reach 25 million units in 2009, up from its previous projection in May of 21 million shipments. Gartner expects netbook shipments to reach 37 million units in 2010.

- According to *IDC* in the period 2009 to 2013 the colour inkjet MFP segment in EMEA will increase to 29.2 million unit shipments, or an upside CAGR of 4.45%. The colour laser MFP segment will also show vigorous growth, with shipments increasing from 1.1 million units to 2.5 million over the forecast period. Colour laser printers are set to show CAGR of 8.1% from 1.9 million to 2.8 million units, with a key driver of sales proving to be price erosion. High-end colour systems will see a slight improvement in shipment levels by the end of the forecast period, with a CAGR of 2.1%.

- US market research firm *In-Stat* expects DisplayPort to see significant adoption in mobile PCs, particularly as an internal interface between the motherboard and LCD panel. However, DisplayPort's success in LCD monitors is much less certain, as LCD manufacturers grapple with issues of backwards compatibility. Overall shipments of DisplayPort-enabled devices will see a compound annual growth rate of 194% from 2008 to 2013, albeit from a very low base in 2008.

- Strong LCD TV shipment growth during the second quarter in key markets like China and North America and the prospect for continuing growth during the remainder of the year have led *DisplaySearch* to increase its 2009 global LCD TV shipment forecast to 130 million units from 127 million units previously, for an annual growth of 24%. The forecast for TV shipments of all display technologies in 2009 was reduced from the previous forecast by 3% to 195 million units for a 5% shipment decline from 2008, as the market for traditional CRT TVs is declining faster than previously expected and the growth in flat panel TVs is not strong enough to fully compensate.

- According to Strategy Analytics worldwide personal navigation device (PND) shipments almost doubled in Q2 2009 to 8.0 million, in a market growth recovery which largely reflects the after effects of an extremely poor Q1 2009, as PND vendors reduced inventory.

- In Europe, the Middle East and Africa (EMEA), server shipments totalled just over 490,000 units in the second quarter of 2009, a decline of 32% from the same period last year according to figures released by Gartner. Server revenue totalled US\$3 billion in the

second quarter of 2009, a decline of 36% over the same quarter last year.

## Business

### EU identifies key enabling technologies

The EU has identified nanotechnology, micro- and nanoelectronics including semiconductors, advanced materials, biotechnology and photonics as Key Enabling Technologies in the shift to a low carbon, knowledge-based economy.

As a result the Commission will set up a high-level expert group tasked with developing a shared longer term strategy and well coordinated concrete actions at European level, according to the specific maturity level of each key technology. Based on this work, the Commission will report back to the Council by end of 2010.

## Mergers & Acquisitions

### Kontron AG acquires majority stake in Swiss company DIGITAL-LOGIC AG

Kontron AG, one of the world's leading providers of embedded computer technology, has acquired a stake in the unlisted Swiss company DIGITAL-LOGIC AG, which is based in Solothurn, Switzerland. The German company has acquired 78% of the shares in the manufacturer of embedded PCs and computer systems (annual revenue of Euro 15 million, 100 employees), and intends to increase this to 100%.

Kontron is strengthening its presence in the central European region as a result of this investment, and anticipates further gains in market shares. The move also allows Kontron to access a new and complementary technology, thereby supplementing its product portfolio in these high-margin market segments. DIGITAL-LOGIC is particularly specialized in compact, ruggedized computers.

### Other mergers & acquisitions

- **Elster Group**, the Luxembourg headquartered company focused on smart metering and Smart Grid systems and solutions, has agreed to acquire **EnergyICT NV**. EnergyICT is a global leader in providing smart metering and smart grid solutions, headquartered in Courtrai, Belgium with sales offices across Europe, the USA and Australia. The acquisition of EnergyICT will further strengthen Elster's Advanced Metering Infrastructure (AMI) and Smart Grid

portfolio, and broadens its expertise in the systems and services markets. EnergyICT is a market leader in its field, designing and offering highly advanced Energy Information and Communication Technology solutions and services to utilities, energy suppliers, and end customers.

- **Gemalto** has completed the acquisition of the French company **Trusted Logic SA**, a developer of secure open technology for embedded systems, for an undisclosed amount. Gemalto already held 32% of the company's shares. Under the terms of the transaction, Trusted Logic and Trusted Labs will continue to operate as separate entities with their own teams, products and services and under their own brand names.

- **NCAB** has signed an agreement with **Capinor Holding AS** for the acquisition of 100% of the shares of **Capinor AB**. NCAB is one of Europe's largest PCB suppliers, and will use the acquisition to further strengthen its position in the Swedish market. The sale Capinor AB will not have an impact on Capinor's activities in Norway and China.

- **Schneider Electric**, the French automation and energy management group, has announced the sale of **Selectron Systems AG** to its management and employees, backed by private and venture capital investors. Selectron, headquartered in Switzerland, is active in the design, development and marketing of automation solutions for rail vehicles, and has become a recognized player in Europe and China. Selectron reported 2008 sales of approximately CHF24 million. This company entered the Schneider Electric group in 2001 as part of the Berger Lahr acquisition, and 80% of its turnover is dedicated to the rail sector.

## Communications

### Huawei opens French research centre in France

As part of a move to increase its position in Europe Chinese communications equipment maker Huawei Technologies Co Ltd has established a basic research centre in Cergy-Pontoise, near Paris, France.

This new centre will focus on mobile phones and currently employs 20 people at with this expected to reach 50 employees by the end of the year.

### Leading companies form Mobile High-Definition Interface Working Group

Nokia, Samsung Electronics, Silicon Image, Sony and Toshiba Corporation have announced the formation of

a Mobile High-Definition Interface Working Group that intends to create an industry standard for an audio/video interface to connect mobile phones or portable consumer electronics (CE) devices directly to high-definition televisions (HDTVs) and displays. This new mobile connectivity standard, based on Silicon Image's Mobile High-Definition Link (MHL(TM)) technology, will be defined, promoted and marketed by the Working Group as an industry standard open to anyone desiring to be an adopter and enable the development of mobile products that adhere to this new standard across a broad connectivity ecosystem.

The Working Group's vision for the next generation of mobile connectivity is to provide an easy and cost-effective implementation for manufacturers while offering consumers a simple and reliable mobile connectivity experience. A single-cable with a low pin count interface will be able to support up to 1080p high-definition (HD) digital video and HD audio in addition to delivering power to a portable device.

The Working Group is expected to organize a Consortium of founding members who will develop a mobile connectivity technology standard specification that governs transmission and reception of high-definition content between portable devices and display devices, to support connectivity in accordance with the new specification.

## Automotive

### Delphi to cut 200 jobs in Germany

Delphi Deutschland, a part of the US automotive supplier Delphi, plans to cut 140 jobs at its plant in Langenlonsheim and 60 more in several other locations. As part of the move the Langenlonsheim plant, which currently manufactures mechatronic components, will focus the unit into a Centre of Competence for integrating electric, electronic, mechatronics and haptic elements for complete control modules and consoles.

### MELECS produces control units for VW All-Wheel Drive system from Haldex

From 2012 Austrian EMS provider MELECS will produce electronic control units for the Swedish automotive supplier Haldex. The contract volume is valued at around Euro 50 million over a period of five years. For the Haldex group the respective order from VW, where the new MELECS control units will be installed, is the biggest in its history.

For the 5th generation of Haldex'All-Wheel Drive system MELECS has been developing electronic control units specifically on customer requirements.

**European passenger car production**

European passenger car production was down 14.4% year on year in August at 0.79 million units, according to the latest figures from *J.D. Power*. In Western Europe production actually rose by 0.5% in August, however output in CEE declined by 39% resulting in the region's share of the total falling to 26.8%. For the first eight months of 2009 passenger car production in Europe declined by 27% year on year.

Units Million	August 2009	August 2008	Eight Months 2009	Eight Months 2008
West Europe	0.578	0.575	6.894	9.165
Central and Eastern Europe	0.212	0.348	2.654	3.909
Total	0.790	0.923	9.548	13.074

Source: *J.D. Power* ([www.jdpowerforecasting.com](http://www.jdpowerforecasting.com))

Apart from low cost the product convinces with a light, robust and compact design together with an innovative heat dissipation concept.

The control unit will be produced at MELECS' electronics factory in Siegendorf, Austria, one of three units of the company which was formed earlier in 2009 following the spin-off of several business areas of Siemens Austria.

**Sanyo in car navigation agreement with TomTom**

The Japanese company Sanyo Electric has signed an agreement with the Dutch car navigation system maker TomTom NV to enable its subsidiary Sanyo Consumer Electronics to push into the North American and European car navigation markets.

The two companies plan to develop an all-in-one multimedia solution which will combine Sanyo's audio video infotainment experience with TomTom's in-car navigation technology. Initial products are expected by the end of 2010.

**Bosch to cut jobs**

With group revenue expected to fall by 15% to Euro 38 billion in 2009 the German automotive and industrial group Bosch could cut up to 10,000 jobs globally in 2009 and keep more than 100,000 on short working. The company also, according to an *Automotive News* report, does not expect to surpass 2007 levels until 2012 at the earliest.

**Nissan/Renault to cooperate on EV infrastructure**

The Nissan/Renault group has signed an agreement with German electricity supplier RWE AG aiming at establishing a network of battery charging stations

and in turn the viability and attractiveness of electric vehicles.

The agreement, which follows a similar move in France, highlights Renault/Nissan's ambition to become the leading e-car vendor globally. At the same time it is a part of Germany's efforts to play a leading role in the market for such cars and to establish e-cars as a viable alternative to conventional vehicles. RWE is one of Europe's largest electricity utilities and already building up a battery charging station infrastructure in some major cities within Germany.

The first prototype vehicles built by the Nissan/Renault alliance to be able to use the new infrastructure are expected by the end of 2010. Volume production for the group's electric vehicles is scheduled for 2012.

**Audi to hire 100 engineers for electric vehicle development**

In order to speed up the development of electric vehicle, car maker Audi AG has announced it plans to hire 100 additional development engineers for its 'ePerformance' project. The jobs are expected to be filled by the end of the year.

**Magenti Marelli and ST sign agreement**

Magneti Marelli, the automotive components and systems subsidiary of Fiat and one of the leading European semiconductor group STMicroelectronics have signed a memorandum of understanding that lays the foundations for an agreement in the sector of power electronics modules and components for energy conversion electronic systems (inverter) to be fitted on hybrid and electric vehicles.

The goal is to develop and produce inverters for hybrid and electric engines in mass-produced vehicles that combine high performance with low cost and compact size. The agreement builds on the existing collaboration between Magneti Marelli and STMicroelectronics in Formula 1.

In hybrid and electronic engines, the inverter covers the strategic role of electronically managing the engine and the battery recharging process.

The agreement should be finalized by the end of 2009.

### **Continental selects Maxwell Technologies BOOSTAP® ultracapacitors**

Maxwell Technologies has announced that Continental AG, one of the world's leading automotive electronics and mechatronics suppliers, has selected Maxwell's BOOSTCAP® ultracapacitors as the energy storage element of a voltage stabilization system (VSS) it has developed for automobiles.

Continental's VSS system stabilizes the auto's electrical system and supports stop-start functionality for improved fuel efficiency and reduced emissions. Continental has advised the company to prepare for delivery of initial series production volumes of BOOSTCAP cells for new car models starting in 2010.

Stop-start systems reduce fuel consumption and emissions by shutting off the car's internal combustion engine as the vehicle slows and seamlessly restarting the engine when the driver engages the clutch or touches the accelerator. In the VSS system, the ultracapacitor module provides burst power to re-start the engine, relieving the car's battery of high currents and repeated cycling that can shorten battery life. It also provides a reservoir of power to ensure stable functioning of the vehicle's electrical system when multiple power demands tax the system.

Maxwell is also working with other Tier 1 suppliers, automakers and heavy vehicle OEMs on ultracapacitor-based solutions for other electrical system applications and various hybrid and electric drive systems.

### **Automotive Sensors market to reach US\$16.8 billion by 2016**

According to *Strategy Analytics* the market for automotive sensors will fall 14.6% to US\$9.9 billion in 2009. Despite the current low demand for vehicles worldwide, automotive sensor shipments will grow to

3.7 billion units—and be worth US\$16.8 billion in 2016—because of planned vehicle safety, emission and fuel economy enhancements.

Light vehicle production is expected to grow at a CAGR (Compound Annual Growth Rate) of 3.5% over the period 2008 to 2013. Over the same period, Strategy Analytics expects automotive sensor revenues to grow by 5.4% CAGR, as carmakers respond to tightening environmental, fuel mileage and safety legislation as well as consumer expectations, by introducing electronically controlled innovations for enhanced performance, comfort and convenience.

### **Renault and Better Place announce a new, expanded agreement for Renault's first passenger electric vehicle**

Renault and Better Place have signed a definitive agreement whereby Better Place will start importing and distributing Renault's first passenger electric vehicle – Fluence ZE, a 5 seat-sedan, in the first half of 2011 in Israel and will offer subscriptions to customers buying this car from the Renault network in Denmark. Both companies commit to a volume of at least 100.000 vehicles for both countries by 2016.

The battery can be completely re-charged via a standard charge (between four and eight hours) or an immediate solution (under five minutes) in the form of the 'Quickdrop' – or battery switch technology – which enables vehicles to switch their batteries. Renault and Better Place collaborated on developing this innovative technology solution for enabling the vehicle to quickly release a depleted battery for a fully charged battery in a matter of minutes. A third option – quick charge – is able to recharge the battery to 80% state of charge in 20 minutes.

The Better Place EV services platform manages at scale the charging of electric cars as well as the integration with the local utility, giving drivers peace of mind and the freedom of roaming across all of Israel and Denmark and managing the impact on the grid. One component of the Better Place EV services platform is the on-board computing platform, codenamed "AutOS," which will be embedded into the Fluence ZE.

### **Magneti Marelli and FAAM sign agreement**

Magneti Marelli and FAAM, a leader in the production of starter batteries and industrial traction batteries, have signed an agreement for the development, production and marketing of innovative lithium

traction batteries and the related control and management systems (BMS, Battery Management System).

The agreement provides for joint development of the products and their marketing by the second half of 2010. FAAM will make available its know-how and technological leadership in energy accumulation systems for industrial and automotive use. Magneti Marelli will share its know-how on the integration of complex systems, and specifically on control and power electronics and energy accumulation and recovery systems, such as the KERS (developed by Magneti Marelli for the Formula 1), where hi-tech components such as the motogenerator, the inverter, batteries and battery monitoring and control system, are integrated in an environment with high levels of stress.

The agreement aims at establishing a competitive offer with high technological contents in a sector that is of primary strategic importance in the scenario of sustainable mobility of the future and in the area of hybrid and electric engines.

## Production

### Elcoteq chooses a new strategic partner

Elcoteq, Europe's leading indigenous EMS provider, has announced that it has ended discussions with Shenzhen Kaifa Technology Company Limited regards a potential equity investment by the Chinese industrial group.

Instead, Elcoteq has signed a non-binding Letter of Intent with another Asian strategic investor. This transaction aims at strengthening Elcoteq's financial position and it also offers clear business synergies.

Further details of the new agreement will be released in early October.

### Sony starts Blu-ray disc player production in Hungary

According to a *Nikkei* report Sony has started assembling Blu-ray Disc players in Godollo, Hungary and Brazil to keep pace with growing global demand. Previously, the Japanese consumer electronics group only manufactured Blu-ray Disc recorders at a Japanese factory in Kisarazu, Chiba Prefecture, and the company's Bangi factory in Malaysia. Production in Hungary and Brazil will use core components exported from Japan. Output from the two factories will be used to meet demand in Europe and South America, respectively.

Sony forecasts that the global market for Blue-ray Disc recorders and players will grow to more than 20 million units in fiscal 2010, which ends 31 March 2011, up from slightly more than 5 million units in fiscal 2009. By expanding its lineup of Blu-ray Disc devices, the company hopes to increase its sales of such products by roughly 60% to 4.2 million units this fiscal year.

### Orbit One acquires Wega Electronics

Swedish EMS provider Orbit One has acquired an 85% stake in the Polish EMS Wega Electronics from the Swedish company BC Electronics. Wega Electronics current CEO Grzegorz Kohls will retain the current 15% he holds in the company.

Wega, which employs around 50 people at an ISO certified facility in Prabuty, has changed its name to Orbit One and will provide the Swedish company an additional low-cost location. Orbit currently has manufacturing operations in Sweden and Russia.

Orbit One currently has sales in the region of SEK150-200 million and employs around 110 people.

### Molex workers agree to reindustrialization plan

Workers at Molex's factory in Villemur-sur-Tarn, near Toulouse, France, have voted in favour of the social plan after the group agreed to participate in a reindustrialization project with HIG Capital.

The Molex business in Villemur will close effective 1 October 2009. However, because of the cooperation the company has received from the French government, Molex has agreed to participate in a reindustrialization project with HIG Capital that will preserve jobs in Villemur area through HIG's operations.

Molex unveiled in October 2008 its intention to shut down its Villemur-sur-Tarn facility on June 30, 2009 and transfer the production to China and the United States. This restructuring plan involved 283 job cuts.

### Norautron invests in new pick and place machine

Norwegian EMS provider Norautron has according to *Evertiq* reported invested in a new Siemens Siplace X2 pick and place machine with flexible mounting head at its site in Vänersborg, Sweden.

## Ruwel emerges from insolvency

German PCB manufacturer Ruwel has emerged from insolvency with the backing of the company's single remaining investor BluBay Asset Management and a strategic investment by the Taiwanese PCB producer Unimicron.

With a turnover of US\$1.4 billion Unimicron is the world's second largest manufacturer of PCBs the company maintaining 14 production facilities, seven of which are in Taiwan and seven in China. Unimicron offers nearly all types of printed circuit boards, including those with ultra-fine conductors, backplanes, and flexible and flex-rigid circuits in large lots.

Unimicron tends to focus on high volume markets in the communications and computer segments and will complement Ruwel which is heavily focused on the automotive market.

As part of the agreement between the two companies Ruwel will take over the marketing of Unimicron PCBs in Europe, while the Taiwanese company will support Ruwel's activities in Asia.

## Elcoteq concludes personnel negotiations in Finland

Elcoteq has concluded personnel negotiations concerning Elcoteq SE, Finnish Branch and Elcoteq Finland Oy. As a result of these negotiations the companies have decided to make altogether 10 persons redundant on financial and production grounds.

## Toshiba looking to Russia

Toshiba, according to a *Nikkei* report, is considering building a TV assembly plant, either independently or with a partner, in Russia possibly by the next fiscal year ending March 2011. The move is part of the company's goal to sell a total of 15 million LCD TVs and gain a 10% share of the global LCD TV market. That's up from 10 million units, or an 8% share estimated for the year ending March 2010.

## tbp electronics opens German office

Dutch EMS provider tbp electronics has opened a new sales office in Zirndorf, Germany. The new office will provide design, development and service support to German customers and is in line with tbp's European expansion plan - the company currently has Sales Offices (and production plants) in Dirksland, the Netherlands and Geel, Belgium

## ACW launches new unit

UK EMS provider ACW Technology has invested £300,000 to launch a new production line as part of the company's recently formed special business services (SBS) group. The new unit will look to forge close links with customers and their design teams to help ensure product designs are optimised for fast, cost effective manufacture.

## PCB Technology Ltd invests in Europlacer's iineo

Blakell Europlacer Ltd, the UK designer and manufacturer of SMT placement systems for the global electronics industry, has announced that the Russian company PCB Technology Ltd has placed an order for the company's iineo platform. The move will allow PCB Technology to move into PCB assembly and away from its core PCB business.

## Trizo awarded AS9100 approval

UK EMS provider Trizo has recently been awarded AS9100 approval for the sub-contract manufacture of PCB assemblies.

## New consortium to drive further development and deployment of automotive DSI bus standard

Tier 1 automotive component and system suppliers DENSO Corporation and TRW Automotive and US semiconductor group Freescale Semiconductor have established an industry consortium to drive further development and deployment of the Distributed Systems Interface (DSI) standard.

The Consortium will actively seek broader industry participation to enhance the capability of bus systems, while also expanding the range of applications beyond automotive and into industrial control and networking. Consortium members will be free to use the DSI standard and will be able to influence the development of future generations of the DSI standard.

With the establishment of this consortium, the members expect acceleration in the development of advanced competitive DSI standards that have higher performances and lower costs, as well as help expand the DSI standard in the market.

With this announcement, the DSI Consortium unveils DSI 2.5, the next-generation standard. The Consortium will also work to develop the DSI 3.0,

which will aim to increase bus performance such as electromagnetic compatibility (EMC) signature and transmission speed.

The DSI protocol has been adopted by the world's leading supplemental restraint system (SRS) airbag manufacturers. Currently, more than a dozen automotive OEMs have included DSI-based systems in their vehicles. DSI-compliant products have been in production for many years. Demand for airbag-related systems is driven by legislation, consumer influences and automotive growth in emerging markets.

As automotive airbag systems continue to become more sophisticated and require more collision detection sensors, car manufacturers face pressures to reduce cost while enhancing safety. This consortium will enable implementers of the DSI safety bus to participate in the evolution of the standard and to continue providing robust, high-speed communications for the growing number of collision sensors planned to be used in new vehicles.

### **Assel selects Agilent**

Polish EMS provider Assel has chosen Agilent/HP 3070i series III as their leading ICT platform. Agilent 3070i is one of the leading testing platforms offering sophisticated in-circuit test capabilities.

### **Stadium to increase headcount**

In response to new orders UK EMS Stadium Electronics plans to re-hire around 12 people at its facility in Hartlepool.

### **Dynamic EMS Increases capability and capacity**

Contract manufacturer Dynamic EMS has added a Universal Instruments radial inserter and a Soltec Delta lead-free wave-soldering machine to its existing pin-through-hole automation equipment.

This latest investment follows the 2008 purchase of an additional screen printer and lead-free surface-mount reflow oven, and increases capability as well as capacity at the company's 43,000 sq ft factory in Dunfermline, Scotland.

High-quality pin-through-hole capabilities are required to build assemblies such as advanced lighting controllers, industrial controls, automotive subsystems, power converters and other equipment. The extra equipment adds to the company's existing Universal Instruments DIP inserter and VCD/Sequencer, as well as automatic pin-insertion and lead-cropping capabilities.

Dynamic EMS employs 83 people and has a turnover of £8 million.

### **HANZA signs manufacturing agreement Rocla**

Swedish EMS provider HANZA has signed a manufacturing agreement with the Finish truck producer Rocla. Under the agreement HANZA has been appointed strategic supplier by Rocla, and will immediately commence manufacturing of electric modules for Rocla's selected products.

### **AT&S provides update on European restructuring**

AT&S, Europe's largest indigenous PCB manufacturer, has announced that due to increased orders the company plans to retain additional capacity at its manufacturing plant in Leoben-Hinterberg, Austria. As a result annual production capacity – in terms of circuit board surface area – will be 85,000 sq m instead of the proposed 70,000 sq m announced in the original restructuring, and 700 people will be employed, rather than 600.

### **Preh officially opens new production plant in Romania**

The German company Preh has officially opened its new production location in Brasov, Romania. The automotive supplier manufactures various units at this plant, in particular multi-functional steering wheel switches and air conditioning control systems. The new S.C. Preh Romania S.R.L. plant currently covers a surface of approx. 4,700 sq m, however, a gradual expansion of up to 11,000 sq m is planned. At the end of 2009, the Brasov location will have approximately 95 employees, and further personnel intake of up to approximately 250 employees is planned until the end of 2010.

Production in Brasov was actually launched in March 2009 and then expanded gradually. In April 2009, the plant was certified according to DIN ISO 9001/2008, the declaration of conformity to the TS 16949 automotive industry standard was achieved and the environmental certification according to ISO 14001 was acquired in July 2009.

### **Nujira raises £10 million**

UK power amplifier specialist Nujira has announced that it has completed further funding of £10 million, to accelerate development of its handset technology and support expansion into the military communications

market as well as general commercial development of Cellular Infrastructure and TV Broadcast sectors. The round included Environmental Technologies Fund (ETF), a new investor, as well as existing investors Bank Invest, 3i, Amadeus, Mitsubishi UFJ Capital and private investors.

### **Telit and TES Electronics extend cooperation**

Italy's Telit Wireless Solutions, a leader in machine-to-machine (M2M) communications and a subsidiary of Telit Communications PLC and TES Electronic Solutions are stepping up their collaboration. The French electronics service provider will be the new Telit Competence Centre in France, developing high-performance telematics solutions based on Telit's M2M technology. Customers will benefit from a significantly shorter time to market, lower integration costs and state-of-the-art telematics technology.

The main task of the Telit Competence Centres is to develop and produce new designs for specific customer applications for GSM/GPRS products based on M2M technology from Telit. Instead of individual products, the telematics expert TES offers its own reference designs that are based on a range of shared basic functions. As part of the reference platform strategy, TES designs and produces customised telematics hardware and software solutions that can then be quickly transferred to serial production. The services provided by TES range from drawing up the application concept and development to product design.

### **EuroTech to build new UK PCB facility**

Eurotech has started construction of a new PCB manufacturing factory as part of a multimillion pound investment at its Salterton Road site in Exmouth, Devon, UK.

The new facility, totalling 35,000 sq ft, is being built as part of a major redevelopment of the Eurotech site in Exmouth. The facility will contain new and improved equipment including new plating lines and will allow Eurotech to better match the requirements of capability and capacity for future UK, European and worldwide customers.

### **Haier, Triview plan to begin building factory in Macedonia**

According to the *Macedonian Information Agency* a joint venture between the Chinese company Haier and South Korea's Triview started construction in

September on a new plant initially for the production of LCD monitors and televisions and in the longer-term PCs.

### **EU approves aid to Dell's Polish plant**

The European Commission has approved the provision of regional aid worth Euro 54.5 million by the Polish government to Dell Products Poland to help it build manufacturing capacity in Lodz. The move follows a formal investigation by the EU to see if the grant played a role in the decision by Dell to close its manufacturing facility in Ireland.

### **CTS selected by Thales as a global EMS partner**

CTS Corporation a leading supplier of electronics manufacturing services, has announced that its Electronics Manufacturing Solutions (EMS) business has been selected as a global manufacturing partner by Thales, one of the world's largest defense and aerospace companies. The Company has won an initial design and manufacturing award with total expected revenue of approximately US\$5 million over the three to five year programme life. Initial production begins late 2009. CTS will manufacture multiple PCBAs for harsh environment systems at its AS9100-certified Scotland facility.

CTS was selected by Thales UK to provide turnkey design services for military electronics applications, providing on-site engineering support as part of its commitment to meet objectives for the duration of the program.

### **KEMET announces reorganisation of its Film and Electrolytic Business Group**

KEMET a leading manufacturer of tantalum, multilayer ceramic, solid aluminium, plastic film, paper and electrolytic capacitors has restructured one of its three business groups. The Film and Electrolytic Business Group has been realigned into two Business Units: the Standard Film and Paper Products Business Unit and the Power and Specialty Products Business Unit.

The move will allow the company to streamline its manufacturing operations and in doing so reduce operating costs. It is also expected to allow the company to work more closely with customers earlier in the design phase.

## Altrel opens 400 sq m production unit

Altrel, a subsidiary of the French EMS provider Eolane, opened during the summer a new 400 sq m production unit. The unit will be used for the integration of complete products.

## Jabil to divest West European automotive electronics manufacturing operations

Jabil has announced it expects to divest of its automotive electronics manufacturing entity located in Western Europe. The company indicated it expects a loss of US\$20 to US\$25 million on the sale of the entity, of which US\$4 million is expected to be cash. Subject to country-specific regulatory approvals and other closing conditions, the transaction is anticipated to close during the company's first fiscal quarter.

Jabil acquired Valeo's automotive electronics plant in Meung-sur-Loire, France in 2002 extending the site in 2005.

In fiscal 2009, ending August, automotive accounted for 3% of the Jabil's total revenue of US\$11.7 billion.

## Philips and Bruker BioSpin to jointly develop medical imaging equipment

Philips Electronics and Bruker BioSpin, a division of the US Bruker Corporation have signed a memorandum of understanding (MOU) for the development of Magnetic Particle Imaging (MPI) scanners, a new imaging technology, for the preclinical market. The partnership would unite Philips' strength in medical imaging and Bruker BioSpin's leadership in analytical magnetic resonance instruments and preclinical Magnetic Resonance Imaging (MRI).

Under the terms of the MOU, Bruker BioSpin intends to develop and manufacture the preclinical MPI scanner at its facilities in Ettlingen, Germany. Both parties intend to co-market the resulting solution. Preclinical imaging has emerged as a powerful tool in disease studies, translational research and drug discovery. Philips and Bruker BioSpin believe that the addition of MPI as a complementary preclinical imaging technique has great potential to help researchers gain new insights in disease processes at the organ, cellular and molecular level.

## Philips to close French TV plant

Philips Electronics has announced it will shut down its

plasma TV production facility in Dreux, France, with the loss of 212 jobs. The move ends Philips production of TVs in Western Europe and follows the announcement of the closure of its TV plant in Bruges, Belgium in June. The move is part of the company's strategy to improve the competitiveness and profitability of its TV business.

Philips remaining in-house TV production facilities are located in Hungary and South America.

The actual timing of the closure has still to be announced.

## Company restructuring

- Although announcing that it believes that the worst of the recession is over **Jabil**, the US EMS provider, is according to reports looking to increase the number of lay-offs in 2009 from the originally announced 3,000 to 4,500.

- French EMS provider **Asteel's** subsidiary in Douarnenez has been placed into liquidation. The company which employs over 130 people filed for bankruptcy in June.

- According to local media reports US EMS provider **Sanmina-SCI** has cut 70 jobs at its plant in Örnköldsvik, Sweden. The move is in response to weaker demand.

- **Elcoteq**, according to a report by *MTI* plans to consolidate production in Hungary at the site in Szilva u. in Pécs and close the factory in Cserkúton.

- US EMS provider **Jabil**, according to an *Evertiq* report is looking to merge its plants in San Marco Evangelista and Marcianise, Italy

- According to media reports Swedish EMS provider **Fabec**, which was recently acquired by fellow Swedish EMS EDC, plans to cut 45 jobs at its operations in Estonia.

- According to local media **PartnerTech** plans to cut 65 jobs at its unit in Karlskoga, Sweden.

- **Alcatel-Lucent** has announced it has slightly revised downwards the number of job cuts in France. In July the telecommunications equipment manufacturer announced it planned to cut about 850 jobs in France in 2009 and 2010. This figure has now dropped to 814.

- According to a report in *Rzeczpospolita* the **Bumar Group**, a leading Polish supplier and exporter of armament and military equipment, plans to dismiss

more than 1000 employees (out of the total of 8000) by the end of 2009. The cuts will affect all manufacturing and trading units located across Poland. The Bumar Group consists of 20 manufacturing and trading companies specializing in munitions, radars, rockets and armour as well as construction, agricultural plant, and construction service companies.

- Following a detailed review of its current and future business levels, aerospace and defence group **BAE Systems** has announced it has started consultation regarding the potential closure of its Woodford, UK site and job cuts at another three UK plants, with the loss of 1,116 jobs.

- Finnish EMS provider **Scanfil** has completed statutory negotiations concerning its production plant in Sievi. As a result of the negotiations 5 salaried employees and 25 workers will be made redundant and 40 workers will be laid-off for an indefinite period. Lay-offs will be carried out by the middle of October and personnel reductions will be executed in stages by the end of March 2010.

- The Austrian company **AKG**, a subsidiary of **Harman International Industries**, will cut 100 jobs at its facility in Vienna. The move follows the transfer of volume production to Asia.

### EMS financial round up

- Belgian EMS provider **EPIQ** has reported revenues for the first half of 2009 of Euro 79.1 million, down 26.1% from the Euro 107.1 million reported for the same period a year earlier. Automotive related sales declined by 26.7% to Euro 61.2 million (2008: Euro 83.5 million), and Household by 34% to Euro 11.4 million (2008: Euro 17.3 million) while Industrial revenues increased by 9.6% to Euro 6.3 million (2008: Euro 5.7 million). EPIQ expects sales to be approximately 18% lower than in 2008 with a continuation of positive income.

- US EMS provider **Jabil** has reported net revenue for its fiscal fourth quarter ending August 2009 of US\$2.8 billion down from US\$3.3 billion for the same period a year earlier. Net revenue for the fiscal year was US\$11.7 billion compared to US\$12.8 billion for fiscal 2008. Jabil expects its net revenue for its first fiscal quarter of 2010 to be in a range from US\$3.0 billion to US\$3.2 billion. Sequentially all divisions apart from Computing & Storage reported increasing sales in the final quarter of the company's fiscal year with Automotive up 4%, Industrial, Instrumentation & Medical 14%, Networking 11%, Telecommunications 13%, Displays 9%, Mobility 4%, Peripherals 5% and Aftermarket Services 9%. Computing & Storage declined by 5%.

- **Stadium Electronics**, the EMS division of the UK Stadium Group, has reported sales of £15.36 million in the first six months of 2009 marginally higher than the £15.20 million reported for the same period a year earlier. During the period sales have benefited from the contribution of UK EMS company Zirkon which was acquired in November 2008, sales in the UK increasing to £6.34 million from £3.32 million in the first six months of 2008. Sales in Asia declined in the first half of 2009 to £9.02 million from £11.88 million in the first half of 2008.

- French EMS and PCB company **Cofidur** has reported sales of Euro 56.1 million for the first half of 2009 down from £62.3 million for the same period a year earlier.

## Renewable Energy

### SolarWorld to expand German production

SolarWorld AG is significantly expanding its production in Germany. The production capacity for solar power modules in Freiberg in Saxony will be tripled to 450 MW until the end of 2010. Together with the already initiated expansion of the wafer production in Freiberg to 1,000 Megawatt the company will thus be creating more than 500 new jobs in the region. SolarWorld currently employs 1,500 people in Germany.

### M+W Zander receives order from European Batteries

The international engineering company M+W Zander has been awarded a contract from the Finnish battery manufacturer European Batteries Oy to engineer and construct the process rooms of its new battery factory.

The factory in Varkaus, Finland, will produce large lithium ion battery cells for the automotive industry, the energy sector and other industrial applications. Production is scheduled to start next year. The factory has a planned annual capacity of 300 MWh.

European Batteries Oy has also an affiliate company Oy Finnish Electric Vehicle Technologies Ltd. (FEVT) who uses the lithium ion batteries in their offerings. FEVT supplies the patented battery management and control system that controls the linked battery cells, enabling them to be used as high-performance batteries in a broad range of applications.

### Investment in renewable energy rebounds in Q2

According to a report released by the European Commission's *JRC Institute for Energy*, global investment in renewable energies and energy efficiency was hit by the financial crisis in late 2008 and early 2009, but is now showing signs of a strong recovery. The report notes a significant slowdown in investment in the second half of 2008 (-10% in the third quarter; -23% in the fourth), that continued in the first quarter of 2009 (-47% compared with the fourth quarter of 2008), but started to reverse in the second quarter (+83% compared with the first quarter of 2009).

Other key findings from the report include:

- China became the leading producer of solar cells with an annual production of about 2.4 GW, followed by Europe with 1.9 GW, Japan with 1.2 GW and Taiwan with 0.8 GW. If this trend continues, China

could have around 32% of the world-wide production capacity by 2012.

- An increasing number of producers are entering the market with the result that the market share of the ten largest PV manufacturers decreased from 80% in 2004 to 50% in 2008.

- In 2008, thin-film solar modules have reached 12 to 14% of the market share.

- Concentrating photovoltaics (CPV) is an emerging market with approximately 17 MW cumulative installed capacity in 2008.

### First Solar to build French production plant

First Solar, a solar cell manufacturer, has announced that it will set up a new photovoltaic cell production site by the end of 2011 employing 300 people in the Rhône-Alpes region of France. The company, which is

### First Solar to top 2009 ranking of solar cell suppliers

First Solar will become the world's largest producer of photovoltaic cells in 2009, leveraging its low-cost thin-film process to surpass the industry's crystalline competitors, predicts US research group iSuppli.

First Solar is set to produce 1.1 GW of solar cells, more than double the 503 MW it made in 2008, iSuppli reported. That level of production will give First Solar almost double the cell production of China's Suntech Power Holdings Co Ltd which iSuppli said is the leading crystalline-based solar cell producer.

2009 Ranking of Solar Cell Suppliers

2009 Rank	Supplier	2008		2009	
		Production (MW)	Market Share (%)	Production (MW)	Market Share (%)
1	First Solar	503	7.5	1100	12.8
2	Suntech	494	7.3	595	6.9
3	Sharp Electronics	511	7.6	580	6.8
4	Q-Cells*	574	8.5	540	6.3
5	Yingli Green Energy	282	4.2	430	5.0
6	JA Solar	277	4.1	400	4.7
7	Sun Power	236	3.5	390	4.6
8	Kyocera	300	4.5	390	4.6
9	Motech Industries	272	4.0	360	4.2
10	Gintech Energy	220	3.3	350	4.1
	Others	3065	45.5	3435	40.1
	Total	6734	100	8570	100

\* includes subsidiaries

Source: iSuppli

owned by Electricité de France (France) and General Electric (US), will build the solar panels plant either in Rhone or Savoie.

### **Siemens wants to win smart grid orders worth over Euro 6 billion by 2014**

German industrial group Siemens wants to receive orders worth more than Euro 6 billion for intelligent power networks (Smart Grids) over the next five fiscal years: Siemens is already one of the leading international suppliers of Smart Grids and is continuing to strengthen this position. Siemens anticipates that orders for Smart Grid technologies will reach nearly Euro 1 billion in the current fiscal year.

Overall, the Smart Grid market has three primary components: Smart Metering (intelligent billing), Grid Intelligence (the grid infrastructure and its controls), and Utility IT (intelligent data management). Siemens is active in all three areas and is already global market leader for grid intelligence. Siemens will strengthen its Smart Grid portfolio in the field of power data management in the coming fiscal year when it plans to take over a 60% stake in Energy4U on 1 October 2009. This move will expand the company's portfolio for power utilities in the area of consumption data acquisition and billing.

### **Wacker retreats from solar wafer business**

Wacker Chemie AG has exited from the solar wafer business and will transfer its shares in its joint venture Wacker Schott Solar GmbH (WSS) to its former partner Schott Solar AG.

Wacker said it will continue to focus on polysilicon production while Schott will devote itself to all downstream steps in the value chain.

## **Semiconductors**

### **Rohm opens German semiconductor design centre in Germany**

Japanese manufacturer Rohm Semiconductor has opened a design centre in Europe based in Willich-Münchheide, Germany. The design centre will focus on LCD and LED drivers, power management, automotive drivers, EEPROM's, sensors and ICs general lighting applications.

### **Recore Systems receives US\$ 3 million funding**

Recore Systems, the Dutch fabless semiconductor company specialized in reconfigurable multi-core processors, has received US\$3 million in additional funding. The investment round was led by Point-One Innovation Fund and the East Netherlands Participation Company. The new funds will be used to expand the sales, marketing and customer support organization.

### **C-MAC and Linear sign agreement**

C-MAC MicroTechnology and Linear Technology have signed a strategic partnership to provide the European, Canadian and Asian space markets with space qualified radiation hardened (rad-hard) monolithic devices and hybrid modules. This important partnership forms part of C-MAC's strategy for growth within the space market following C-MAC's accreditation to MIL-PRF-38534 Class K in 2007.

C-MAC will assemble, test and qualify Linear Technology's rad-hard (RH) die in a new range of package outlines at its plant in Great Yarmouth, United Kingdom. This relationship will combine C-MAC's range of microelectronic packaging and test services with Linear's state-of-the-art portfolio of high performance analogue integrated circuits (ICs).

For the first time, customers outside the USA will be able to purchase high reliability, space grade monolithic and multichip modules incorporating Linear's RH IC designs from a European manufacturer.

### **Semi market notes**

- After swelling to major excess levels in 2008, global semiconductor inventories in the second quarter of 2009 dwindled to lean, but appropriate, levels, according to *iSuppli Corp.* *iSuppli* believes that in the third quarter, semiconductor suppliers have moved to build inventory to achieve supply and demand equilibrium. As a result, global chip revenue in the third quarter likely will rise by 3% more than actual demand would dictate, creating an artificial bump in sales for the industry.

- Following the severe contraction in 2009 *SEMI*, the industry association, expects six companies - TSMC, GlobalFoundries, Toshiba, Samsung, Intel, and Inotera - will lead an expected 64% year over year growth in fab spending in 2010 to US\$24 billion. Despite this spending, will be negative compared to 2008 and remain at its lowest levels since 2003, when around US\$22 billion was spent.

- Semiconductor industry fab capacity utilization is expected to rise sharply in the third and fourth quarters, reaching levels not seen since the third quarter of 2008, according to a forecast by market research firm *IC Insights Inc.* Industry-wide capacity utilization rebounded to 78% in the second quarter after sinking to a low point of 57% in the first quarter and according to the company will reach 88% and 89% in Q3 and Q4 2009, respectively.

-According to *Forward Concepts* the annual market for Smartbook, netbook and mobile internet devices (MIDs) ICs, including application processors, basebands, RF transceivers and others, is forecast to reach US\$9.7 billion in 2014.

- Worldwide semiconductor capital equipment spending will grow 47.3% in the second half of 2009, but due to the steep declines in the first half of the year, the market is projected to decline 47.9% for the year as a whole, according to the latest figures released by *Gartner*. Worldwide semiconductor capital equipment spending will rebound in 2010, when

revenue is forecast to increase 34.3%. All segments of the market are expected to grow in 2010.

-Strong second-quarter sequential growth along with improving supply chain visibility and semiconductor demand trends has prompted *iSuppli Corp.* to upgrade its forecast of 2009 chip sales. iSuppli now predicts global chip sales will decline by 16.5% in 2009, compared to the publicly announced forecast previously of a 23% drop. While revenue began growing on a sequential basis in the second quarter of 2009, sales will not begin to increase on a year-to-year basis until May 2010. This means the industry will endure 20 months without year-over-year revenue growth, compared to the 17-month downturn that the industry experienced during the 2001-2002 decline. While 2010 will bring a return to growth in the semiconductor industry with a 13.8% rise compared to 2009, the market won't return to its 2007, pre-downturn level until 2012. Global semiconductor revenue will rise to US\$282.7 billion in 2012, compared to US\$273.4 billion in 2007.

## Asia Pacific Electronics

### Research & Design

- Identification products and specialty materials manufacturer **Brady Corp** has opened an R&D centre in Singapore.

### Equipment/Manufacturing

- Taiwanese PC maker **Compal** has announced plans to invest US\$180 million to build its second notebook PC production base in Kunshan, as part of its efforts to boost notebook PC capacity in China. In addition to production the base the company will also set up an R&D base at the site.

- US semiconductor equipment manufacturer **Applied Materials** has announced it plans to shift part of its manufacturing from the US to Singapore. Applied already has subcontractors in Asia to build some parts of its equipment, which are then shipped to Austin for final assembly. Under the new plan, some sections of equipment will be built in Austin and some in Singapore. The company could also complete final assembly at the customer's facility

- **Styromatic Thailand**, a company linked to the Danish EMS provider **Styromatic**, plans to expand its manufacturing facilities in the country to 1,800 sq m.

- According to Taiwan's *Economic Daily News* China's **Longfei Optoelectronics** has broken ground on a new 8.5G LCD panel plant in Kunshan, Jiangsu Province. Projected with a monthly production capacity of 90,000 glass substrates, Longfei's 8.5G plant is expected to engage in the R&D, production, and sales of LCD panels, modules, and finished goods with sizes ranging from 32- to 52-inch.

- **Wistron** expects to ship 2.4-2.5 million notebooks in September, bringing its total for the third quarter to seven million units, according a report by *DigiTimes*. The Taiwanese company is now expected to reach its 2009 shipment targets of 25-26 million notebooks, eight million LCD monitors, four million desktops and 2.5 million LCD TVs.

- **Alane Technology**, the Chinese subsidiary of French EMS-provider **Eolane**, has received the ISO 14001 & OSHAS 18001 certification. The company has also opened an R&D department and is looking to complement its existing EMS activities by becoming an ODM within the next three to five years.
- Taiwan-based computer monitor and flat panel television maker **TPV Technology** has announced plans to build two new plants in mainland China and Mexico, respectively.
- According to a *DigiTimes* report Taiwan-based LCD monitor maker **Innolux Display** will increase its monthly capacity for resistive and capacitive touch panels from two million units currently to seven million in 2010. Additionally, LCD TV capacity will increase from 300,000 units to 800,000 units, while the proportion of revenues from LCD monitors is expected to drop from nearly 90% at present to 60%.
- The Taiwanese company **Kenmec Mechanical Engineering**, a supplier of automated factory equipment and thin-film-transistor panel manufacturing equipment, plans to spin off its EMS business into a separate business in 2010.
- According to a *DigiTimes* report **Inventec** will begin shipping Windows Mobile-based smartphones to markets in Europe in the fourth quarter, marking a major milestone in the development of the notebook maker's OEM handset business.
- **Flextronics** is according to a *DigiTimes* report looking to establish a handset ODM team in Taiwan by the end of 2009.
- EMS provider **Kimball Electronics'** Nanjing, China facility has received a new long-term contract to produce the complete system assembly of transport temperature control systems. Annual volume is expected to exceed 25,000 units. Full production, including system assembly, is scheduled to begin in October 2009 with an initial revenue projection of US\$5 million annually.
- According to a *CENS* report **Quanta Computer Inc**, the world's largest notebook PC supplier, has started construction on its sixth production plant in China. The new plant is scheduled to be operational before the third quarter of next year and will roll out 1.5 million notebook PCs a month.

### **Components**

- **Advanced Technology Investment Company (ATIC)** - a technology investment company wholly owned by the government of Abu Dhabi - and **Chartered Semiconductor Manufacturing** have jointly announced a definitive agreement whereby ATIC would acquire the Singapore-based foundry chipmaker. The transaction is expected to close during the fourth quarter of 2009, with ATIC being the sole owner of Chartered. This acquisition marks ATIC's second major investment in the semiconductor industry following its March 2009 creation of **Globalfoundries**. Acquiring Chartered will allow ATIC to build on the complementary platforms of Chartered and Globalfoundries with the former's customer relationships and capabilities in both 8-inch and 12-inch fabrication and the latter's advanced technology expertise.
- **SB LiMotive**, a joint venture between Germany's **Robert Bosch** and South Korea's **Samsung SDI Co**, plans to invest Won 500 billion (US\$409.2 million) in an electric vehicle battery plant by 2015. The new plant in Ulsan, South Korea, will produce batteries for hybrid and pure electric vehicles starting in 2011.
- According to Korean media reports **Samsung Electronics** is looking to use its manufacturing capabilities in semiconductor memory and TFT-LCD displays to enter the solar cell market the company establishing a new R&D/test facility for crystalline silicon cells in Giheung, Korea. In June this year fellow Korean company **LG Display** said it would spend Won 50 billion to build a thin-film solar cell production line.

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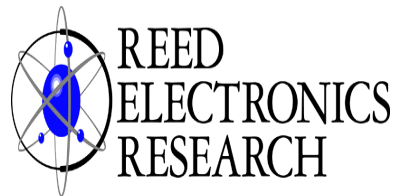
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