



## Electronics Supply Chain Weekly Digest

*Important Disclosures in the Appendix*

*A weekly collection of news summaries, survey results and channel insights, and report summaries from Edgewater Research*

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**DATAPOINTS OF THE WEEK:** S&P Global reported Sep Eurozone mfg PMI of 43.4 vs 43.5 in Aug and Germany PMI of 39.6 vs 39.1 in Aug both reflecting a high pace of new order declines and sustained reduction in employment, purchasing activity, and inventories. In the US, The ISM reported Sep mfg PMI of 49 vs 47.6 in Aug reflecting an expansion in output but a continued decline in new orders and inventory, albeit at a slower pace vs Aug. S&P Global similarly reported an improvement in Sep mfg PMI to 49.8 from 47.9 in August but a continued decline in orders. In Japan, mfg PMI remained in contraction territory for the fourth straight month falling to 48.5 in Sept from 49.6 in August reflecting steeper declines in output and new orders. In China government official mfg PMI increased to 50.2 in Sept from 49.7 in Aug, signaling expanding activity for the first time in six months. The private-based Caixin PMI declined in Sept to 50.6 from 51.0 in Aug but similarly signaled a slight improvement in operating conditions though the year ahead confidence was noted as remaining subdued which was reflected in a drop in employment.

S&P reported Global Electronics operating conditions continued to deteriorate in Sept with a PMI of 47.7, albeit at a slower pace compared to Aug's 47.0 reading. S&P notes output continued to decline at a similar pace in Sep, marking a 13<sup>th</sup> consecutive month of declining output with all sub sectors reporting declining production led by Computing. New orders also declined on the back of inventory destocking. Staffing levels also fell for the first time in 37 months, albeit only fractionally. S&P adds that in line with reduced new orders and production, global electronics manufacturers lowered their purchasing activity in September. The pace of contraction eased from August but remained marked overall.

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### **Reports published this week:**

[Distribution Insights – September 2023](#)

### **Key Takeaways:**

1. 3Q POS tracking in-line, down mid-single digits Q/Q, with weaker China, seasonal Europe and in-line Americas.
2. TI seen accelerating shift direct from Arrow in 2H, particularly in 4Q. We estimate ~65% of TI sales through Arrow are in Asia.
3. 3Q inventory progress viewed as uneven and slow on STMicro, Infineon and other European semis driving inventory up by enforcing NCNRs.
4. Arrow seen angering tier 1 EMS with aggressive tactics on receivables/NCNRs; Foxconn threatening to cut ties, move to Avnet/others.
5. Bookings remain weak with B2B<1 globally; semis B2B/orders cont. to decline; IP&E more stable with green shoots in China.
6. 4Q POS projected down LSD-MSD Q/Q with flattish APAC/China and declines in EMEA and Americas.
7. Future Electronics sale seen as having limited industry impact NT as WT planning limited change to Future's biz model and GTM. MT, the supply chain sees potential Arrow/Avnet gains as some end customers/suppliers seen expressing uneasiness re. the new owner.
8. Distributors seen expressing concern about slow inventory progress. Arrow seen aiming to cut inventory by 30-40%, or ~\$2B.
9. NCNR enforcement, ongoing customer pushouts seen limiting disti's ability to reduce inventory. Receivables collection also noted as incrementally more challenging. Combined those dynamics seen constraining WC improvement and FCF generation near term.

## Auto/Transportation

**BYD** – DigiTimes forecasts BYD to sell more than 300k vehicles outside of China in 2023, or up 1.8x vs 2022. BYD has expanded its footprint in Europe to 15 countries and the company is determined to drive its cost down in the region in light of the EU probe into potential punitive tariffs. DigiTimes says on average BYD vehicles sold in Europe cost 10,000 to 20,000 EUR less than locally made vehicles due to cost advantage but that could be narrowed if the EU decides to implement additional tariffs. DigiTimes estimates BYD sold 4,083 vehicles in Europe a 282% increase from 2021 and the company is on pace to see another triple-digit growth in shipments to Europe in 2023.

**GM/Stellantis** – The Biden administration proposal to hike fuel economy standards through 2032 would cost GM \$6.5 billion in fuel economy fines and Chrysler parent Stellantis \$3 billion, according to a letter seen by Reuters. The American Automotive Policy Council, representing GM, Stellantis, and Ford Motor F.N, said in a letter to the Energy Department on Friday that the size of the expected penalties for not meeting proposed Corporate Average Fuel Economy (CAFE) requirements are "alarming."

**GM/Ford** – GM and Ford announced this week laying off an additional 500 workers at four Midwestern plants due to the impact of the UAW strike.

**Ford** – Ford's factory in Saarlouis, Germany, is once more on course for closure after sale talks with a potential investor failed the company announced. Autonews Europe says sources familiar with the talks had said Chinese automakers were among companies interested in taking over the plant.

**Germany Car Sales** – New vehicle registrations in Germany slowed substantially in September, coming in flat Y/Y after growing at high teens to low 20% through most of the year after sales of EVs slumped 35% after government incentives for business buyers were ended. The German auto association noted that the market is still being propped up by a backlog of orders from the production disruptions but

the persistently low level of incoming orders is a cause for concern.

**Lithium** – Lithium prices are spiraling down toward the lowest level in two years on concerns over the strength of Chinese EV demand for the material, reports Bloomberg. Bloomberg reports spot prices have declined by ~70% from the peak of 598,000 yuan a ton reached less than a year ago. Bloomberg notes demand for lithium typically picks up in 4Q in China because of strong cell production and installation and stock replenishment. But this year that hasn't happened.

**Hyundai/Kia** – Hyundai and Kia Corp said this week that they had decided to adopt Tesla electric vehicle (EV) charging technology in the United States, joining peers like Ford, GM, and Nissan in adopting Tesla's North American Charging Standard (NACS)

**Tesla** – Tesla reported total 3Q deliveries of 435,059 and production of 430,488. That represents a 7% Q/Q decline from the 466,140 shipments in 2Q and below consensus expectations of 485k deliveries. Tesla pointed to planned downtime for factory updates while maintaining its 2023 target of 1.8 million shipments.

**Tesla** – Tesla released an updated version of the Model Y in China, with improved configurations and the same starting price, in a push to better compete with local rivals.

**Tesla** – Tesla cut US prices for its Model 3 and Model Y by 2.7% and 4.2%. The cuts come days after 3Q global deliveries missed consensus expectations. YTD in the US model 3 prices have come down by 17% while Model Y is down over 26%.

**VW** – After reducing EV production plans in its European factories over the last month, VW has decided to scrap plans for a new \$2B EV factory near its complex in Wolfsburg. Instead, new electric models based on the SSP architecture (scalable systems platform), which will be introduced at the end of the decade, will be integrated into existing and modernized structures at the main plant said the company.

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**UAW Strike** – The United Auto Workers' ongoing strike against Ford, General Motors, and Stellantis is in its third week, and has already cost the U.S. economy nearly \$4 billion. That is according to a Michigan economic consulting firm Anderson Economic Group. The breakdown shows the work stoppage has cost workers \$325 million in direct wages, while automakers collectively lost \$1.12 billion, dealers and customers lost \$1.2 billion and suppliers took a \$1.29 billion blow.

**UAW** – The UAW has decided against additional walkouts in the coming week at Ford, GM, and Stellantis as contract talks have progressed. UAW had prepared to strike GM's high-profit margin plan making SUVs in Arlington Texas, but reached a last-minute deal with GM agreeing to put EV battery plans under the union's master agreement which means that workers in the plans will be unionized. Negotiations with Ford and Stellantis are also reportedly progressing with Stellantis giving concessions on cost of living adjustments and Ford upping its wage offer to more than 20% increase.

**Used US Car Prices** – Wholesale used-vehicle prices (on a mix, mileage, and seasonally adjusted basis) increased 1.0% in September from August says Cox Automotive. The firm attributes the price increases to market fluctuations and not to any reverberance from the UAW strike.

**US New Car Inventory** – New vehicle inventory at dealer lots in the US increased by 7% M/M and more than 60% y/y in September to 2.21M says Cox Automotive. The increase is seen despite strength in sales and the impact of the UAW strike indicating strong production. Days of inventory inched up by 2 to 60 in Sep, in-line with what Cox considers normal for the US market. Cox reports GM is potentially at risk of seeing a more pronounced impact since its inventory is at industry average of 60 while Ford and Stellantis appear well inventoried with 90 and 111 days.

**UK Car Sales** – New car sales in the UK increased 21% Y/Y propped up by large fleet sales growing 41% and PHEV growing 51% according to UK data. However private sales of EV fell 14% as less than one in 10 private new car buyers opted for an electric model last month, the report adds.

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## Datacenter

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**Dell** – Dell on Thursday reiterated a revenue outlook consistent from a year ago, disappointing some investors who expected AI to drive a bigger sales jump. Dell sees LT revenue growth of 3-4% underpinned by 7% CAGR growth in server, storage and networking infrastructure and 2% CAGR in PCs. The combined outlook is seen as raising questions regarding the potential weakness implied in the non-AI portion of server and storage sales due to the cannibalization of IT budgets from AI.

**All Flash Storage** – According to Gartner 2Q23 external enterprise storage sales declined 14% to \$5.03B with primary storage sales down 15% Y/Y, secondary down 7% and backup and recovery down 20%. HDD and Hybrid sales were down 21% y/y and accounted for 47.6% of the market while all flash sales declined 7% Y/Y. According to Gartner Huawei's all-flash sales increased 33% in 2Q23 and have surpassed those of Pure Storage and Netapp trailing only Dell's.

## Industrials

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**Rockwell** – Rockwell Automation has completed its acquisition of Clearpath Robotics and its industrial division OTTO Motors just a month after the deal was announced.

**Yaskawa** – The Japanese industrial automation and robotics supplier Yaskawa reported 1H revenue increased 10% Y/Y while operating profit increased by 6%. The company reiterated its current fiscal year forecast of 4% revenue growth citing order backlog and pass true increases but noted demand remains weak in key markets like China. The company sees continued strength from the build-up of EV infrastructure in key automotive customers.

## IP&E

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**Yageo** – Yageo is scheduled to enter volume production at the phase three facility of its factory in Dafa Industrial Park in Southern Tawan in 1Q24 says the company.



## Semiconductors

**AI Chips** – OpenAI, the company behind ChatGPT is exploring plans to make its own AI chips as an option to solve for the shortage of such chips. Other options include working closely with Nvidia and also diversifying its suppliers beyond Nvidia, according to a report by Reuters.

**China MCUs** – Chinese MCU suppliers are actively expanding their target markets to include automotive and home AI edge device applications, looking to capitalize on the market development, according to a DigiTimes report.

**Display Driver ICs** – Demand for DDI ICs is seen as remaining weak into 4Q23 due to weak shipments for large-size display devices like PCs and TVs, according to a report from DigiTimes.

**Intel** – Intel announced its intent to separate out its Programmable Solutions Group (Altera product line) as a standalone business and ultimately position the segment for an IPO over the next 2-3 years (similar to the Mobileye business). Using AMD's purchase multiple of 10x next 12 months sales for Xilinx, the PSG groups is expected to be valued at \$20-25B.

**Infineon** – Infineon announced the acquisition of the Swiss-based startup 3db Access, a supplier of low-power UWB technology for IoT. Terms of the deal were not disclosed.

**Huawei** – Taiwan's government has opened an investigation into four companies named in a media report as conducting business with firms linked to U.S.-sanctioned Huawei in China. The ministry said it would be looking into whether the firms' activities in China "matched up" with their initial investment approval from the island's government and whether firms are helping build infrastructure for the production of advanced chips. The companies - Topco Scientific (5434.TW), L&K Engineering (6139.TW), United Integrated Services (2404.TW) and Cica-Huntek Chemical Technology Taiwan (6725.TWO) - have all denied any wrongdoing.

**Nvidia** – The European Union and the French government are separately investigating potential anticompetitive behavior by Nvidia in the supply of artificial intelligence technology, according to Bloomberg. The report notes that this is a preliminary investigation and may not lead to a formal inquiry or a case being brought against any company.

**RISC-V** – US lawmakers are putting pressure on the US administration to restrict American companies from working on the open source RISC-V technology in China – a move that could upend the global technology industry collaborates across borders. The lawmakers expressed concerns that Beijing is exploiting a culture of open collaboration among American companies to advance its own semiconductor industry, which could erode the current U.S. lead in the chip field and help China modernize its military. Their comments represent the first major effort to put constraints on work by U.S. companies on RISC-V.

**Lagging Edge Semis** – Utilization for 8-inch fab capacity is forecasted to drop to 50-60% in 2H23 due to persistent inventory overhang and macroeconomic weakness in demand says TrendForce. The firm notes stockpiling demand from Automotive and Industrial end markets helped 8-inch fab utilizations float in the 70% range but after fulfilling stockpiling needs orders for PMIC and DDI ICs are seen as continuing to weaken in the 2H. As a result, the firm projects suppressed capacity utilization through 1Q24. TrendForce indicates that due to mounting inventory pressure Infineon has recently cut orders to UMC and Vanguard which will likely put pressure on Vanguard's utilization into 1Q24.

**TSMC** – TSMC has told several suppliers that installation of semi equipment at its Kumamoto fab in Japan will start in October and be completed by 1Q24 which is seen as a sign that mass production from the fab could be achieved ahead of previously communicated plans by the end of 2024.

**TSMC** – TSMC reported September revenue of NT\$180B, a decrease of 4.4% M/M and 13.4% from Sep 2022. For 3Q the results imply revenue of NT\$546B marking an 11% decline Y/Y but ahead of consensus expectations of NT\$531B which is seen driven by boosting demand for AI chips.

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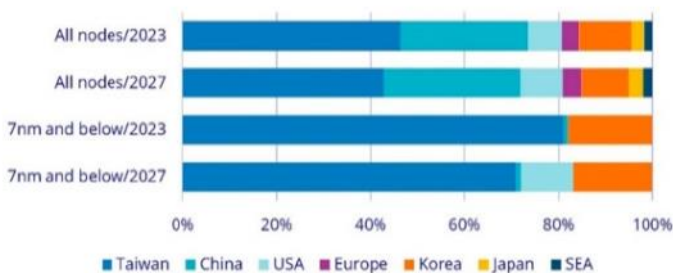


**SMIC** – Semiconductor Manufacturing International Corp. (SMIC) is likely to, in the next few years, again defy the U.S. government by manufacturing chips with feature sizes as small as 5 nm, industry insiders told EE Times.

**Semi sales** – Global semi sales in August increased 1.9% M/M but declined 6.8% Y/Y says SEMI. The sequential increase marks the 6<sup>th</sup> month of improvement. Regionally, month-to-month sales increased in the Americas (4.6%), China (2.0%), and Asia Pacific/All Other (1.2%), but decreased slightly in Japan (-0.4%) and Europe (-1.1%).

**Semi capacity** – IDC projects changes to the geographic mix of semiconductor capacity due to the global geopolitical shifts in recent years from US and European CHIPS Acts as well as strategies like China + 1 and Taiwan + 1 from global semi suppliers. IDC forecasts that Taiwan market share for semi fab capacity will decline from 46% in 2023 to 43% in 2027 while China’s proportion is expected to increase to 29% in 2027 from 27% in 2023 due to investments in mature edge technologies.

Worldwide Semiconductor Foundry Market by Location, 2023-2027



Source: IDC

**US** – The Biden administration warned Beijing of its plans to update rules that curb shipments of AI chips and chipmaking tools to China as soon as early October, a U.S. official said. The update seeks to limit access to more chipmaking tools in line with new Dutch and Japanese rules, other sources said, and to close some loopholes in export restrictions on artificial intelligence (AI) chips.

## Consumer and EMS

**Apple** – Apple pointed to software and app-related bugs as the reason new iPhone 15 are getting too hot. The company said it will be addressing the issue with a software update in the coming weeks.

**Apple** – Apple and its manufacturing partners may decide to absorb the higher cost of making iPhones in India in the near term, according to a report. Business Standard quoted sources involved in the production of iPhones saying that the incentives of an average of 4–6% on incremental sales for handsets made in India are not enough to make up for the high cost of 7-8% for making handsets in India than in China.

**Foxconn** – Foxconn reported Sept revenue reached \$20.46B, a decrease of 20% Y/Y but a 60% surge M/M. Foxconn said the fourth quarter should see significant growth compared to the third quarter without elaborating.

**Jabil** – Jabil has launched a restructuring plan the company said in a filing stating that it looks to realign its cost base associated with the sale of its Mobility business to BYD. This will include headcount reductions across Jabil’s selling, general and administrative (SG&A) cost base and capacity realignment.





## APPENDIX

*We Nik Todorov, Dennis Reed, and Sean Muir hereby certify that the views expressed in this research report accurately reflect our personal views about any or all of the subject securities referred to in this research report. We certify that no part of our compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this research report. The analyst(s) responsible for the preparation of this report have no ownership stake in this company. Edgewater Research Company provides no investment banking services on this or any company*

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