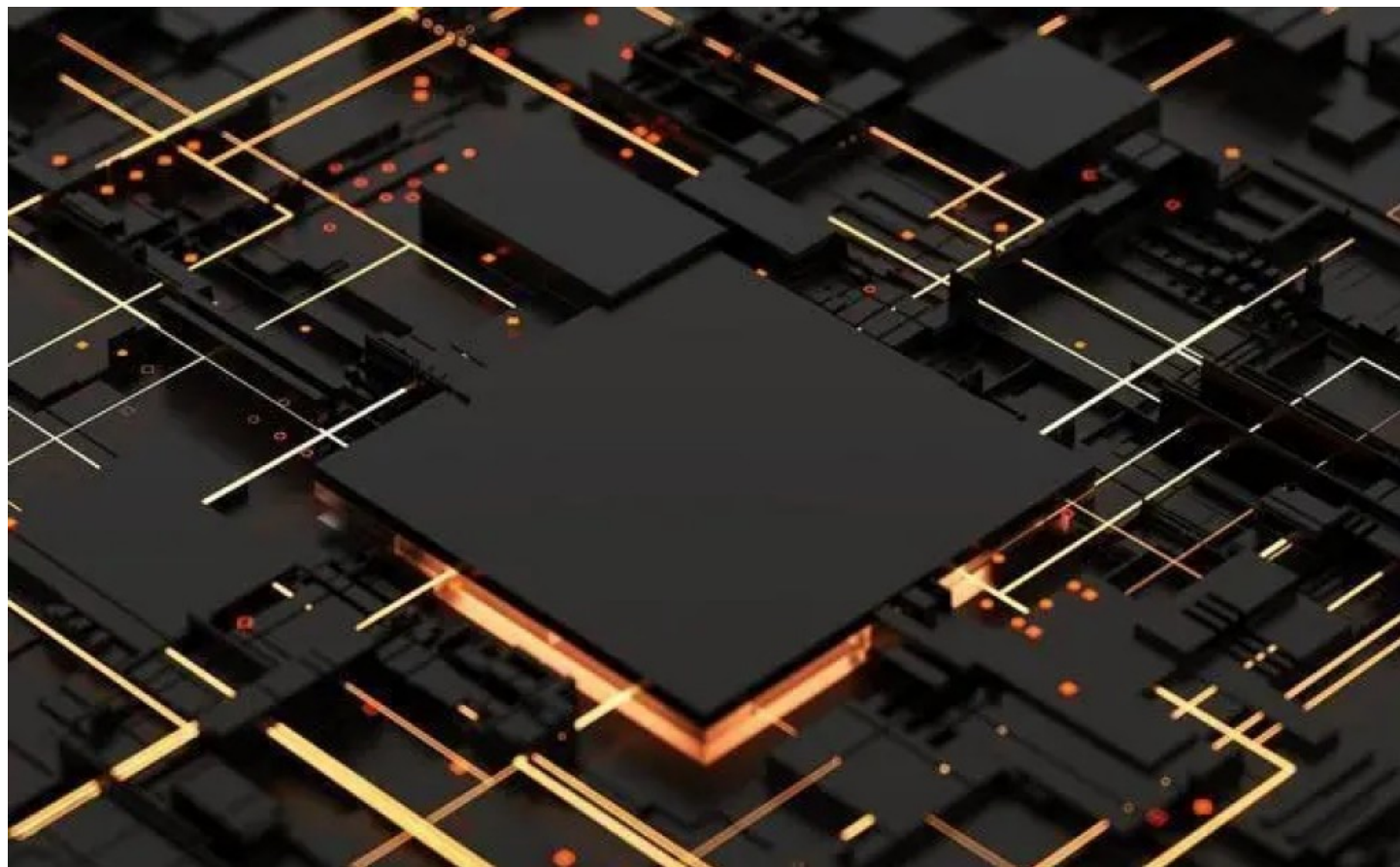


## Kynix: The Down Cycle of Semiconductor is Coming

Global semiconductor market growth is slowing down and the semiconductor market is entering a cyclical shift from hot to cold.



**Hong Kong, Hong Kong S.A.R. Sep 28, 2022 ([IssueWire.com](https://www.issuewire.com))** - With shrinking demand in July and August 2022, the semiconductor industry is experiencing a downturn. [KYNIX ELECTRONICS](#) forecasts that global chip shipment growth will slash to 5.7% this year from an original estimate of 9.9% and expand from a 0.5% recession to a 6% recession in 2023.

The semiconductor industry is heading for the biggest recession since the Internet bubble in 2000, but also one of the biggest recessions in the history of chip manufacturing. The current semiconductor super cycle is finally nearing its end, and the 17th market downturn has really begun.

According to data released by China's National Bureau of Statistics, China's IC production totaled 166.1 billion blocks in the first half of this year, down 6.3% year-over-year, the first time since 2009 that the year-over-year growth rate turned negative.

Among other things, it is noteworthy that June, which usually serves as a bumper month for the semiconductor market, still saw a decline in sales this year. This is the first decline in June since 1976, marking the weakness of the chip market.

Semiconductor market development has a clear cyclical nature. For the industry chain companies, each time the market cyclical changes is a selection process of the winners and losers. In the face of the

inevitable arrival of the market cycle change, companies should pay great attention to it.

The overall performance of Taiwan's semiconductor stocks is weak, with the Fed's continued interest rate hike and foreign investors selling shares to liquidate being seen as the main reasons. Most analyses point out that, as the main product of Taiwan's semiconductor industry, only the chip foundry can currently maintain good growth. According to the Taiwan Semiconductor Industry Association (TSIA) statistics, the industry in Taiwan in 2022 will grow to 4.88 trillion New Taiwan dollars, an annual growth rate of 19.7%.

However, the impact caused by the combination of factors such as the slowdown in the global economy and the semiconductor market itself entering a downward cycle has gradually become apparent since the third quarter. Major semiconductor manufacturers composed of the World Semiconductor Trade Statistics Organization (WSTS) data show that in July this year, global shipments for the first time in nearly 32 months below the same month of the previous year; and is expected to chip sales growth rate of 4.6% in 2023, the lowest growth rate since 2019.

U.S. research firm IDC pointed out that the semiconductor market originally a seller-dominated business environment has changed significantly, especially in the field of memory, inventory is increasing, and downward pressure on prices is strengthening.

### **Memory chips: Prices keep falling**

For a long time, SSD prices are continuing to decline, and the drop is huge. But instead, the more the price is reduced, the more no one buys, seems to have entered the cycle.

Last year [memory chip](#) prices continued to rise, but this year the price all the way down. A memory with 1 TB capacity M2 interface, model Samsung 980, whose price once rose to about \$1400 last year, is now less than \$700.

Most of the memory prices have fallen significantly, and merchants say that since November last year, memory prices have been falling.

Memory is mainly composed of controller and memory chips, and it is the memory chips that determine its price.

In the first half of this year, downstream demand declined, but global memory chip shipments still maintained growth. The industry, such as Micron, Hynix, and many other chip makers has issued warnings that the oversupply of chips is increasing.

The inventory of these storage chips is rising in the past two years, and is not well digested, resulting in the phenomenon of oversupply starting to become apparent, and the price will drop very dramatically.

### **IC design companies: conservative attitude towards demand in the first quarter of 2023**

IC design companies are conservative about the demand outlook for the first half of 2023 because their downstream customers engaged in the PC and cell phone markets are taking longer than expected to adjust their inventories.

So far, sales of notebooks, other PCs, cell phones, and other consumer electronics have been disappointing in the second half of 2022, already prompting the relevant supply chains to start adjusting

their inventories.

IC design companies intend to be cautious about placing orders with pure foundries in the first half of 2023 as there are no signs of recovery in end market demand. Fabless companies have slowed the pace of orders for the remainder of the year.

Some IC design companies previously said that demand would start to pick up in the fourth quarter, but that is now becoming uncertain. The expected pickup in demand may not occur until the first half of next year.

With end market demand falling rapidly in the second half of 2022, IC design companies are inclined to hold onto cash. Sources said second- and third-tier foundries have started offering price discounts for additional orders, but it is still difficult to strike new deals. On the other hand, pure-play foundries have seen their fabless customers increasingly take a wait-and-see approach to order commitments, but not all of them have agreed to significant price cuts.

### **The electronics industry is urgently responding to inventory changes**

The common theme of the electronics industry in 3Q this year is inventory adjustment, including PC, display card, DRAM, IC design, smartphone, and panel industries are facing downward pressure on the boom.

Applications such as automotive electronics, servers, and industrial computers are still growing to reduce the impact of inventory adjustment.

After two years of epidemic dividends, this year the PC industry demand reversal, coupled with global inflationary pressure, the 2nd quarter, and the sudden occurrence of the mainland sealing control incident, the Russia-Ukraine war, etc., resulted in a sharp freeze in PC market conditions.

The total inventory of manufactured goods of PC brands climbed to a new high of \$14.8 billion in the first quarter, an annual increase of 56%. This is data aggregated from HP, Dell, Lenovo, Acer, Asus, MSI, and Gigabyte.

The PC market has shifted from an oversupply at the beginning of the outbreak to an oversupply.

As for smartphones, as of the first quarter of this year, OPPO, Vivo, Xiaomi, and Honor have over 30 million units of branded factory phones in stock. Affected by lower than expected demand, Samsung has close to 50 million smartphones in stock. Samsung's total smartphone shipments this year target about 270 million units, 50 million units of inventory accounted for 18%, nearly double the healthy water level. It can be seen that the non-Apple camp in the first half of the inventory is serious, so the second half of the peak season is not prosperous and also become a certainty.

In terms of display cards, the display card boom began to decline rapidly in the second half of May, continued to adjust inventory in the third quarter, and explore the field of servers, gaming, and industrial computers to reduce the impact of operations.

As for the IC design industry, the relevant industry pointed out that now is the degree of small months, downstream customers have not been so strong demand for goods, so had to reduce the amount of upstream wafer foundry investment to adjust inventory.

As for the [Driver IC](#), end consumer buying is suppressed, and the short-term market demand, especially consumer demand is uncertain. But the demand for automotive, commercial IT, and gaming applications is still good.

Inventory will increase in the short term because the production cycle is long, and the sales period may be lengthened due to the change in demand, and inventory will increase.

As for the DRAM industry, South Korea is the world's largest source of memory chips. South Korea's chip inventory wrote the largest increase in more than four years, showing that the global demand for memory chips in electronic products is slowing down.

The panel industry boom continues to weaken and branded major Samsung panel inventory came to a high point of 16 weeks in response. The second quarter cut TV panel orders 2 million to 3 million pieces, and in June announced the supply chain suspended procurement until the end of July; early July and then extended to the end of August. Coupled with Dell's urgent notice to panel makers, a downward revision of the 3rd quarter monitor and notebook panel procurement volume of up to 50%. Panel factory this year is afraid of not ushering in the 3rd quarter peak season and needs to reduce capacity utilization early over the winter.

### **About Kynix**

Kynix Electronics, found in 2008, is a famous electronic component distributor in Hongkong. With professional knowledge and rich distributing experience, Kynix publishes electronic industry reports and market analyses every week.

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