Kynix: Chip prices soared and plummeted in September 2022

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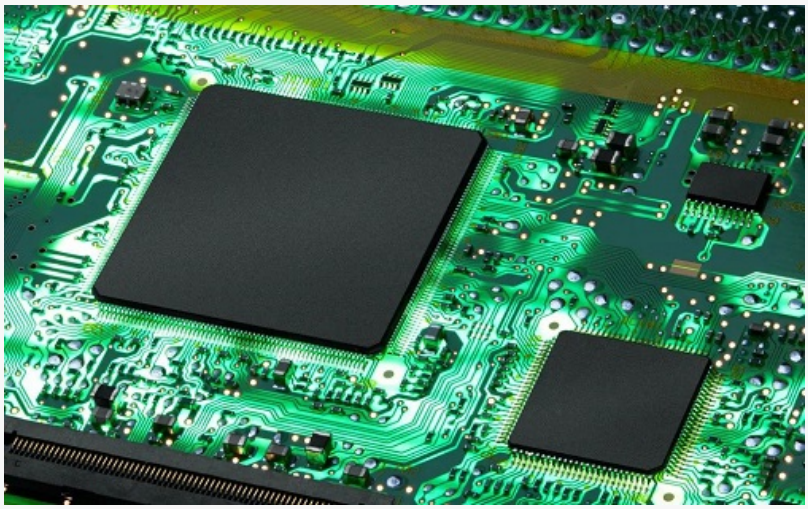
MCU

HONGKONG, CHINA, September 20, 2022 /EINPresswire.com/ -- Distributor Kynix made the observation that, since the beginning of the year, chip prices have risen dramatically for a period of time before dropping. A specific STMicroelectronics chip, which is the essential element of the electronic control system, reportedly reached a high of about $600 in 2021 and a low of around $100 in 2022, a price decrease of more than 80%. An other kind of chip will continue to cost roughly $30 in 2021, but by August 2022, it will only cost about $3 per chip or about one-tenth of the highest price.

In addition, STMicroelectronics' general-purpose MCU chip pricing has decreased from $10 in March to $5 in July, and the quotes of MCU chip producers including Infineon, Texas Instruments, and STMicroelectronics have plummeted precipitously. However, at the same time, the "lack of core" phenomena has emerged in the automotive, industrial automation, AI, big data, and other industries.

Why are there sometimes chip shortages and sometimes a drop in chip prices at the same time? Do chip prices change frequently? What elements will influence the escalation and decline of chip prices? Which chips are deficient, according to the market, in terms of cores?

Distributor Kynix made the observation that, at the beginning of the epidemic, people were caught off guard and gradually lowered their expectations, which resulted in insufficient upstream stocking and, concurrently, the lack of factory operation brought on by the superimposed epidemic directly resulted in limited output. At the same time, there has been a significant mismatch between supply and demand due to the rising demand for equipment and

equipment needed for anti-epidemic measures, as well as home offices, education, etc. Downstream manufacturers are eager to stock up, which is more than the actual demand, as they see that chip production capacity is in short supply. There are more orders, which causes an inflated demand.

Additionally, a lot of chip companies are publicly traded, and profit projections were made public along with the cycle's financial report. In order to protect the stock price from being affected by the number's fluctuation, the company must be listed. As a result, even if some models are available, even if the listed company's sales have exceeded expectations, they won't sell.

The need for graphics cards for mining virtual currency is another aspect. Nvidia and AMD graphics cards will be difficult to find from 2020 until mid-2021, and even replacement components and refurbished cards will be expensive. A shortage of other chips has also resulted from this rapid demand, which has constrained production capacity.

Consumer electronics chips had the most restricted production capacity at the time. Chips larger than 45 nm were the focus from the standpoint of the manufacturing process, particularly chips between 60 nm and 90 nm.

The other is automotive chips, but the ones that are most essential for conventional autos, such as braking, control, and sensing, are chips of 90nm and above, which are largely lacking. Major foundry firms like TSMC and Global Foundry will not raise the production capacity of such chips because the majority of the chips used in cars are older chips. Even if there is a slight scarcity of the chips needed for vehicle intelligent systems (such smart cockpits), the situation is not critical. There is a process overlap between these chips and mobile phone chips.

The severe core scarcity in the automotive industry is caused by another factor. Lean production and agile inventory are used extensively in the automotive sector, and they are hardly ever stored. The supply cycle has been compressed to the utmost efficiency (the shortest time) from chip components to production lines, thus when the chip supply chain is out of balance, chips in the automobile industry will be particularly noticeable due to the lack of stocks.

The acute lack of "mining" chips is another type. Since the outbreak, demand for graphics card chips (GPU) has surged, the price of virtual currency has climbed dramatically, and the global demand for mining has grown greatly. These factors have put pressure on other chips' ability to produce chips. GPU costs are also rising at the same time. TI's power management chips, such as the TPS61021, ST's MCU, the STM32F Series, and Nvidia's graphics processors. The price of memory chips, such as DRAM, FLASH, etc., is likewise increasing.

Which chips have had the biggest price drops recently, according to the media?

According to Kynix's investigation, the major price decrease this time also closely corresponds with the chip kinds that were previously absent, namely MCU, analog IC, power device, storage

class, GPU, etc., with a wide range.

The main causes are as follows, briefly summarized: the epidemic-induced imbalance between supply and demand has returned to normal; everyone's expectations for future growth have decreased; stockpiling willingness has decreased; demand has decreased; the value of virtual currencies has fallen; and there is less demand for "mining."

Is the rise and fall of chip prices regular?

There are specifics and generalities in the electronics sector. Particularity describes the existence of specific fields with a high level of technological complexity and high entrance barriers. This industry combines scarcity and adaptability exceptionally well, making it the most important link in the supply chain. In general, like in other domains, there are supply and demand-related oscillations around price baselines as well as diminishing marginal impacts.

The cost and selling price will steadily decline as more goods are shipped out and as new technologies and items are introduced until they stabilize within a specific range. The short-term imbalance of supply and demand is the main cause of the minor changes in the overall trend. This imbalance may result from a lack of coordination during the product upgrading process, the emergence of explosive products in the terminal market, an imbalance in the rhythms of sales demand and supply, and some unforeseen events (such as earthquakes in Taiwan and Japan, unrest and flooding in Thailand, etc.) that led to abnormal production capacity and logistics.

On the other hand, even for regular chips, the phenomenon of price manipulation mentioned above will happen if the product is only in demand to a particular amount within a certain period of time and the supply is concentrated in one or two companies.

Due to the tiny market size for some so-called sunset products, neither new competitors nor upstream producers can actively boost production capacity. The price normally does not change significantly, and the remaining supply is essentially consistent, but the profit margin is rather substantial. For instance, the DDR1 and DDR2 generations have substantially higher capacities than the current DDR4 price.

Chip price changes are a common occurrence for businesses, and supply chain management requires a lot of effort. The quality of supply chain management significantly affects their ability to seize the market and boost profitability when there is a stock shortage or significant price swings. The development of supply chain management skills necessitates consistent work, which not only include dealing with the connection between Party A and Party B and adhering to the contract but also a comprehensive knowledge of and sensitivity to the market and industry. In order to reduce risks over the long term, a better supplier ecology must be fostered and supported. Domestic businesses still have a ways to go from here. The price is primarily determined by the market.

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