

5. « » [], – :
http://www.customs.gov.by/ru/sistema_riskov-ru/ – : 19.03.2022
6. : – :
<http://www.consultant.ru/about/software/cons/belarus/> – : 20.03.2022
7. – [], – :
<http://www.consultant.ru/about/software/risk/cons/belarus/> – : 20.03.2022

THE SHORTAGE IN THE SEMICONDUCTOR MARKET AND ITS IMPACT ON BELARUSIAN PRODUCTION

The chip market is represented by a fairly extensive list of companies that manufacture and sell microprocessors and semiconductors. The main clusters of such companies are located in China and the United States, which in turn causes quite violent conflicts between them. This area of the market is currently one of the most priority areas. Microchips are used almost everywhere, while they are extremely expensive, which only encourages companies to expand the range by coming up with newer, more compact, more reliable semiconductors. The bulk of the production of goods goes to computer components, which is about 31%, followed by communications, which also include phones, about 30%. It is also worth noting the car sector, approximately 12%, this direction is just beginning to develop, but has huge potential in the future.

It is also worth highlighting several of the largest corporations in this field. Intel is an American company, developer and manufacturer of electronic devices and computer components: microprocessors and system logic sets (chipsets) for client computing systems and data centers, JSC Angstrom is a Russian developer and manufacturer of semiconductor products, from discrete transistors to

modern microcontrollers and microprocessors. The company has one of the most powerful complexes in Russia for the creation and production of semiconductor products, TSMC is a Taiwanese company engaged in the study and production of semiconductor products. Founded in 1987 Semiconductor Manufacturing International Corporation is the largest microelectronic company in mainland China. These companies are the manufacturing giants of the chip world.

The main focus of the production of such companies are memory cards, approximately 34%, followed by logic processors, modems, microcontrollers, microprocessors make up only 12% of the total output.

Since 2020 and to this day, the semiconductor market has been in crisis. It arose due to the sharply increased demand for microchip-capacious goods, such as laptops, phones, electric cars, etc. Such a high level of demand arose due to the coronavirus pandemic, which forced people to stay at home, which stimulated people to buy such goods. This situation forces companies to raise prices by 10-20%. The shortage of microchips affects not only ordinary buyers, but also car manufacturers, because now many car models resemble "smartphones on wheels", which of course negatively affected their production. In addition, huge problems are observed in medicine. New equipment requires a huge number of semiconductors. Given the current situation on the chip market, engineers prefer to modify old devices rather than create new ones. Unfortunately, it is impossible to change this situation quickly. This is due to the production process, because for the production of microcircuits it is required to perform long manipulations with grown crystals, which does not significantly speed up the process, since this is an extremely sensitive and delicate process. Given such an unpleasant situation on the market, manufacturers still strive to solve this problem, even more not in order to fix the situation, but to earn as much as possible. Although it is possible to single out the TSMC company, which, to the detriment of profit, began to build factories for the production of 3nm and 5nm chips, which will at least slightly smooth out the current market deficit.

We should also not forget about domestic companies. The largest company in Belarus is undoubtedly Integral. This company has more than 55 years of experience, a full cycle of creation, extremely high quality and reliability of chips, and is also the largest enterprise in this field in all of Europe. It was founded in 1962 and was one of the largest enterprises producing integrated circuits in the USSR. Even after the collapse of it, it did not stop its work and was able to reach high places in the world ranking. Integral was able to reach such heights thanks to the quality and reliability of its chips and, although it cannot afford to produce many types of semiconductors, this does not prevent it from successfully selling all its products in the current situation.

In conclusion, we can say that in our time, in the age of high technology, the chip market is constantly expanding and advancing, increasing the possibilities

