

Domestic Industrial-Grade Switch Chips



Overview

However, the development of domestic Ethernet switch chips has been fraught with challenges due to the high technical barriers in chip design and manufacturing.

Key Takeaways

China has developed a range of domestic industrial Ethernet switch chips that are increasingly competitive with foreign alternatives, supporting high-speed, reliable, and industrial-grade networking. Key Domestic Industrial Switch Chips¹.

ZXI

C Series by ZTE Microelectronics ZTE's ZXIC series is widely used in industrial automation, smart grids, and security monitoring. These chips support high-speed data switching, multiple port configurations, and advanced features such as VLAN, QoS, and multicast management. They are designed for high reliability, low power consumption, and strong anti-interference performance, making them suitable for harsh industrial environments.

2.

Hi

Silicon by Huawei HiSilicon industrial Ethernet switch chips are applied in smart manufacturing, IoT, and industrial internet systems. They offer high bandwidth, low latency, and support for industrial protocols like Modbus, PROFINET, and EtherCAT. Security features are integrated to protect industrial control systems, ensuring fast and reliable data transmission between devices.

3.

R

K Series by Rockchip Rockchip's RK series supports Gigabit Ethernet and advanced network management functions such as link aggregation, flow control, and bandwidth limitation. These chips are designed for industrial-grade wide-temperature operation, making them suitable for extreme high- and low-temperature conditions in industrial settings. 4.

G

D Series by GigaDevice GigaDevice's GD series provides high-performance Ethernet switching for industrial automation and intelligent transportation. These chips integrate multiple industrial communication protocols, emphasizing high reliability and long life cycles, which are critical for demanding industrial applications.

Industrial Applications

Domestic switch chips are increasingly deployed in manufacturing, energy, transportation, and healthcare, where stable and real-time data transmission is essential. They are used in industrial automation, smart grids, embedded systems, and intelligent transportation networks, providing alternatives to foreign chips and reducing dependency on imports.

Strategic Context

China has invested heavily in domestic semiconductor production to achieve self-sufficiency and reduce reliance on foreign technology. This includes subsidies, tax incentives, and support for local chipmakers to develop industrial-grade chips. While China still lags behind the US, Taiwan, and South Korea in advanced chip manufacturing, domestic chips now capture a significant share of the market for legacy and industrial semiconductors, which are essential for vehicles, industrial equipment, and IoT devices.

Summary

Domestic industrial Ethernet switch chips from ZTE, HiSilicon, Rockchip, and GigaDevice now offer high-speed, reliable, and industrial-grade performance, supporting a wide range of industrial applications. These developments are part of China's broader strategy to strengthen its semiconductor industry, achieve technological self-reliance, and reduce dependence on foreign suppliers.

Article Content

Domestic Industrial Ethernet Switching Chips | Weyland

These chips offer high bandwidth, high throughput, and low latency, supporting various industrial communication protocols (such as Modbus, PROFINET, EtherCAT), ensuring fast and low

Analysis of the current status of domestic Ethernet switching chips

However, the development of domestic Ethernet switch chips has been fraught with challenges due to the high technical barriers in chip design and manufacturing. This article will

How important is the switching chip of an Ethernet

As one of the core chips of the switch, the switching chip determines the performance of the switch and is the most critical chip in network switch

Industrial Ethernet Switches

Our managed Ethernet switches, fiber switches, and router switches provide fast Ethernet and gigabit combo ports as well as numerous network protocols, such

Industrial Ethernet Switches | Supplier | Maisvch

Our customized solutions allow you to tailor rugged industrial switches to your exact specifications — whether through custom firmware, port configuration, housing

Ethernet Switches

Moxa provides a wide range of industrial Ethernet switches that feature industrial-grade reliability, network redundancy, strengthened security, easy management, and competitive price-to

Industrial Ethernet Switches

Built for diverse industrial applications, these switches feature all-gigabit, high-density, all-copper or mixed copper and fiber ports, PoE options, and resiliency protocols.

Switch Chips Uncovered: How They Power Modern Networks

To meet the challenges of high-speed data transmission, switch chip technology continues to evolve. This article will briefly introduce the basic concepts of switch chips, the

Durable Industrial Switches

With their strong build, the whole family of DIS industrial switches are certified against vibration, shock and free-fall. We're so confident in the quality of their hardened build that they come with our D-Link

Japan Semiconductor Market Size, Share, Growth, 2026-2034

Japan semiconductor market growth accelerates as national fabrication capacity expands, partnerships attract advanced-node investment, domestic innovation strengthens critical

Elpida's Domestic Ethernet Chips | Weyland

Market Applications InnoComm's domestic Ethernet chips are widely used in various network devices, including enterprise-grade switches, data center switches, routers, network

What are the domestic Ethernet switch chip manufacturers

Conclusion Domestic Ethernet switch chip manufacturers have achieved significant advancements in technology and market competition, driving the development of China's network

Exclusive Report from Yingke: Domestic Core Automotive

A domestic manufacturer of core automotive-grade chips has completed nearly 100 million yuan in financing. The team members are from Huawei and Hisilicon | Exclusive report from Yingke

Domestic Ethernet switching chip mainstream brands

The domestic Ethernet switch chip market has experienced rapid development in recent years, with a number of competitive brands emerging. These brands have shown significant

What are the domestic chip brands for industrial control systems

Domestic industrial control chip brands are constantly evolving, offering a wide range of performance and functionality to meet the needs of different industrial control applications.

What are the domestic Ethernet switch chip manufacturers

Specifically for industrial needs, Fuman's chips also include self-diagnosis and fault detection functions, enhancing equipment reliability and longevity. Conclusion Domestic Ethernet

Analysis of the Ethernet chip market structure: Domestic substitution ...

Some self-use manufacturers have also enriched their switch product lines by purchasing commercial chips from outside. The Ethernet chip market presents a monopoly structure, and there is a large

Analysis of the current status of domestic Ethernet switching chips

These domestic chips are increasingly being used in various network devices, especially in 5G base stations, data centers, and enterprise-grade switches, achieving a certain market share.

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