



RELEASING SPACE TO
EMBRACE FREEDOM

ZipBank

The World's First Video Intelligent
Calculation (Compression) Switch





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COMPANY INTRODUCTION

Tianjin Joint Optic Technology Co., Ltd. is an industry-leading provider of intelligent secure network equipment and solutions. It is also a high-tech enterprise with a comprehensive system that integrates production and research, dedicated to enhancing the safety and freedom of network connections!

The company independently develops and manufactures standardized, multi-rate, and diversified commercial and industrial-grade switches, optical module products ranging from 155M to 800G, wireless WLAN, passive optical networks (XGS-PON), and computing servers. These offerings meet the comprehensive needs of the communications industry. In recent years, the company has received unanimous praise from over a thousand clients in sectors such as security visualization, smart cities, IDC data centers, the Internet of Things, power transmission and transformation, and rail transit. This recognition stems from its ability to offer customized solutions to clients in aerospace, shipbuilding, electricity, energy, and data centers.

In 2024, the company officially launched several network communication products targeting emerging markets, including security switches, intelligent computing switches, and liquid-cooled optical modules. These products offer more possibilities and better solutions for security in terminal access and video storage, thereby contributing to the national digital strategy. The latest switch + intelligent computing product, ZipBank, enables full HD video. After high compression under standard encoding, it maintains consistent image quality, resolution, frame rate, feature points, duration, and encoding standards, while reducing data storage volume by 90%. This innovative achievement offers an innovative and streamlined storage solution for the surveillance industry and security field, injecting new momentum into the development of digital assetization, transmission enhancement, and future high-reliability transmission industries!

In the future, Joint Optic will continue to lead innovation in security network equipment solutions and intelligent algorithms, and collaborate with partners in the communications and security industries to develop and create a better future!



HONOR RUALIFICATION



PRODUCT FUNCTION

■ ZipBank Intelligent Video Compression Switch can produce HD video after high compression under standard encoding without compromising image quality, resolution, frame rate, feature points, duration, and encoding standards, while reducing data storage volume by 90%.



MARKET POSITIONING

Professional video field switches, intelligent algorithm switches.

APPLICABLE INDUSTRIES

Weak current surveillance, intelligent buildings, security, smart communities, comprehensive public safety, and related industries.

PRODUCT INTRODUCTION



SCS2500V-8P4S

Layer 2 Managed Ethernet POE Switch (1 CLI port, 8 Gigabit POE+ ports, 4 Gigabit SFP optical ports, standard power supply AC220V, POE power 130W, fan cooling, 1U height, 11-inch rack mount)



SCS2500V-16P4S

Layer 2 Managed Ethernet POE Switch (1 CLI port, 16 Gigabit POE+ ports, 4 Gigabit SFP optical ports, standard power supply AC220V, POE power 260W, fan cooling, 1U height, 19-inch rack mount)

*ZipBank is a series of products, with additional port configurations and industry forms that are continuously under development. For details, please consult the sales manager.

ZIPBANK VIDEO INTELLIGENT CALCULATION (COMPRESSION) SWITCH

ZipBank is a video intelligent computing (compression) switch launched by Joint Optic Technology Co., Ltd. It is designed for use in premises networks, weak current intelligent networks, smart buildings, security monitoring, and enterprise networks.



Based on high-performance hardware and Joint Optic's proprietary switch operation software platform, it supports comprehensive security protection mechanisms, including VLAN, EAPS/ERPS, ACL, QoS, and IGMP functions. Additionally, it supports IPV4/6 static routing protocols, as well as ONVIF, and RTSP protocols. The system is compatible with 1080P@25fps, supports intelligent compression for H.264/H.265 encoded video. It offers simple yet rich management methods along with flexible installation options, effectively meeting the audio and video monitoring access needs of various complex scenarios.

PRODUCT CHARACTERISTICS



“ ZIPBANK VIDEO INTELLIGENT CALCULATION (COMPRESSION) SWITCH

- ZipBank can achieve real-time algorithmic compression of standard-encoded high-definition video, facilitating the exchange and forwarding of compressed video streams and storage streams, which can then be smoothly played back using standard streaming media resources.
- ZipBank's efficient compression capability and algorithm integrate hardware chips and computing power (6 TOPS) at the switching layer. The core model-based algorithm optimizes the arrangement and processing of incoming audio and video data streams based on the standard encoding, achieving stream data compression. This ensures that relevant video parameters and features remain unchanged while improving storage efficiency.
- In idle scenarios (e.g., static backgrounds), ZipBank can save up to 90% of bitrate and storage capacity based on H.265. In typical scenarios, the bitrate savings can reach 70-80%. In dynamic scenes (real-world scenarios), savings can still range between 35-60%.

PRODUCT CHARACTERISTICS



ZipBank manages data using algorithms from video stream formation to network access, ensuring compliance with national standards and performing stream data compression calculations, along with secure terminal access. This ensures high-quality video and storage stream forwarding while alleviating bandwidth pressure during network transmission. It optimizes the streaming data rate for network forwarding and achieves over 10 times better compression effect in backend storage, significantly reducing network bandwidth usage and storage space, thus fundamentally addressing industry pain points.

ZipBank, a multifunctional streaming algorithm communication device, exhibits flexible applications and significant functional benefits. It optimizes bandwidth and storage hardware resources, ensuring efficient stream forwarding while maintaining the rational continuity of network storage resources. This results in clear advantages and promising prospects, particularly in cross-network audio and video applications, promoting business development in the audio-visual industry, and leveraging the benefits of integrated streaming data exchange to help users save on capital investment.

APPLICATION SCENARIOS

ZIPBANK VIDEO INTELLIGENT CALCULATION (COMPRESSION) SWITCH USER SCENARIOS



WEEK CURRENT
SURVEILLANCE



INTELLIGENT
BUILDINGS



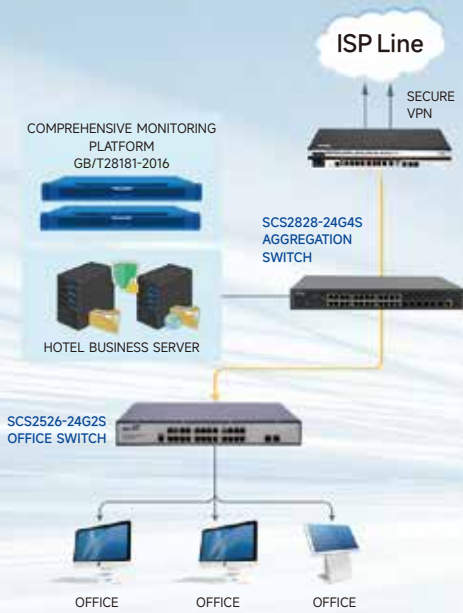
INTELLIGENT
SECURITY



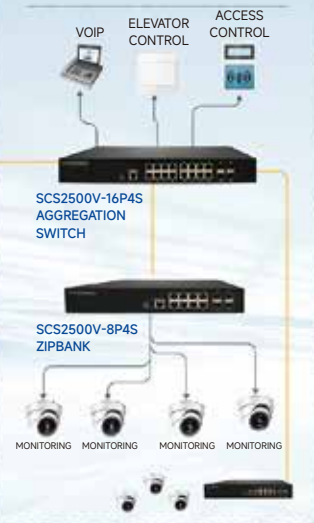
SMART
COMMUNITIES

CASE NETWORK TOPOLOGY DIAGRAM

INTRANET




INTELLIGENT MONITORING NETWORK



EXTRANET




PRODUCT ADVANTAGES




01
INVESTMENT SAVINGS

Minimizes expenses associated with optimizing bandwidth and storage hardware resources, conserves space that would otherwise be allocated for equipment storage, and reduces the labor required for maintenance.




02
HIGH CAPACITY COMPRESSION

Achieves real-time compression of videos encoded in H.264 and H.265 by over 10 times on average.



03
NO LOSS IN IMAGE QUALITY

Preserves the image quality, resolution, frame rate, feature points, duration, and encoding standards of the video after high compression.



04
FULL FORMAT COMPATIBILITY

Complies with H.264 and H.265 standards, supports ONVIF and RTSP protocols, facilitates easy access to standard video resources, and supports connection to national standard GB/T28181 video platforms and integrated communication command systems.

05 BANDWIDTH SUPER COMPRESSION

Ensures high compatibility with various network architectures and communication devices, effectively decreases transmission bandwidth resources and backend storage needs, and enhances high-compression transmission efficiency for low-bitrate HD video images.

INTELLIGENT ALGORITHMS 06

ZipBank performs algorithm processing without altering the original video parameters, ensuring a stable playback effect. The output video and storage streams achieve unaltered compression, enabling direct comparison with the original data stream information.

07 HIGH RELIABILITY

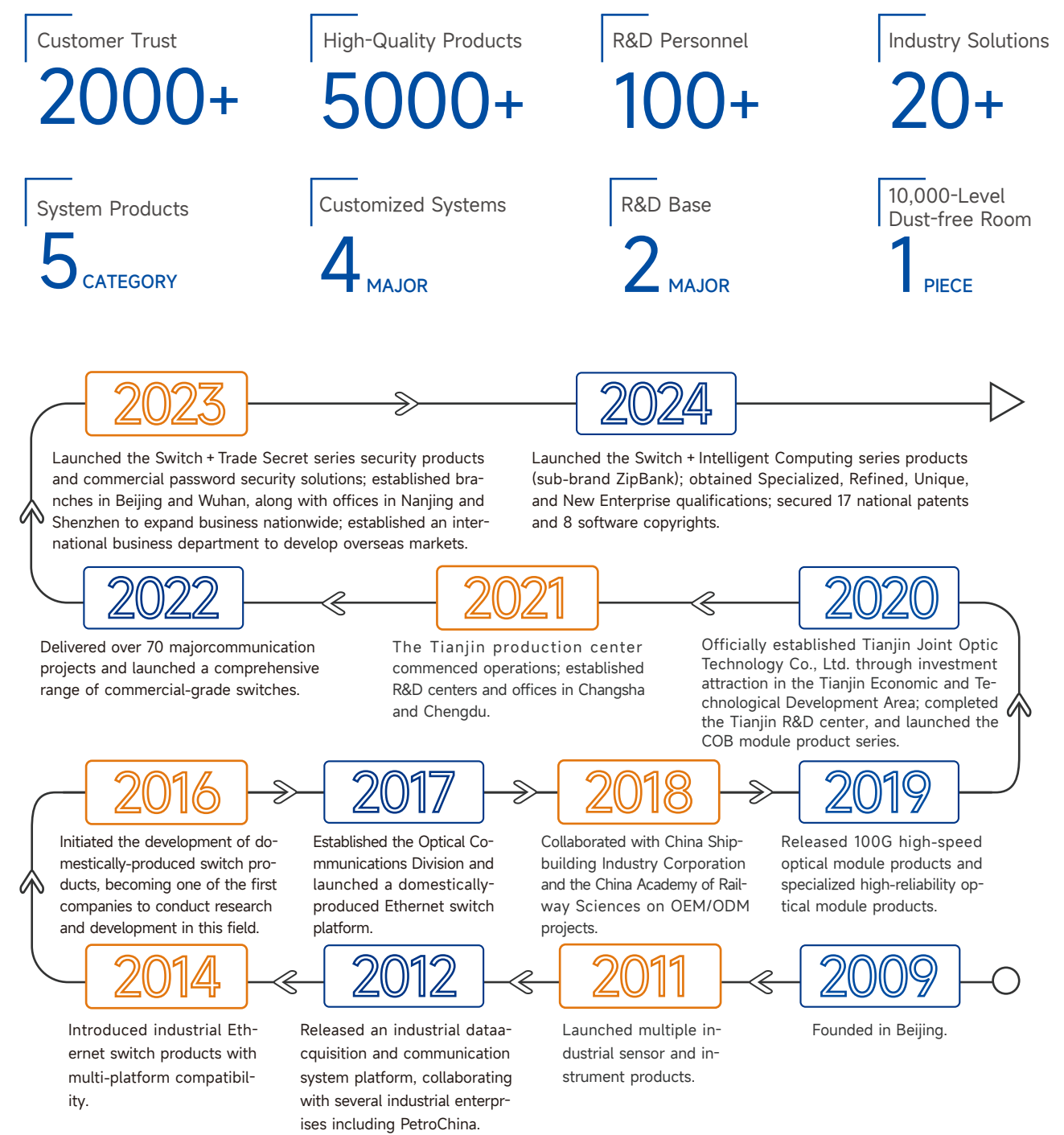
Supports carrier-grade Ethernet Ring Protection Switching (ERPS) with a protection switching time of less than 50 ms. It features dual uplink primary-backup link protection and supports simple and efficient redundancy protection mechanisms like static and dynamic LACP link aggregation, meeting users' high reliability requirements.

FLEXIBLE CONFIGURATION 08

Powerful ACL features support L2 to L4 packet filtering. It allows for packet filtering through configurable matching rules and processing operations. Additionally, the system supports flexible security policies such as terminal security control, including DHCP snooping and IGMP snooping, providing users with flexible and diverse policy control options.



DEVELOPMENT HISTORY





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