

Security Monitoring for Military Sites
2009-05-06

Location / Country : Southeast Asia

Product Solutions:

[EDS-518A Series](#)

16+2G-port Gigabit managed Ethernet switches

[EDS-828 Series](#)

24+4G-port Layer 3 Gigabit modular managed Ethernet switch

Introduction

Project Introduction

Military installations around the world use different surveillance devices to enhance security, which is of the utmost importance for the military operation. The application presented here involves protecting a permanent military base in the Southeast Asia. A major part of the security system involves the installation of several PTZ cameras around the perimeter of the base. All these cameras are connected directly to the base's video surveillance network system.

System Requirements

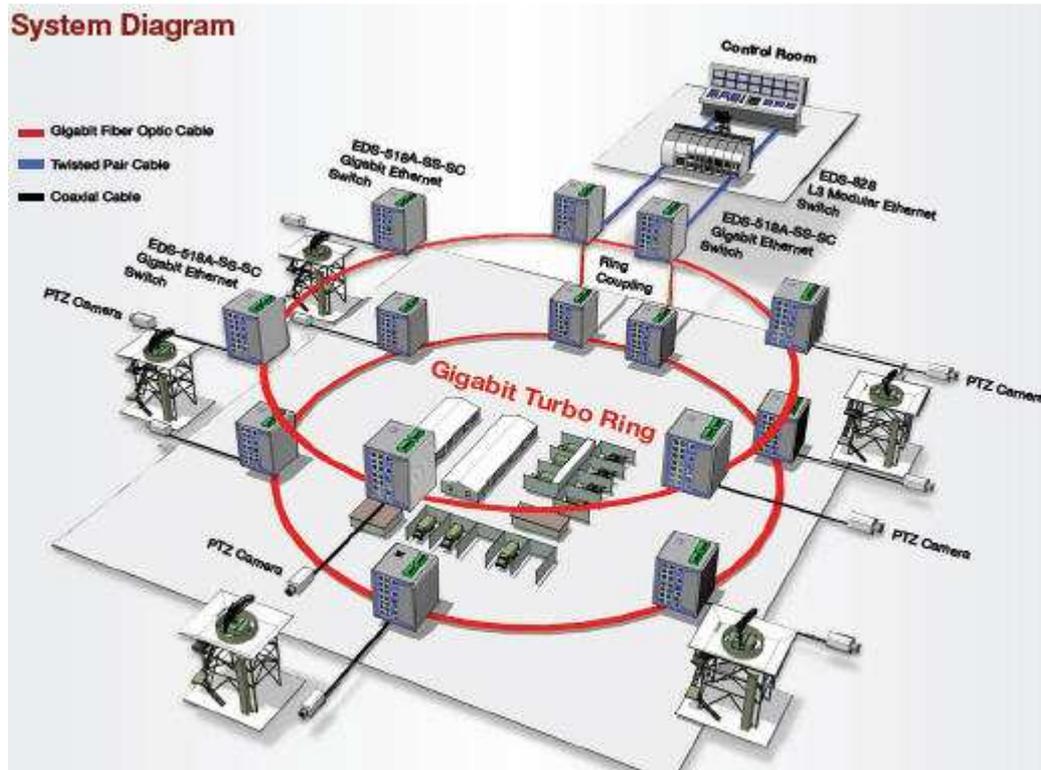
- Dual-device redundant Gigabit backbone to provide an extra-reliable video surveillance system that never goes offline.
- Layer 3 switching function to help organize LAN segment demands for future expansion to other military bases.
- Networking devices with high bandwidth capability to allow real-time video and data transmission.

Moxa Solution

Moxa's industrial Layer 2 and Layer 3 Gigabit managed Ethernet switches, the EDS-518A and EDS-828, were chosen for the network's Gigabit backbone. The Gigabit transmission speed allows both data and video images to be transmitted in real time, which greatly enhance the ability of the base's security personnel to respond immediately when an intrusion or emergency occurs.

The base's video surveillance network must be extra-reliable and it doesn't accept failures unexpectedly, even when subjected to extreme stress. This is achieved with fault tolerant technology that uses a dual-device redundant system design. For extra reliability, PTZ cameras are installed in pairs at strategic points along the perimeter of the base. The cameras connect to Moxa's EDS-518A Layer 2 Gigabit managed Ethernet switches, which are also

installed in pairs to form two independent Gigabit backbone networks, each of which uses Moxa's Turbo Ring technology for double redundancy. "Ring coupling" is used to connect the two rings to each other, and in this way creates a redundant backbone for transmitting both data and video images. With the EDS-518A's Gigabit fiber optic links, the Turbo Rings can be easily extended over long distances, such as along the perimeter of the base, while at the same time supporting faster transmission of information and video. In addition, the dual Ethernet rings link to Moxa's EDS-828 Layer 3 Gigabit modular managed Ethernet switches in the control room. The EDS-828 Ethernet switches deliver the full-wired speed of Layer 3 switching, and help IT engineers organize LAN segments for future expansion and to connect with subnets at other military bases.



Why Moxa

- Moxa products support a wide operating temperature range, from -40 to 75°C, ideal for both hot and cold environments.
- The EDS-510A's Gigabit port can transmit massive amounts of data, voice, and video.
- The EDS-510A managed Ethernet Switch is Class 1, Div. 2 certified to guarantee operation safety at hazardous locations.

Product

EDS-518A

- 2 Gigabit plus 16 fast Ethernet ports for copper and fiber
- QoS, IGMP snooping/GMRP, VLAN, LACP, RMON supported
- Long-haul transmission capability of 40 or 80 km
- -40 to 75°C operating temperature range

EDS-828

- Layer 3 routing interconnects multiple LAN segments
- Four Gigabit plus 24 fast Ethernet ports for copper and fiber
- Gigabit Turbo Ring and RSTP/STP (IEEE 802.1w/D) for Ethernet redundancy