Reliable Network Transmission for City Security Solution
(U City-Seoul, Korea)

About CTC Union

CTC Union, founded in 1993, is committed to developing, manufacturing and selling network communication products with particular focus on fiber optical technologies, Ethernet technologies and the integration of broadband access technologies. With leading-edge technology and high quality service as the driving force, CTC Union continues steady growth to become a top global equipment supplier of innovative last-mile access in the telecommunications market.

Case Introduction

To prevent crime, IP surveillance has become one of the future-proof options for safety and surveillance applications. Nowadays, IP surveillance devices are employed in every corner or in places where security personnel are not able to be stationed all day long so as to instantly acquire images of potential crime actions or illegal behaviors such as illegal waste disposal. However, to build up a reliable and highly efficient IP Surveillance system, there are several challenges that may be encountered. First, for instant image transmission, high bandwidth is required to ensure images are received clearly without distortion and delays. Moreover, to ensure IP surveillance system is up and running uninterruptedly, multiple ring-type link redundancies and power redundancy need to be deployed. In this way, important images can be transmitted successfully even when link or power failure occurs. The following is a comprehensive list of challenges that need to be solved when setting up IP surveillance systems:

Requirements and Challenges

- High bandwidth required for clear and instant image transmission
- Reliable transmission including multiple link redundancies and power redundancy
- Noise protection (such as lightning strike, ESD) for outdoor applications
- Withstand extreme weather changes such as cold weather in winter and scorching hot weather in summer
- High MTBF for long-term uses to reduce operational expenses
- Remote cable diagnostic detection to reduce maintenance costs

CTC Union Solutions and Benefits

SmartView™

- Centralized Device Management Platform
- Real-time visual representations and processing of alarms
- Easy and User-Friendly Operation Interface
- Long term event storage (1 year)

Industrial Core Switch

• ICS-G24S4X

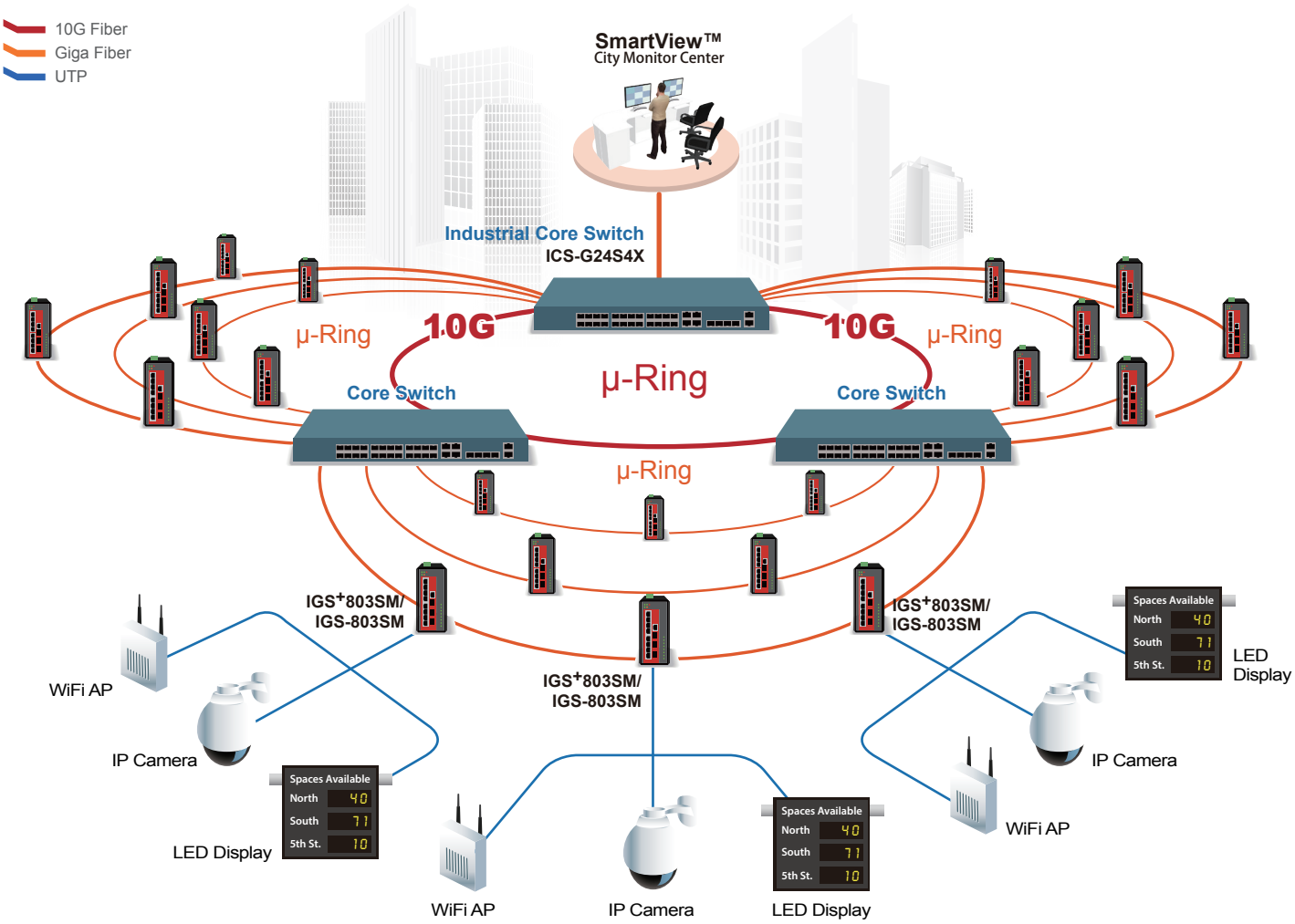
- 4x 10G SFP+ and 24x GbE SFP Fiber
- Redundancy isolated low voltage 24/48VDC, or/and isolated High voltage AC/DC (110/220 VAC/VDC) power inputs
- UL60950-1, CE, FCC, Rail Traffic EN50121-4, Industrial Grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified
- Supports SmartView for Centralized management
- u-Ring, STP, RSTP, MSTP, ITU-T G.8032 ERPS for redundant cabling
- Wide operating temperature -10 ~ 60°C, fanless
- High MTBF 214,649Hours

Industrial Managed GbE Switch

• IGS+803SM / IGS-803SM

- 8x 10/100Base-T RJ-45 and 3 x 100/1000Base-X SFP Fiber
- UL60950-1, CE, FCC, Rail Traffic EN50121-4, Traffic control NEMA TS2, Industrial Grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified
- Supports SmartView for Centralized management
- μ-Ring, STP, RSTP, MSTP, ITU-T G.8032 ERPS for redundant cabling
- Cable diagnostic
- Wide operating temperature -40 ~ 75°C ,suitable for outside cabinet in high temperature
- High MTBF 611,126Hours
- Supports negative voltage power input with isolated RS-232 console port (for example in telecom system) (IGS+803SM)
- 2.25K VDC Hi-pot isolation protection for Ethernet ports and power (IGS+803SM)
- 4KV surge protection for UTP and fiber ports (IGS+803SM)

Topology



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