

## Smart Management your Intelligent Transportation System (ITS)



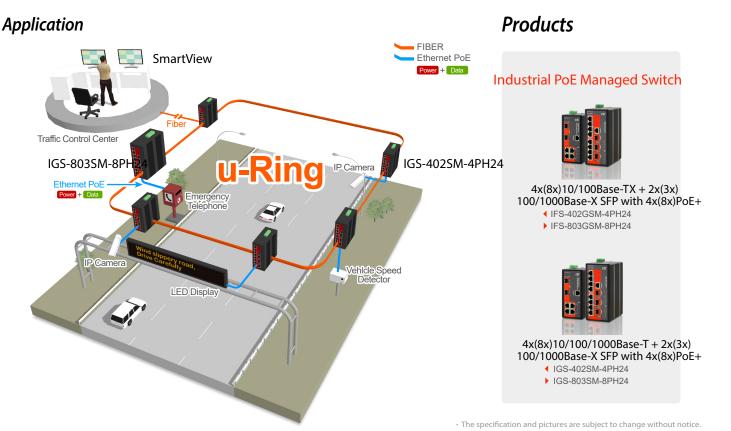
In recent years, thanks to the rapid development of networking devices, high performance and high-definition IP cameras are installed in every corner in metropolitan areas with ease and simplicity. By analyzing real-time or recorded video images received, the government can fight against violence or any sort of terrorist attacks in a more efficient and effective way with less cost and manpower supports. However, when it comes to highway surveillance implementation, the situation becomes more complex. Unlike surveillance implementation in urban areas, highway runs across many cities. Thus, frequent policeman patrolling is not realistic since it needs more manpower supports and is not efficient enough when an emergent event occurs. Before setting up a successful highway surveillance implementation, there are several challenging factors we need to take into account.

## Challenges

- Devices placed outdoor may have high possibilities to be hit by lightning or suffer from ESD and surge.
- When a single point of failure occurs in a device, the engineer may not be able to visit the highway field site immediately to solve the problem.
- When the connected PoE devices fail, the engineer needs to pay on-site visit to troubleshoot problems.
- Unstable or fluctuated PoE power output may damage the connected PoE devices.
- Outdoor temperature in highway area varies greatly from day to night or from season to season. During summertime, the temperature in a metal junction box may reach up to 60°C or higher; however, in winter, temperature may drop to -20°C or lower.

## CTC Union's Solution

- Provides Industrial grade EMI, EMS and EN50121-4 certification to offer better protection against unexpected lightning strikes, ESD or surges.
- Supports various efficient network redundancy (such as u-Ring) when a single point of failure occurs. u-Ring can support up to 5 rings (maximum) and can recover from a single point of failure in <10 ms.</li>
- Supports PoE device auto test and auto reset function to reduce frequencies of on-site troubleshooting.
- Provides Boost DC power feature to power up PoE devices in 24/48V (20~57V) and regulate power voltage to stabilize PoE devices.
- Supports wide range of operating temperature (-40~75°C) with rugged design.





CTC UNION TECHNOLOGIES CO., LTD.

8F, No.60, Zhouzi St. Neihu, Taipei 114, Taiwan TEL : +886 2 2659-1021 FAX : +886 2 2659-0237 sales@ctcu.com