

CONTROL'S ROCKETLINX SWITCH "THE EDGE OF THE NETWORK" FOR MCITY

The University of Michigan, in partnership with the Michigan Department of Transportation, designed and built Mcity, a unique urban-suburban environment for testing connected and automated vehicles and systems.

Mcity sits on a 32-acre site on the University of Michigan's North Campus, with more than 16 acres of roads and infrastructure. It includes approximately five lane-miles of roads with intersections, traffic signs and signals, sidewalks, benches, simulated buildings, street lights, and obstacles such as construction barriers. This environment allows the testing of new technologies, such as autonomous vehicles, in a safe, controlled, but otherwise real-world environment.

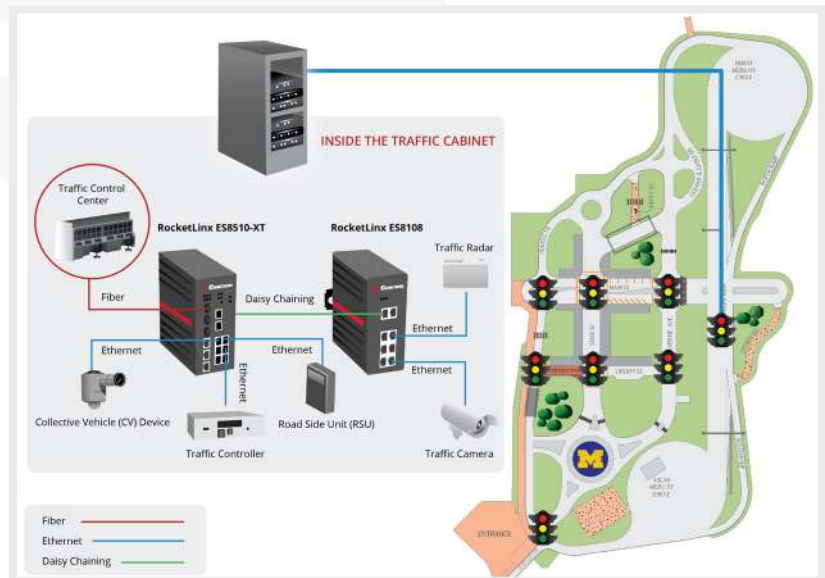
At Mcity, each set of traffic signal devices in an intersection, on-ramp, rail crossing, crosswalk, etc. is connected to the facility's traffic management network via a dedicated fiber link using Control's ES8510-XT switch. This network then consolidates each of those connections onto a high-speed backbone, which in turn connects to a state-of-the-art traffic control center, located near Mcity at the U-M Transportation Research Institute (UMTRI).

The traffic signal devices connected to the ES8510-XT include a Road Side Unit (RSU), a Traffic Controller, and an embedded connected vehicle (CV) data collection device developed by UMTRI.

In addition to the ES8510-XT, Mcity has also chosen to implement Control's RocketLinx ES8108. The ES8108's sole purpose is to aggregate the video/radar portion of Mcity's traffic control system- which includes four video cameras and two radar sensors per intersection. From here, the switch is daisy chained to the ES8510-XT and all communication is relayed back to U-M's TCC (Traffic Control Center).

"Mcity required trouble-free equipment that would occupy crucial places in our infrastructure. The switches' ability to operate in the harsh conditions of Michigan weather, handle complex requirements, such as multiple fiber connections, VLAN, etc., and their easy configuration have left us satisfied with our decision in choosing Control".

- Greg McGuire, Mcity Lab Director



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RocketLinx® ES8510-XT

Part Number: 32061-6



KEY FEATURES AND BENEFITS

- Multiple redundant ring (recovery time <5ms)
- Seven 10/100BASE-TX ports and three Gigabit RJ45/SFP combo ports (10/100/1000BASE-TX, 100BASE-FX, 1000BASE-X)
- 32Gbps non-blocking, 8K MAC address table
- VLAN, GVRP, QoS, IGMP snooping V1/V2/V3, rate control, port trunking, LACP, online multi-port mirroring
- Management via console CLI, Web, SNMP V1/V2c/V3, RMON, HTTPS, SSH and NetVision
- Advanced security feature supports IP security, port security, DHCP server, IP and MAC binding, 802.1x network access control
- Event notification by email, SNMP trap, syslog, digital input and relay output
- -40° to +74°C operating temperature for extreme environments
- Rigid aluminum IP31 housing, excellent heat dispersion, redundant power, DIN rail/wall mount installation
- NEMA TS2 Compliant
- RoHS2 compliant under CE
- IPv6 support

PRODUCT DESCRIPTION

The RocketLinx ES8510-XT is a managed industrial Ethernet switch, equipped with seven 10/100TX ports and three 10/100/1000 RJ45/100-FX/Gigabit SX/LX/LHX/ZX/SFP combo ports. Two Gigabit ports may be used to form a non-stop Redundant Ring while the third Gigabit port enables connection to an upper switch, couple ring or public server. The Gigabit combo port design provides flexibility to choose copper or fiber media supporting 100BASE-FX or 1000BASE-X, Multi-Mode or Single-Mode for a wide variety of distance and installation requirements.

The RocketLinx ES8510-XT is housed in a rugged aluminum enclosure that features an excellent heat dispersing mechanical design and extended operating temperature support. The embedded software supports full Layer 2 management features, multi-form ring redundancy, network control, monitoring, security and notification. The RocketLinx ES8510-XT also provides a built-in watchdog timer and digital input and relay output to avoid undetected problems. The RocketLinx ES8510-XT provides the perfect foundation for building your industrial Ethernet infrastructure.

Three Gigabit Ports for Flexible Network Planning

A unique feature to the RocketLinx ES8510-XT is the three Gigabit RJ45/SFP combo ports, which can improve performance dramatically compared to products with only two Gigabit RJ45/SFP combos. Each combo comes with a flexible connection - 100Mbps or 1000Mbps, as well as fiber or copper connection options. All together, as many as ten different combinations of port connections are possible. By selecting the appropriate fiber transceivers, the RocketLinx ES8510-XT can meet your industrial application requirements with virtually any transmission distance.

100/1000Mbps SFP

The RocketLinx ES8510-XT SFP socket supports 100BASE-FX Single/Multi-Mode and 1000BASE-SX/LX/LHX/XD Multi/Single-Mode transceivers. The available distance of the 100BASE-FX is up to 30KM. 1000BASE-SX Multi-Mode supports 550M, 1000BASE-LX Single-Mode supports 10KM, 1000BASE-LHX Single-Mode supports 30KM, 1000BASE-XD Single-Mode supports up to 50KM. 1000BASE-ZX Single-Mode supports up to 70KM.



Warranty Information

Control offers a 30-day satisfaction guarantee and 5-year limited warranty.

Sales Support

+1.763.957.6000
sales@comtrol.com

Technical Support

+1.763.957.6000
www.comtrol.com/support

Email, FTP, and Web Support

info@comtrol.com
ftp.comtrol.com
www.comtrol.com