Advantech Industrial Automation Case Studies

Shipping Authority upgrades its Navigation System with Advantech Network Switches

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Market: Transportation(Infrustructure)
Location: America
Technology Partner: Sphinx Group

Project Introduction:
With their locks, miles of waterway and lots of big heavy ships shipping lanes and channels are complicated places that require a great deal of management. With 24 hour operation it?s imperative that their systems are fail proof and they require the most up-to-date equipment to ensure the smooth flow of traffic so that good can be transported around the world.

System Requirements:
The client wanted to add a new section of control to their water channel as they needed to maintain monitoring of the water routes on their watch, for 24 hours a day, 7 days a week and 365 days a year. It was therefore essential that they chose a set of switches that would guarantee permanentuptime.

Havingtrialed other suppliers Advantech was chosen as the supplier as the devices offered the best possible solution and have an international presence which ensures that if there are any issues they can be resolved quickly and efficiently.For the purposes of this network the client required many 100/1000Mbps RJ45 ports, fiber connectivity to ensure that data can be transferred quicker across the backbone and that it would offer redundancy so that there was no single point of failure and the network would be guaranteed to work.

System Description
The entire system used four EKI-7659C2 gigabit managed redundant Ethernet switches for connecting backwards, via fiber, to the control centers and forward, via

100Base-T(X), to the safety and security systems i.e. Access control devices, perimeter control devices, vessel control devices and safety evacuation devices.

The EKI-7659Calso includes integrated fiber ports so that data can travel faster than with copper. With a wide array of management methods (Web, Telnet, Serial and SNMP) these devices can be controlled and configured from anywhere on the network.

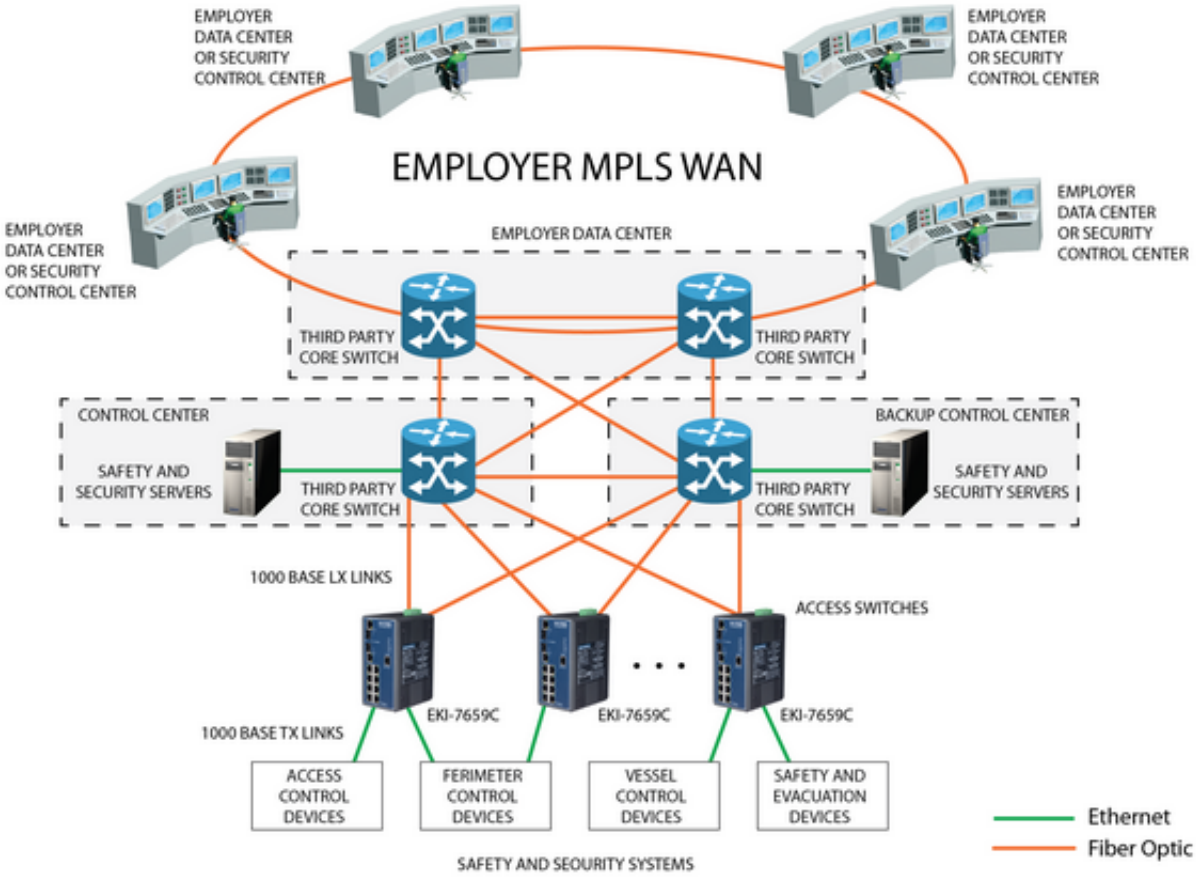
Connected to the EKI-7659Cis an SFP-GLX/LC-10Etransceiver module which converts signals from the copper 1000Mbps to the fiber backbone.

EKI-7659C16+2G Combo Port Gigabit Managed Redundant Industrial Ethernet Switch SFP-GLX/LC-10EAdvantech?s Small Form-factor Pluggable (SFP) transceiver family is available with a variety of different types, allowing users to select the appropriate transceiver for each link to provide the required optical reach over the available optical fiber type. Advantech?s SFP transceiver immovable lock design can fix SFP module into the switch firmly. Besides Advantech?s SFP transceiver?s compact design provides high port density and compliant with Fast Ethernet and IEEE802.3z Gigabit Ethernet Standards. Advantech?s SFP transceivers ensure your networks operate with maximum performance, reliability, and flexibility.

Project Implementation:

Product	Description
EKI-7659C	16+2G Combo Port Gigabit ManagedRedundant Industrial Ethernet Switch
SFP-GLX/LC-10E	Advantech?s Small Form-factor Pluggable (SFP) transceiver family is available with a variety of different types, allowing users to select the appropriate transceiver for each link to provide the required optical reach over the available optical fiber type. Advantech?s SFP transceiver immovable lock design can fix SFP module into the switch firmly. Besides Advantech?s SFP transceiver?s compact design provides high port density and compliant with Fast Ethernet and IEEE802.3z Gigabit Ethernet Standards. Advantech?s SFP transceivers ensure your networks operate with maximum performance, reliability, and flexibility.

System Diagram:



Conclusions:
The key to the success of this project was the reliability of the switches that would guarantee permanent uptime of the rest of the customer?s data network and it is thanks to Advantech?s global presence that guarantees that no matter where inthe world they are parts and engineers will always be available.