www.championone.net

**APPLICATION: Data Center Managed Media Conversion**
**Champion Optical Network Engineering**
23400 Mercantile Road, Ste 2, Beachwood, OH 44122
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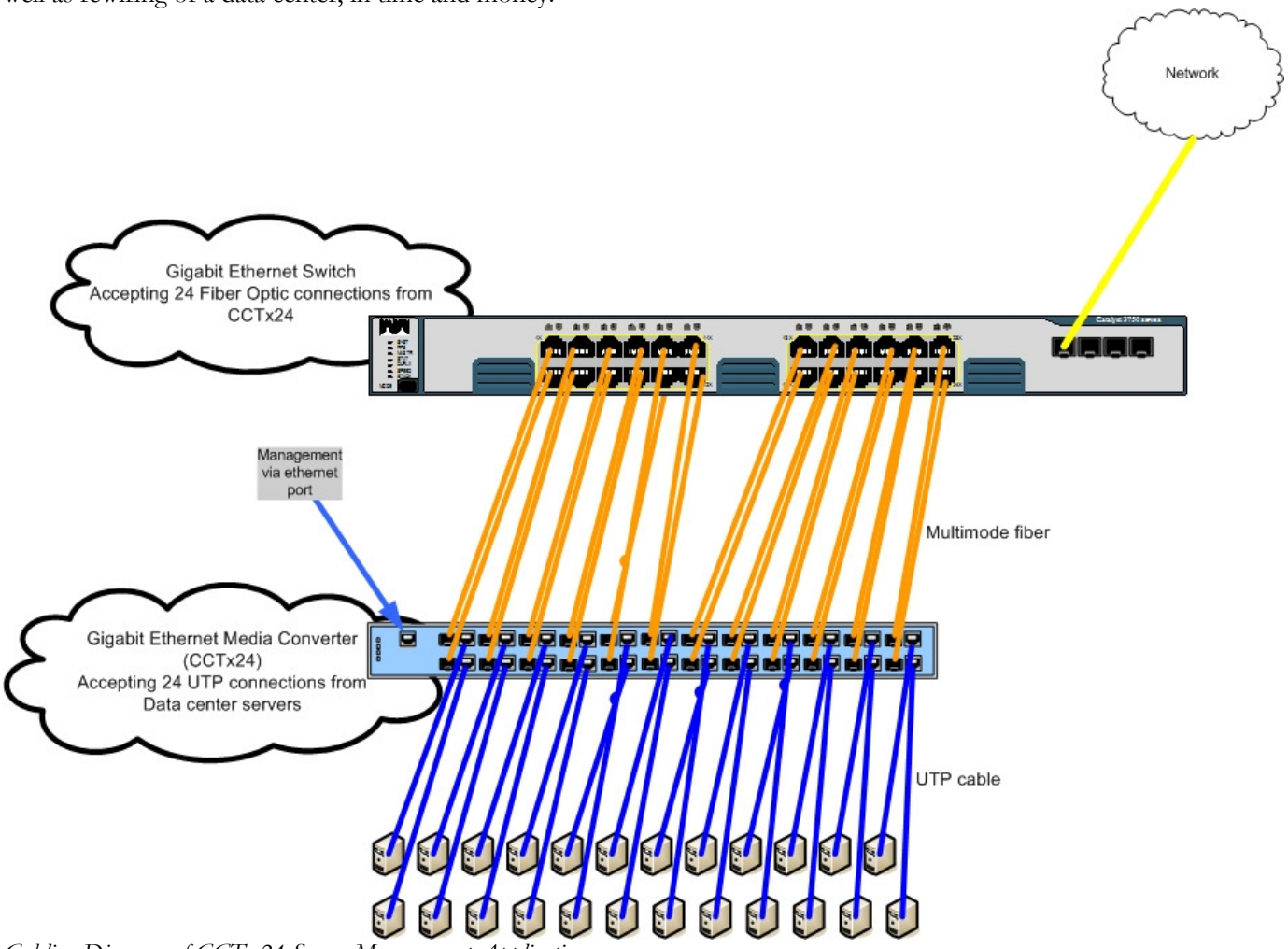
## Managed Media Conversion in Data Centers

As more and more inside plant infrastructure moves to fiber for cabling requirements, the need for a dependable, robust method of media conversion becomes more prevalent, especially in cases where the NIC (Network Interface Card) in a server is still a copper-based RJ-45 connection.

A solution utilizing the CCTx Gigabit Ethernet Copper-to-Optical media converter from Champion Optical Network Engineering allows for transparent conversion from copper to pluggable optical (in the case illustrated below, as a short haul multimode optic). Such a conversion saves both on an overhaul of copper NICs to fiber-based cards, as well as rewiring of a data center, in time and money.




*Cabling Diagram of CCTx24 Server Management Application*

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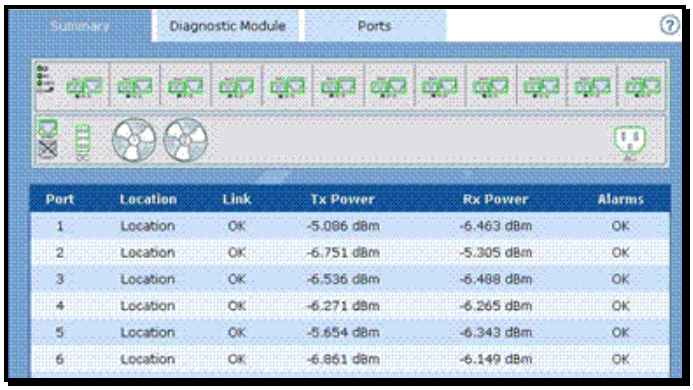
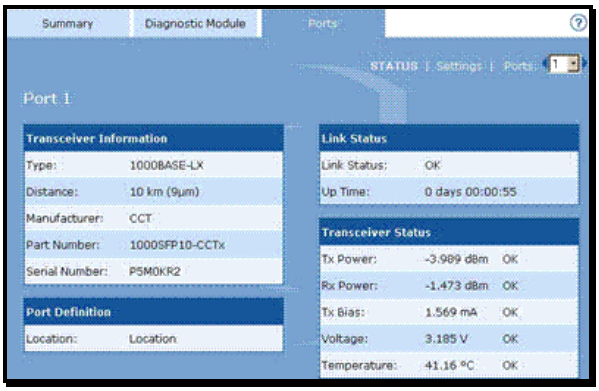
Simple media conversion is often looked at as a 'weak link' rather than a benefit in a network. However, with the ability to manage the link on the copper server port, the fiber optic link, and the switch port, the solution becomes far more attractive, and actually becomes a fortification of the data center network. The figure below is a screenshot from the web-based GUI that is native to the CCTx, and shows ports 'named' by location, link status, transmit and receive power, as well as any alarms triggered.




*Web-based GUI displaying port information and status*




*Web-based GUI displaying individual port status*

Utilizing either the web-based GUI, or an SNMP manager, such as HP OpenView® or CiscoWorks®, the user can log into each connection and verify that there is indeed a server, how long it has been in service, and a myriad of other information. Traps can be set to alarm the manager if a link goes down unexpectedly, and can ensure that servers are decommissioned properly, saving time as well as optimizing ports.

*HP OpenView is a registered trademark of Hewlett Packard, Inc.*
*CiscoWorks is a registered trademark of Cisco Systems, Inc.*