

IMC Networks' Media Converters Link-Up Audio Visual Entertainment Wall at the Dubai Mall in the United Arab Emirates.

Topnet Distribution chooses IMC Networks based on price, performance, warranty and lead time.



The Solution

Short of replacing all of the AV equipment, Emirates Computers needed a fiber mode converter that could handle the bandwidth of the data feeding the LED monitors, in addition to being compact enough to fit into the limited real estate available in the control room.

Considering these challenges, Emirates Computer contacted partner Topnet Distribution, a provider of products for structured cabling, fiber optics, data center, electronic security and audio video solutions. Without hesitation, IMC Networks' IE-ModeConverter SFP/SFP with AC power adapter and IE-PowerTray/18 (1.5 U 18-slot chassis) were highly recommended. The decision to select IMC was based on the price/performance, warranty, plug and play and quick delivery. After the initial evaluation testing was successfully completed and approved, the products were ready for installation and delivered on time.

"We are certain that IMC Networks has the best solution..."

K. Ganesan, Managing Director, Topnet Distribution

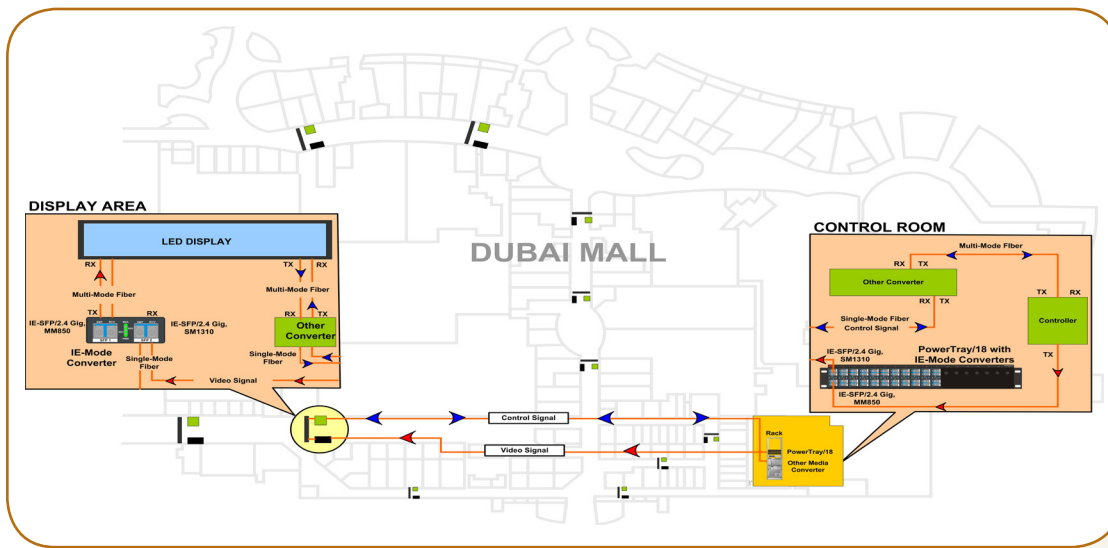
From Topnet's perspective, "We are certain that IMC Networks has the best solution for these types of problems," says Mr. K. Ganesan, Managing Director of Topnet Distribution FZCO. The IMC Networks IE-ModeConverter uses SFP modules to provide greater fiber flexibility in a network environment. The hot-swappable nature of SFPs and the numerous fiber modes and types of available SFPs allow for easy configuration and future upgrading that makes this product a cost-effective solution for the Dubai Mall's AV multimedia entertainment wall."

Opened to the public in November 2008, The Dubai Mall set precedents across the board in terms of scale, luxury, design and retail offerings. Located in Dubai, United Arab Emirates, it is the world's largest shopping, leisure and entertainment destination consisting of approximately 1,200 shops, an ice-skating rink and underwater zoo. Situated throughout the mall on the mezzanine levels are some of the most advanced high-tech, Audio Visual systems for retail marketing, customer information and entertainment.

Together with Topnet Distribution FZCO, a Dubai Airport Free Zone-based company, Dubai Mall's contractor, Emirates Computer, was awarded the Dubai Mall Audio Visual system cabling installation project. Emirates Computer's overall objective was to provide a seamless AV system by connecting the LED monitors to the multimedia control room using fiber optic cabling. This meant linking several very large LED displays (12 meters long by 1 meter high) throughout the mall.

The inauguration of the mall was held on October 30 so the installation had to be completed one month prior. Being that this installation was brand new and the controllers and display monitors had already been acquired by the Dubai Mall IT department, the job appeared to be a simple network cabling project for Emirates Computers. However, one of the challenges that Emirates Computer discovered was converting the video signals. They would need to connect the AV equipment to the controllers in the control room using the multimode fiber optic interface that came with the equipment, while the site configuration had single-mode optical fiber due to the long distance range where the monitors would be placed. The new requirements would be to acquire a mode converter for converting multimode to single-mode and single-mode to multimode. The control room's space requirements were also stringent and adding additional equipment was the only solution.

CASE STUDY



In this application there are 11 locations with 2 LED displays per site area for a total of 22 displays. Installed at each LED display location is an IMC Networks IE-Mode Converter with two 2.4 Gigabit SFP transceivers (MM850 and SM1310). In the control room resides three 1.5U high IE-PowerTray/18 chassis with 22 IE-Mode Converters with 2.4 Gigabit SFP (MM850 and SM1310) transceivers installed in them.

The communications to the LED displays and the controllers uses two optical fiber channels; through one channel, the data flows in one direction for the video signals from the controller to the displays. Through the other channel, the data flows in both directions for the control signals between the controller and the displays.

The channel between the controller and the LED displays is used to communicate the control signals in both directions. The controller sends control signals to the display in addition to receiving input data (temperature, power, etc.) from the display to the controller. This channel transmits at 10 Mbps.

The channel used for the video signal supports two IMC Networks' IE-Mode Converters. At the controller end, media conversion is changing multimode to single-mode at 2.4 Gbps. At the LED display end, media conversion is changing single-mode to multimode at 2.4 Gbps. Each IE-Mode Converter uses two SFPs transceivers, and although the SFPs are capable of proving bi-directional communication, in this case they are only being used to send communication in one direction.

In cooperation with Topnet Distribution and Emirates Computer, IMC Networks' media conversion solutions provided the flexibility needed to meet the challenging network demands of the Dubai Mall's cutting edge AV installation project.

Benefits of the Solution

IMC Networks IE-Mode Converter SFP/SFP

- Cost-effective and flexible with interchangeable SFP modules
- Multiple mounting options
- Compact size
- AC or DC power
- Protocol independent and supports transmission speeds up to 2.4 Gbps
- SFP modules are hot-swappable
- Diagnostic LEDs



IMC Networks PowerTray/18

- 1.5U High-density chassis
- Rackmountable in a standard 19" rack
- Power options for AC or DC
- Extended temperature operation (-25° to +85° C [DC])
- Powers up to 18 IMC MiniMc-type modules



About Topnet Distribution FZCO

Topnet Distribution FZCO is a Dubai Airport Free Zone based company specializing in information transport systems solutions for commercial and residential buildings, campuses and metropolitan areas. Our focus is in understanding the needs of every ITS project and offering the best solution. We work through systems integrators, telecom installers and value added resellers who work with the end users to implement the ITS projects. We work with end users, consultants and the channel to understand the needs of the projects and offer the solution through the channel partners. Our association with leading manufacturers in the industry strengthens our position as a value added distributor for ITS products. We are a BICSI Corporate Member and we follow standards and guidelines in our approach to ITS products and solutions.

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About IMC Networks

IMC Networks is a leading manufacturer of low cost fiber optic access and media conversion solutions for Enterprise, Government and Service Providers' LANs, First-Mile FTTx Networks and Metropolitan Area Networks, delivering 22 years of excellence in product quality, customer satisfaction and value. ISO 9001:2008 registered; all products are RoHS and REACH compliant, Made in the USA and carry a 6-Year Comprehensive Warranty (SFP products offer a 1-Year Warranty). IMC Networks provides complimentary Fiber Consulting Service.



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