

Case Study

Enterprise Network Cabling

FS MTP® Backbone Enables First Scalable 25G Upgrade for A Visual Effects Studio


Discover how a visual effects studio, new to fiber optics, navigated its 25G upgrade. This case study details how FS team consultation on MTP® backbone solutions and fiber standards resolved deployment, scalability, and cable color concerns, providing a clear, future-ready network cabling system.

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Country

 Australia

Industry

 Sports, Media and Entertainment

Network Type

 Small Campus Network

Solutions

 Enterprise Network Cabling

Key Stats

- MTP®-24 trunk cable consolidated multiple fibers into a single, easy-to-manage multi-fiber cable. Compared with deploying individual LC patch cords, it dramatically reduced the number of cables routed through walls and ceilings, eliminating complex and cluttered pathways.
- Pre-terminated MTP® cassettes and enclosures supported tool-free installation, significantly shortening on-site installation time. They enabled an organized, high-density deployment for both MTP® and LC connectivity while providing a solid foundation for future upgrades.

Highlights

- The client successfully transitioned from a traditional LC-based cabling to a future-ready, high-density MTP® backbone solution, achieving a cleaner and more easily maintainable cabling architecture for the first time.
- The client upgraded their office to a 25G fiber network, enabling faster distribution of video rendering workloads and supporting real-time or near-real-time preview and revision feedback, resulting in smoother and more efficient business collaboration.
- Clear visual differentiation of the cabling products effectively helped the client reduce the risk of misconnection, especially during their first deployment in a fiber optic environment.

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Overview

The client is a creative visual effects and animation studio. They planned to upgrade all of its workstations to 25G in order to handle massive media files and real-time collaborative workflows. This upgrade required a complete fiber connectivity solution, including cables, patch panels, faceplates, and transceivers, with some of the cabling routed through existing walls and ceiling spaces.

As a first-time fiber network deployment, the client not only needed a reliable product partner but also expert guidance to navigate the complexities of high-speed fiber cabling and to ensure a successful, scalable implementation.



Challenges

The client had no prior experience with fiber network deployments and was unfamiliar with the components required to build 25G links, such as fiber cables, fiber cassettes, and transceivers. As a result, they were concerned about link reliability and compatibility.

In this project, some cable routes needed to pass through existing walls and ceilings, which added further complexity. Traditional pull-through methods, such as installing large numbers of LC fiber cables, would be cumbersome and time-consuming, raising concerns about conduit congestion and high labor

costs. While the client was aware of more modern MTP® multi-fiber pre-terminated solutions, they were unsure whether such an approach would be suitable for these routing paths and worried that future expansion might require complex and costly re-cabling, making the decision difficult.

At the same time, the client noticed inconsistent OM3/OM4 color identification across different product pages (for example, OM3/OM4 LC cables and OM3 LC adapters were shown in aqua while OM4 LC adapters appeared magenta). This inconsistency heightened their concerns about misidentification and the risk of incorrect connections, potentially increasing troubleshooting efforts and long-term operational costs.

Solutions

To address concerns around deployment complexity and future scalability, the client decided to adopt FS's proposed pre-terminated MTP®-centric solution, which combined MTP® pre-terminated trunk cables, MTP® cassettes, and LC connectivity in a standardized architecture. It used dual-jacket MTP® trunk cables with enhanced crush resistance, providing better fiber protection when routing through walls. At the same time, by replacing 12x LC fiber cables with custom MTP®-24 trunk, the solution reduced the number of fibers pulled through walls. This approach improved installation efficiency and kept cabling neat and manageable. Looking ahead, if the client needs to extend connectivity to additional office areas or upgrade to higher network speeds, they can add or replace MTP® cassettes or swap transceivers without re-pulling physical cabling, providing a clear and scalable path for future expansion.

The client also received clear connection diagrams and polarity guidelines from FS, with step-by-step explanations of MTP® polarity (MTP® cassette, Type A + MTP®-24 trunk, Type A + MTP® cassette, Type AF) and overall link architecture. These materials made the entire end-to-end connection, from ceiling pathways to office outlets, easy to understand, allowing the client to get up to speed quickly, even as a first-time fiber deployment.

Regarding concerns about OM3/OM4 color identification, the client learned through consultation that, under industry standards such as TIA and IEC, OM3 and OM4 definitions are based solely on fiber performance characteristics (such as bandwidth and attenuation), with no mandatory color requirements for cable jackets or adapters. In practice, FS LC OM3/OM4 cables use an aqua jacket to follow the long-established convention that "aqua equals multimode fiber," avoiding unnecessary color changes that could disrupt industry recognition and cause confusion. OM4 LC adapters, on the other hand, use a magenta color to help client quickly distinguish OM4 from OM3 at the patch panel level. This color differentiation is intended for product line management and visual identification only and does not indicate any difference in performance or compatibility, nor does it introduce any technical risk in actual use.

Results

The client now operates a modular, easy-to-manage cabling system that fully supports current 25G transmission requirements. Through this project, they recognized MTP®-based architecture as a best practice for high-density, scalable cabling and view it as a long-term foundation for next-generation network evolution.

Throughout the engagement, the client worked closely with FS team and resolved key questions related to fiber deployment, cabling scalability, and color identification through multiple rounds of timely and in-depth email communication. This consistent and reliable technical support not only addressed real-world implementation challenges but also strengthened the client's confidence in FS's technical expertise, reinforcing trust and overall satisfaction with the partnership.



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