

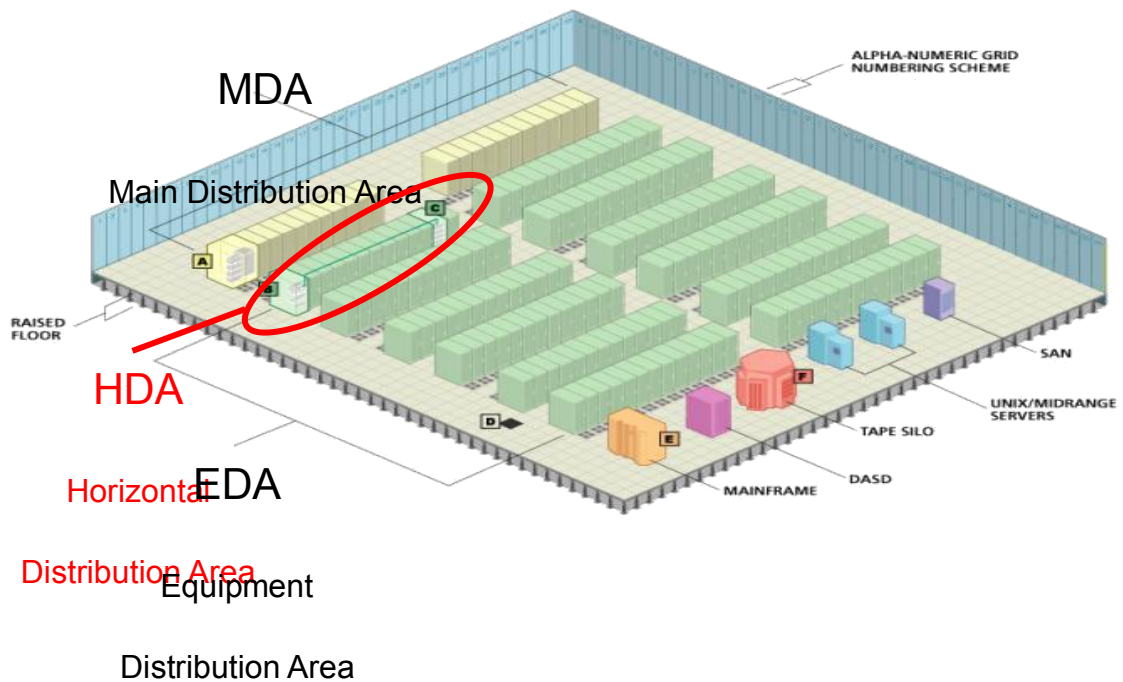
## High Density MPO/MTP Cabling System in Data Center

In today's fast-moving cyber world, with the advent and popularity of cloud computing and big data, the demand for high-speed transmission and data capacity is becoming much greater than ever before. There exist millions of servers in some cloud-computing data centers of big IT giant companies like Google, Facebook, Tencent, thus, how to balance high capacity & high transmission data rate and low power consumption is a major challenge facing today's data center. In the mean time, the prevalence of smart phone, i-pad and other intelligent equipments leads to the data explosion than expected, which all has a more demanding request for higher network capacity.

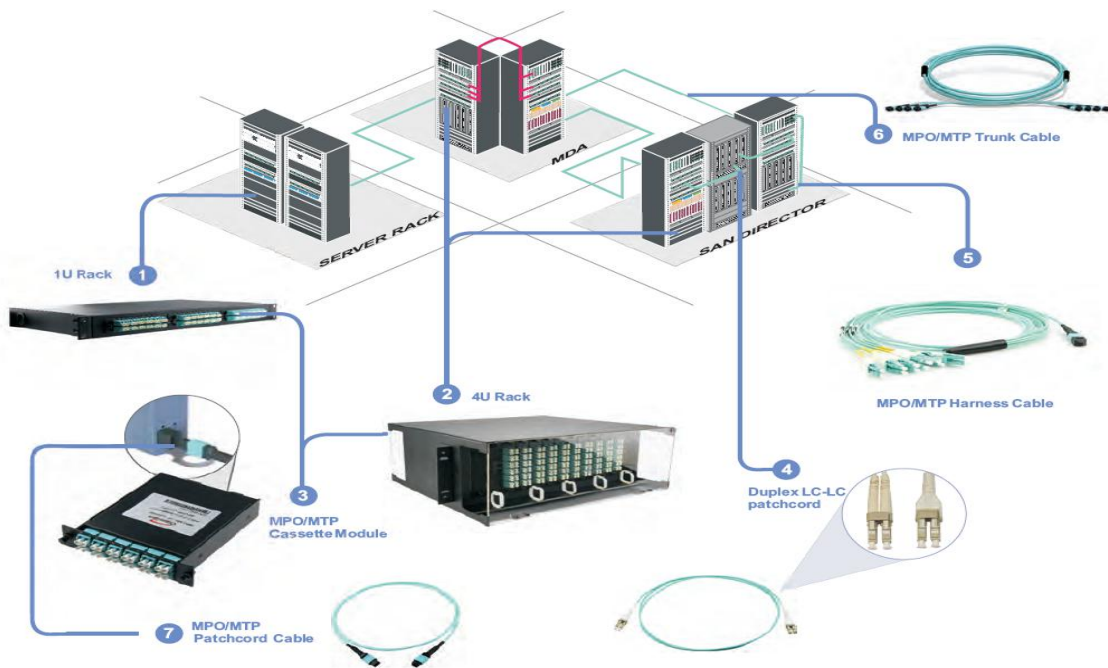
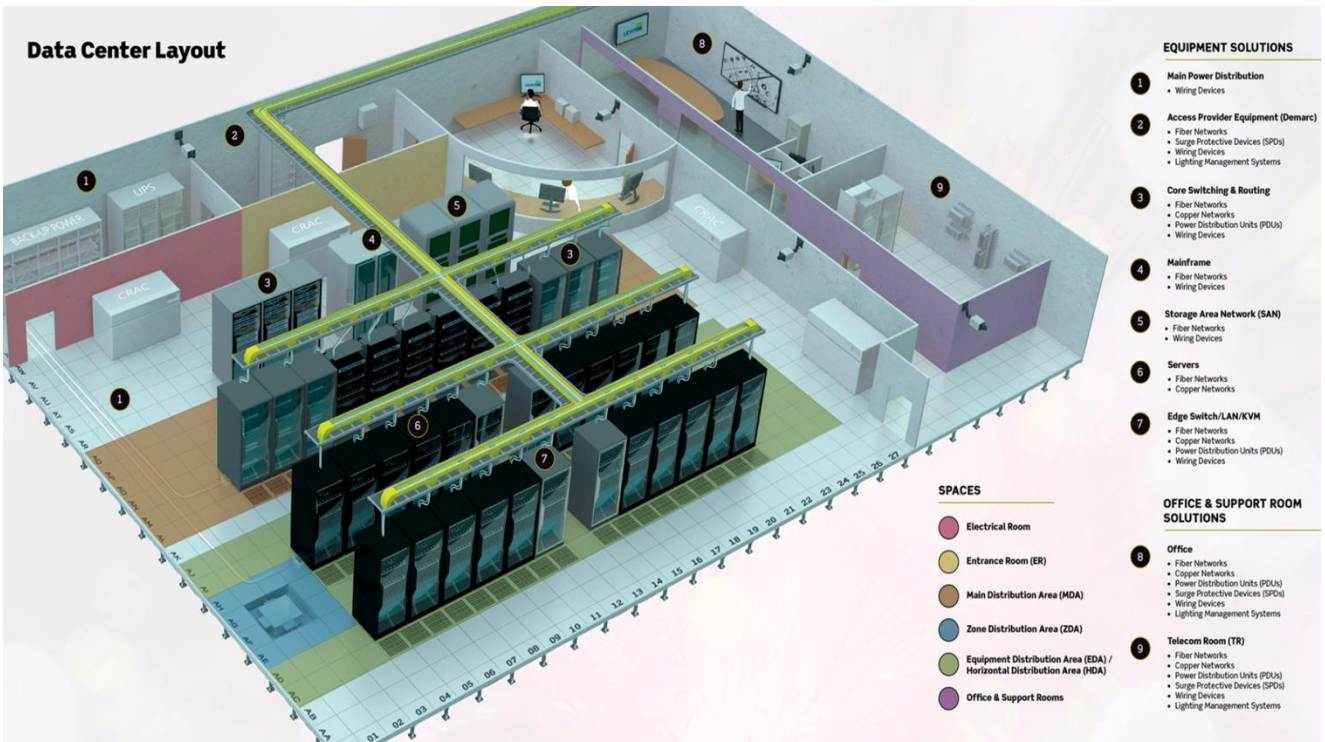
As the data throughput increases, 40Gb/s and 100Gb/s are more commonplace and now become a trend and hotspot for data-center cabling system, plus the fact that MPO/MTP connector is the up-and-coming standard optical interface for 40G and 100G Ethernet network, so it is predicted that MPO/MTP will eventually replace the standards for fiber optics as known. Even now many big IT companies are tearing out their existing infrastructure and placing MPO/MTP cassettes in their patch panels to route data for thousands of network electronics, they find MPO/MTP cassettes, patch-cords, connectors and adapters an essential backbone to their infrastructure. If you run one 12-fiber MPO/MTP cable from a cassette on one side of the building to one cassette on the other, you can supply data for 12 connections just like that. The high fiber count in one connector creates endless possibilities. Imagining a 1U rack mount patch panel that can supply data to run an entire 288-port switch, it will happen soon with today's increasing demand for higher through-put, so the needs for. FC, LC, SC, ST, MT-RJ, etc., will all be a thing of the past.

Gigalight, as a cabling solution provider, is now going to be ahead of the game with MPO/MTP cables that are designed for the reliable and quick operations in Data Centers. The obvious benefits of these cables are less space requirements and improved scalability, providing significant space and cost savings. The MPO/MTP cables are generally used for 40GbE and 100GbE network environment, and play a significant part of structured cabling. We offer a wide range of MPO/MTP cable assemblies including Trunk Cables, Harness Cables, patch-cords, loopback modules, Hydra cables and Cassettes (or Patch Panels). All the

assemblies are fully compliant with IEC Standards 61754-7 and TIA 604-5, and Telcordia GR-1435-CORE., we also provide customized design such as optional fiber counts, cable types and lengths etc.



### Data Center Layout



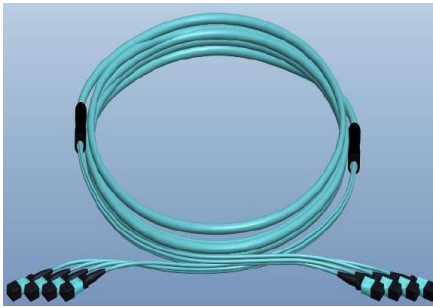
- 1 1U Rack
- 2 4U Rack
- 3 MPO/MTP Cassette Module
- 4 Duplex LC-LC patchcord
- 5 MPO/MTP Harness Cable
- 6 MPO/MTP Trunk Cable
- 7 MPO/MTP Patchcord Cable

### ➤ MPO/MTP Patch cords



MTP/MPO patch cables are commonly used when 40G or 100G active transceivers (e.g., QSFP+ and CFP transceivers) are employed with MTP/MPO interface. The ends of MTP/MPO patch cables are terminated with the customer's choice of 12-fiber or 24-fiber MPO connectors. Available in a male-to-male version (left with guide pins) and a female-to-female version (without pins), these cables are used in various applications such as all-optical networking and devices like 40G/100G modules.

### ➤ MPO/MTP Trunk Cables:



MPO/MTP trunk cables serve as a permanent link connecting MPO/MTP modules to each other. The trunk cables are available with 12, 24, 48 and 72 fibers. A 72-fiber trunk cable can be terminated with 6 MPO/MTP connectors and the connectors are manufactured specifically for multi-fiber loose tube or ribbon cable.

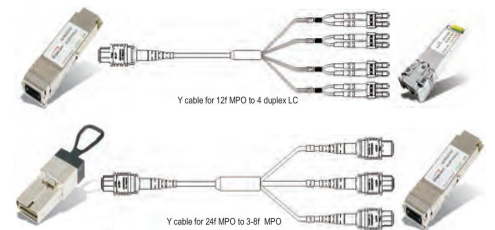
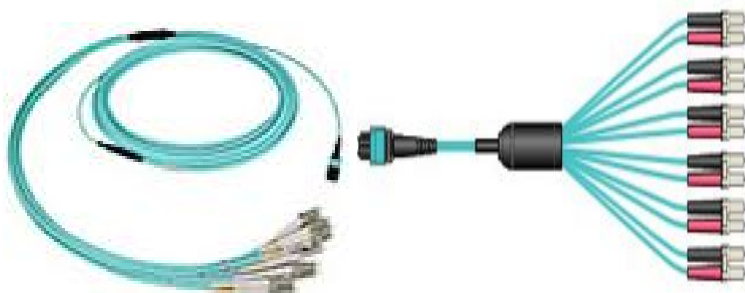
MPO/MTP trunk cables are used to interconnect cassettes, panels or ruggedized MPO fan-outs, spanning MDA, HDA and EDA areas, and to facilitate rapid deployment of high density backbone cabling in data centers and other high fiber environments reducing network installation or reconfiguration. They offer the flexibility in case any decision is made to change the connector style in the patch panels, new

cassettes can be installed with the new connector style on the cross-connect side of the patch panel without having to change the connector on the cable trunk.

Gigalight provides high density MPO/MTP trunk cables including standard trunk cables and hybrid trunk cables, with up to 288 fibers in a single cable. The MPO/MTP trunk cables use a compact and rugged micro cable structure, according to different colors divided into Single-Mode (SM), Multi-Mode (MM) and 10G MM. The fiber ranges from 12 to 144, MTP polarity options are TIA way is Style A (up), Style B (down) and Style C (up/up). The cable length can be up to 999 feet, and breakout length from 12 to 99 inches.

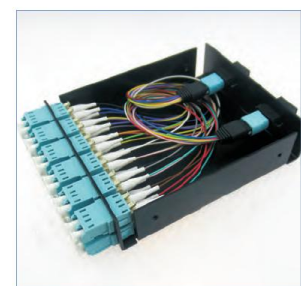
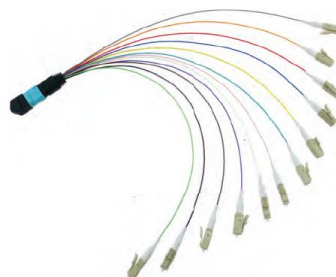
### ➤ MPO/MTP Harness:

MPO/MTP harness cables provide a transition from multi-fiber cables to individual fibers or duplex connectors. These cables are offered for various applications for all networking and device needs like 100G modules including CFP, CFP2 and CFP4 series. It provides a reliable, cost-effective cabling system for migrating from legacy 10G to higher speed 40G/100G Ethernet ect. e.g. our 12F MPO to 4 duplex LC can be used to connect four 10G SFP+ with one 40G QSFP+, and 24MPO to 3-8f MPO is used to connect three 40G QSFP+ with one 120G CXP.



### ➤ MPO/MTP Cassette Modules and Hydra cables

Modular system allows for rapid deployment of high density data center infrastructure as well as improved troubleshooting and reconfiguration during moves, adds and changes. The MPO/MTP cassettes are such modules which enable users to take the fibers brought by a trunk cable and distribute them to a duplex cable. As already assembled units, the MPO cassette modules are fitted with 12 or 24 fibers and have LC, SC or E2000 adapters on the front side and MPO/MTP at the rear, this is to say, inside a standard LGX cassette module, there is a hydra cable.



Also, by putting 3pcs LGX cassette modules inside a 1U 19" rack, or 12 pcs cassette modules inside a 4U 19" rack, a variety of modular cabling solutions are available both for internal and external cabling system.

