METZ CONNECT

Data center

Solutions for the data centers of tomorrow



Fiber optic and copper solutions for high-performance, future-proof data centers

In a data center, the quality of the infrastructure determines performance, availability and future readiness. The rapid growth in data volumes and the resulting demand for computing power place high demands on cabling.

Fiber optic technology enables high bandwidths and provides capacity for future requirements. Copper complements the infrastructure, particularly for connections within racks and between servers, switches and other network components. METZ CONNECT's fiber optic and copper solutions make it possible to use both transmission media where they are needed-creating cabling environments that are well organized, high-performance and easy to adapt.

Carefully selected components and coordinated manufacturing processes support reliable operation. METZ CONNECT covers all levels of passive network infrastructure in the data center. Project-specific configurations and special solutions can be easily defined and requested using the METZ CONNECT Configurator.





Quality for fiber optic and copper connections

METZ CONNECT stands for high-quality, reliable and individually configurable fiber optic and copper components. At our Blumberg site, we combine many years of manufacturing experience with qualified employees, coordinated processes and modern measuring technology.

Quality is built into every manufacturing step-from the selection of materials to the testing of the finished product. Fiber optic cable assemblies are tested 100% for insertion loss and return loss at two wavelengths. Interferometer measurements are used to monitor the polishing processes; every fiber optic connector is visually inspected during final testing in accordance with IEC 61300-3-35. Copper cable assemblies are tested in line with product-specific requirements.

All single-mode cable assemblies with LC, SC and E2000 connectors are also available in “Grade B“ quality. Selected fiber optic cable assemblies have been verified in accordance with the GHMT PVP test plan and comply with PVP Level 2. The result is customer-specific solutions, manufactured with precision and designed for reliable, long-term use.

DCCS - The future-oriented solution for your data center

Compact solution for performance upgrades

The DCCS (Data Center Compact Solution) product line was specially developed for data centers and their applications and extensively adapted to customer requirements in this area. The connectors are protected inside the housing during installation! The installer mounts the DCCS subassembly in the DCCS subrack without tools, using a “plug and play“ approach.

The DCCS system is based on a 19-inch subrack with one height unit (RU), in which pre-assembled copper and fiber optic links (subassemblies connected by cables) can be easily installed in a modular configuration. This allows up to 48 fiber optic duplex or fiber optic MPO/MTP® connections, or 48 copper connections, as well as combinations of both, to be accommodated in just one height unit.

Fiber optic benefits

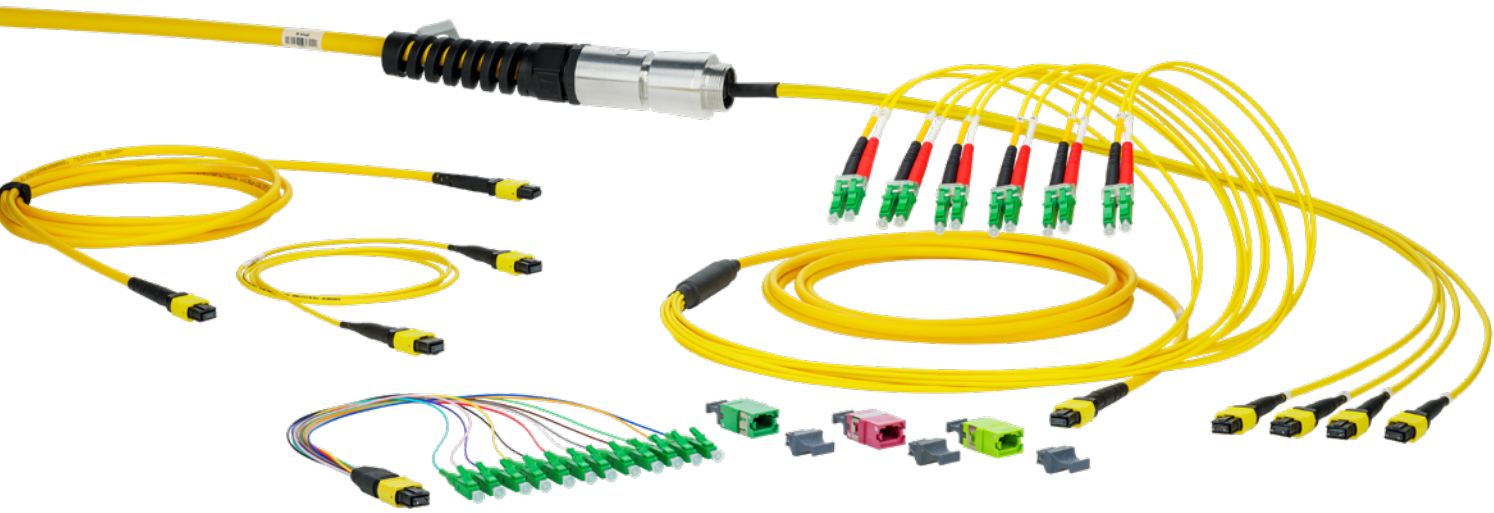
- 10 to 400 Gbit/s Gbit Ethernet transmission technology
- Available in OM3, OM4, OM5 and OS2
- Connector types: LC duplex, E2000 duplex and MPO/MTP® (12 fibers)
- Duplex connectors also available in GRADE B
- Maximum packing density of 576 fibers with MPO/MTP® in 1 RU

Copper benefits

- Cat.6_A components tested according to ISO/IEC 11801-1, ANSI/TIA-568.2-D and IEC 60603-7-51; GHMT certified
- Class E_A compliance up to 500 MHz according to ISO/IEC 11801-1; GHMT certified
- Suitable for ultra-short links (less than 5 m)
- Suitable for remote powering (PoE, PoE plus, UPoE and 4PPoE), HDBaseT, SAT-IP and AV over IP
- Cable connection via IDC terminals on the DCCS $C6_A$ MTC6 for six individual S/FTP 4P cables
- Cable connection via IDC terminals on the DCCS $C6_A$ MTC1 for one S/FTP 24P multi-pair cable
- For 10 GBit Ethernet (IEEE 802.3an)







OpDAT MTP® cable assemblies – high transmission rates with minimal space requirements

Multi-fiber connectors – ideal for data centers

Multi-fiber connectors have become the transmission solution of choice in many data centers and telecommunications exchanges, as they support transmission rates from 40 up to 400 GBit/s and beyond.

A wide range of variants for every application

MPO/MTP® cable assemblies from METZ CONNECT are available in a wide range of variants-from OM3, OM4 and OM5 to OS2, in different cable types, and also as DCCS subassemblies and links. The portfolio includes pre-assembled installation cables in breakout and universal versions with up to 144 fibers, as well as patch cords, wire and cable fanouts, and DCCS subassemblies and links with 72 fibers.

How does an MPO/MTP® connector work?

The MPO/MTP® fiber optic connector is a multi-fiber connector in accordance with IEC 61754-7, with several fibers arranged in parallel in a rectangular ferrule (“parallel optics“). METZ CONNECT uses MPO/MTP® connectors with 8 or 12 fibers. MPO/MTP® connections always use an adapter, which connects a connector with two pins (“male“) to a connector with two holes (“female“). The pins ensure highly precise front-end positioning of the fibers. The adapter provides mechanical fixation in, for example, 19-inch distributors. Its keys on both sides help align the two connectors, each of which also has a key. The connectors are locked into the adapter using a push/pull mechanism.



OpDAT VIK – pre-assembled installation cables for data centers

Fast-to-install connections without splicing

Pre-assembled installation cables (VIK) are the backbone of high-performance data centers: they connect central distributors, OpDAT patch panels and active components as point-to-point links, eliminating the need for on-site splicing. New installations, expansions and relocations can be planned with minimal downtime. Different fanout protection options protect the connectors and fanouts.

MTP® trunk VIKs for high fiber counts in the data center

For highly scalable data centers, METZ CONNECT offers MTP® trunk cables, optionally with breakout cables for indoor applications or with universal cables for indoor/outdoor use. The trunks are pre-assembled with MTP® connectors (8 or 12 fibers) in OM3, OM4, OM5 and OS2, and are available with up to 144 fibers-for high port densities and data rates of up to 400 Gbit/s.

Universal cable trunk VIKs with LC, SC and E2000 connectors

OpDAT VIKs based on universal cables are designed for demanding indoor and outdoor applications-for example, as a building and campus backbone extending directly to the data center. OM3, OM4, OM5 and OS2 fiber classes offer variants for different applications, from short data center links within a building to longer links between buildings.

The transitions to the fanouts are protected by robust aluminium cable splitters. The fibers and fanouts are encapsulated in the cable splitter. OpDAT VIK solutions fitted with LC, SC or E2000 connectors are available with 2-48 fibers in fire protection classes Eca and Cca, and on request in B2ca.

Connections within buildings can also be implemented to customer specifications using mini-breakout or breakout cables with up to 24 fibers. Special solutions, such as customer-specific fanout lengths, are also available.

OpDAT patch panels of the new generation – rethinking the standard

Shared strengths – one platform, many variants

All patch panels are available in the standard 19-inch format as a VIK version for pre-assembled cables or as a splice version equipped with pigtails and adapters for connecting installation cables. The patch panels can be equipped with SC-S/LC-D/E2000-S, SC-D/LC-Q/ST-D/SC-D and E2000-D adapters. Available fiber types: OM3, OM4, OM5 and OS2.

Shared benefits

- Robust sheet steel housing with powder-coated front panels
- User-friendly adapter layout
- Removable labeling fields for clear port identification
- Multiple cable entry options at the rear: 6 × M20, 2 × M25 and 2 U-shaped cut-outs for VIKs
- Connectors are plugged into adapters after visual inspection in accordance with IEC 61300-3-35

OpDAT fix²

OpDAT fix² is designed for permanent installation and is available in 1 RU and 2 RU versions. The cover opens without tools, providing quick and easy access to the installation inside.

OpDAT slide² K

For racks with particularly limited installation depth, or when equipment needs to be mounted at the front and rear within the same height unit, OpDAT slide² K is also available. It combines the benefits of OpDAT slide² with 30% less depth and angled cable entries at the rear.

OpDAT slide²

OpDAT slide² features an extendable, tilting drawer with a quick-release fastener. It opens and closes quickly and can be removed completely if required. Depth adjustment allows flexible integration into different rack configurations.

OpDAT slide² BO

For installations using breakout and solid-core cables, OpDAT slide² BO complements the patch panel portfolio. It includes the proven features of OpDAT slide² and is equipped at the rear with cable routing via a brush strip and double strain relief.

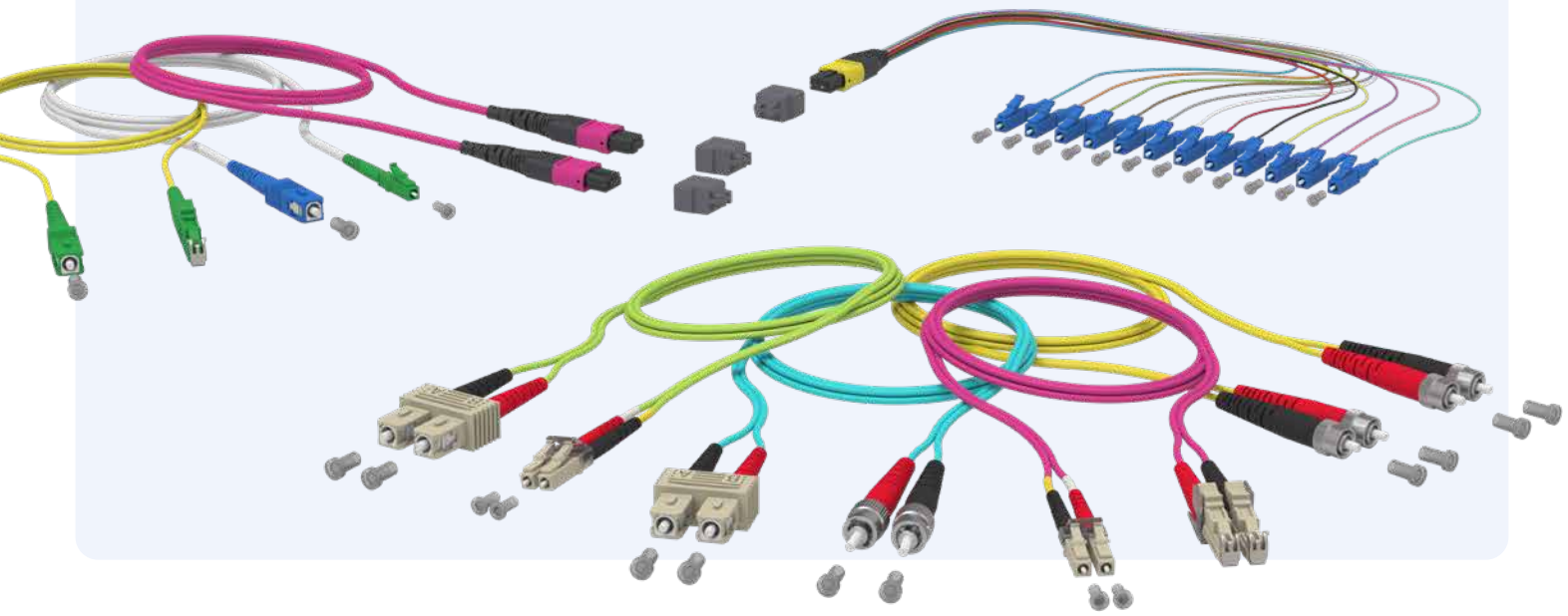


OpDAT patch cords – a wide range of versions for every data center

Thanks to their wide range of variants, OpDAT patch cords can be used for both conventional 1-to-1 connections and hybrid configurations. Versions with Grade B or PVP quality-class connectors are available on request.

Overview of variants

Duplex (Fig. 8) OM3, OM4, OM5, OS2	Duplex (Fig. O) OM3, OM4, OM5, OS2	Simplex OS2	Round cable OM4, OM5, OS2
LC, SC, ST, E2000, FC	LC, SC, ST, E2000, FC	LC, SC, ST, E2000, FC	MTP® – MTP® MTP® – Fanouts (Harness)





OpDAT CM – the modular fiber optic system

The OpDAT CM system is designed for space-saving termination of high-fiber-count cables in 19-inch racks. Its modular design allows the system to be expanded progressively as required. Mixed configurations with different connector types and fiber types can be easily implemented within a single system.

Modular system for high port densities in the rack

The OpDAT CM subrack accommodates up to 12 compact modules, providing up to 144 ports in 4 RU-or up to 288 ports when compact modules with 6 × LC Quad are used.

An integrated cable management drawer accommodates excess cable length and ensures correct cable routing in the 19-inch rack.

Installation cables are secured in the subrack using an M20 cable gland or a U-shaped cut-out for cable distribution units.

Compact modules for VIK and splice terminations of up to 24 fibers

The ready-to-install compact modules terminate cables with up to 24 fibers and can be equipped with simplex, duplex or quad adapters.

- VIK version for pre-assembled installation cables
- Splice version equipped with a standard splice tray, including a crimp splice holder and overlength tray, as well as pigtails
- Secured in the subrack with captive screws

Available with SC, LC or E-2000 connectors; fiber types OM3, OM4, OM5 and OS2. Mixed configurations of connectors and fiber types are possible within the subrack.



RJ45 trunk cables – pre-assembled copper solutions for data centers

Fast connections between patch panels

RJ45 trunk cables from METZ CONNECT are suitable for use in data centers as well as in other cabling areas, such as building backbones, tertiary cabling and office applications. The bundled copper data cables are terminated with RJ45 connectors at both ends, enabling fast connections between patch panels without having to terminate the individual cables on site.

Bundled and neatly routed

Multiple Ethernet cables are combined into a robust cable braid. Depending on the version, up to twelve cables can be bundled together. This can help make installation more organized and allows several connections to be routed together. Different copper cable types are available to meet different requirements, including versions for 10 or 25 Gbit/s applications.

Fanouts to suit the installation

The cables are available with fanouts of equal or staggered lengths. Staggered fanouts can make side connection to a patch panel easier when ports are located at different positions. This allows the cable routing to be adapted to the specific installation situation and creates a structured connection between the patch panels.

Individually configured and tested

RJ45 trunk cables can be configured to suit the project using the METZ CONNECT Configurator. Depending on the required version, options include the cable type, the number and length of the cables, connectors and fanout options. The trunk cables are manufactured individually by hand and 100% tested. They are also suitable for remote powering and are supplied as a cable coil.

25G Module Copper – more performance for the data center

More bandwidth for growing demands

Bandwidth and transmission speed requirements in data centers continue to grow. The 25G Module Copper supports high-performance network connections of up to 25 GBit/s, providing a future-oriented foundation for data-intensive applications.

Plan for the future, deploy flexibly

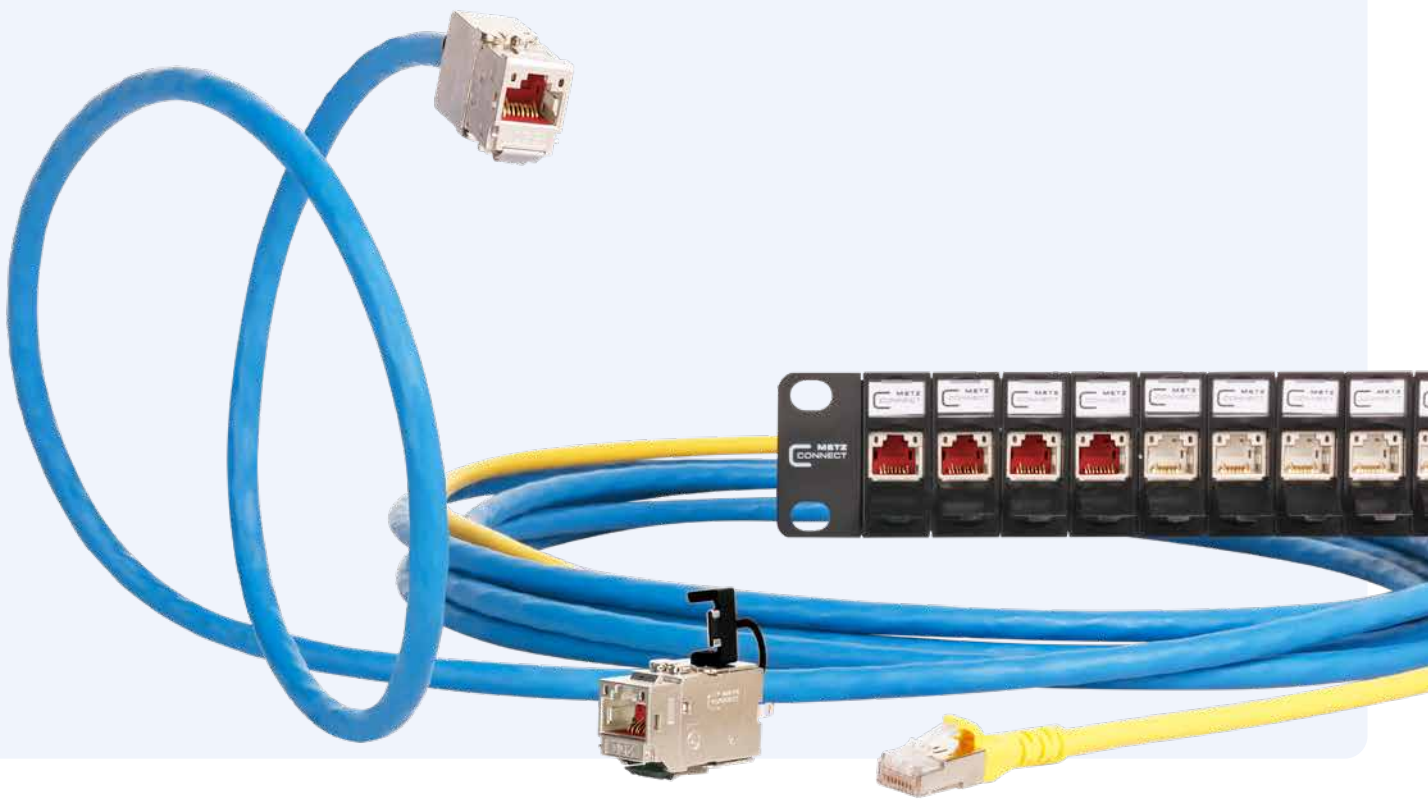
The end-to-end 25G system can be integrated into a wide range of network and cabling solutions. Thanks to its backward compatibility with 10G applications, existing infrastructures can be upgraded step by step to meet the individual requirements of the data center.

Easy migration

Connections can be made without special tools and with minimal installation effort. This makes it easy to plan and implement the transition to 25G. The module is suitable for patch cords and installation cables and is designed for installation in a range of applications and system environments.

More speed with manageable additional investment

Compared with a 10G system, 25G delivers 2.5 times the transmission speed. The relatively small additional investment makes upgrading to a higher-performance infrastructure particularly attractive, and helps prepare the network for future requirements today.



Cable management in the data center – organized and flexible

Cable management for better visibility in the data center

Cable management makes it easier to find your way around a 19-inch distribution cabinet. METZ CONNECT offers cable managers in different heights and widths, including 0.5 RU and 1 RU versions. Labeling options help identify cables clearly; different colors and materials allow the cable managers to blend in with the cabinet layout.

Safely route and neatly store cables

For a well-organized cabling setup, cable managers can be combined with complementary cable management products. OpDAT DCCS cable supports hold cables in the cabinet. Patch cord shelves also help keep unused or excess-length patch cords neatly routed. The result is a clear, easy-to-manage setup in the data center.





Modular patch panels – flexible configurations for the data center

Matched to the cabling structure

Data centers have different requirements for copper and fiber optic connections. METZ CONNECT's empty housings and module frames make it possible to configure patch panels to suit the infrastructure. Unequipped frames can be fitted with the desired modules, allowing the connection configuration to be planned precisely and adjusted when needed. Some patch panels allow individual ports to be accessed for service without disrupting other connections.

Different formats and designs

The range includes module frames and patch panels with different port counts and heights, including 19-inch versions in 0.5, 1 or 1.5 RU, as well as variants with 6 to 48 ports. Depending on the version, the frames are shielded or unshielded, designed for MC or Keystone modules, and available in different materials and colors. This provides solutions for a range of installation and expansion requirements in the distribution cabinet.

Your solution – configured to your needs

Every data center has its own requirements for fiber type, connectors, cable length and distribution solutions. METZ CONNECT's online configurators let customers put together the configuration that suits their needs. Simple, intuitive operation-runs directly in your browser, with no additional software to install.

How it works:

1. Select a configurator

2. Choose the parameters
   - Fiber type
   - Cable type
   - Connector type
   - Length
   - Additional features

3. Get your results
   - Part number
   - Product image
   - Product description
   - Indicative price
   - Specification text
   - Additional downloads

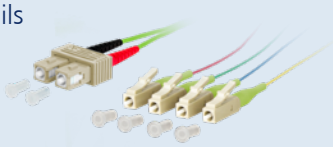
4. Send an inquiry directly
   Add the part numbers to a list and send them together to your sales contact.

All configurators and accessories

Pre-assembled fiber optic installation cables



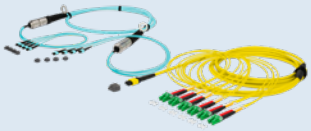
Fiber optic patch cords and pigtails



19-inch fiber optic patch panels



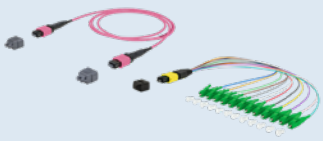
MPO/MTP® VIK – pre-assembled installation cables



DCCS - Data Center Compact Solution fiber optic



MPO/MTP® - patch cords and wire fanout



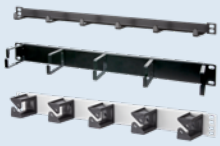
DCCS – copper



RJ45 trunk cables



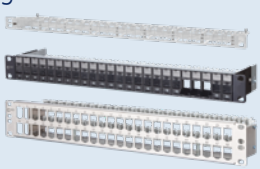
Cable management and cable routing accessories



Tools and installation aids



Empty housings and module frames



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