FTTX
FIBER OPTIC SOLUTIONS FOR HIGHEST
OPERATIONAL RELIABILITY
FTTX

With a fiber-optic connection, you are trusting in technology with proven practical success going back 30 years. For you that means security, reliability, and ample reserve bandwidth for both now and in future. Properties linked to a fiber-optic network increase in value. Municipalities with a well-developed fiber-optic network stand to garner strong interest as business centres. Further development of existing industrial areas is another long-term argument in favour of fiber-optic links. HD video on demand, cloud computing, and telepresence for international companies are just some of the up-and-coming applications. New needs and new video formats like ultra-HDTV continually drive up demand for data bandwidth. More than 30 years of experience developing fiber-optic products allows us to offer solutions that will stay the course over a very long period of time. This is due not only to our products’ outstanding quality and reliability, but to our first-class support and service as well. We can advise and assist you competently, in person and worldwide.

Fiber optic cabling to the end device

The nearer a terminal device is to a fiber-optic connection, the more available bandwidth it can use. Whether the fiber-optic interface is located within your apartment or inside a distribution box close next to an office building, one thing you can expect all the time: it has to work! No faults or outages. The first step to this goal is using best-quality components. There is payoff to always having reliable plugs, mating adapters and service.
1 **Central Office**
“Regional development”
- High packing density
- Outstanding security against outages
- Flexibility

2 **Commercial**
“Further development of business centres”
- Logical network management
- Ease of care and maintenance
- High transmission capacity

3 **Cabling and distribution**
“Basic communications infrastructure”
- Long-lasting products
- Smooth installation
- In-service accessibility

4 **Dwellings**
“FTTH raises the value of your property”
- Simple, fast installation
- Straightforward handling
- Terminal devices are individually locatable
INTELLIGENT COMPONENTS
Ensuring Increased Network Stability and Productivity

Network stability and high network productivity are essentials in any commercially successful networking operation. The aim is to ensure strong resilience against network outages, and should outages do occur, making sure they are detected and fixed fast.

Technologies Involved
Diamond OLiD components use FBG (Fiber Bragg Grating) technology and are suited for both permanent and temporary installation in P2P fiber-optic networks. FBG codes are directly written into the fiber-optic core for clear optical line identification (OLID). Every line in a P2P network installation is thus clearly identifiable.

Features and Benefits
- Fast search and identification process for installation errors
- Shorter fault fixing times and fewer entries into private premises
- Simple, space-saving and cost-efficient integration
- UGT version available for temporary and reusable
- Allows for per-subscriber address assignment
- Extremely reliable

OLiD products
Diamond supplies OLiD coded fiber-optic sockets, connectors, and UGT modules. OLiD codes can of course be used at every splicing point.
FIELD ASSEMBLY SOLUTIONS

Our goal is to design products that are efficient as well as convenient to install and get working. This is why all our products provide optimized fiber management, which helps greatly towards a long-lasting installation.

FTTH wall outlets (OTO)
- Simple assembly
- Well thought-out fiber management
- Mating adapter with inner and outer laser protection shutters
- RJ45 and coax connections possible as well
- Mating adapter attaches easily at any time
- 14 colours available

Building Entry Point (BEP)
- Simple wall mounting
- Flexible components
- Fiber-optimised assembly
- Lockable cover
- Robust design
- Houses up to 144 fiber splices

Splice closures
- Can be used in a flexible and versatile manner
- Can be equipped with individual splice trays (shrink, ANT or combined for splitters)
- Individual cable entry flange and cable entry bush, IP68
- Valve for carrying out leak tests
- Wall-mounting or horizontal mounting possible
- Available in 3 sizes
- 1 to 48 splice trays

FUSION – HIGH-END SOLUTION FOR FIELD APPLICATIONS

FUSION family connectors (Splice-On-Connector, SOC) are simple and fast to assemble in the field, while keeping to the same high quality standards as Diamond plug connectors. The key component for this is the “Crocodile Alberino” for field assembly, with 2.5mm or 1.25mm ferrule components from Diamond. These are comprised of a mini-pigtails with built-in splice protectors. The FUSION series assembles using a fusion splice made by a Diamond ZEUS D50 Fusion or a compatible splicer. With this high-quality tool and ferrules, insertion losses are very low.

All ferrule assemblies are factory polished

Connectors
- Connector types E-2000®, F-3000®, FC®, SC and ST™
- Single-mode (SM) or multi-mode (MM)
- 0°PC or 8°APC
- Boots for fibers and cables

Benefits
- Simple, fast and reliable assembly in the field
- No epoxy adhesive needed
- Outstanding optical characteristics
- No polishing in the field

Zeus D50 splicer
- Makes both SOC and fiber-fiber splices
- Comprehensive accessories to cover all situations

Get the most out of Fusion family connectors with a choice of cleaning and assembly cases, the Fusion Zeus kit, or an installation set specially tailored for you.
PREASSEMBLED SOLUTIONS

Our products are modular and compact, the ideal solution for a flexible system of installing and extending fiber-optic networks.

DiaFlex - Multi channel solution
A special feature of the new DiaFlex connectors is that the Fan-Out side can be removed. This adds flexibility when installing fiber-optic networks.
- Removable and exchangeable Fan-Out side
- End cap with drawcord lug, ready for pulling through conduit
- Suited for permanent and temporary installations
- For preassembled systems
- No splicing needed
- Client-specific cable lengths
- Available with 12 or 24 fibers
- IP68 rated enclosure

Fan-Out and Break-Out
Client-specific cable lengths
- For MM 50 μm, MM 62.5 μm and SM 9 μm
- Connector types: E-2000®, F-3000®, FC, SC, ST™, MT-RJ, etc.
- Feed-in protection for Fan-out
- Color-coded fiber labelling
- Stable fiber divider made from metal (Fan-Out)
- Supplied as a ring or on a roll
- Delivery incl. test report

19” flexPatch 1U optical distribution frame
- Extremely easy-to-use thanks to the magnetic fastener
- Can be removed, ready for splicing with up to 48 fibers
- Can be used as a modular solution in a modular system for all commonly used connector types
- Tray is removable and depth-adjustable up to 60mm
- Extractable and bendable in two stages, from 20° to 60°
- 2-chamber system for the separate housing of bundled wires and fiber pigtails
- Strain relief for installation cables from a number of different directions
- Light weight

FTTH Box
Factory-assembled OTO with individual cable lengths.
- User-friendly
- Cable lengths up to 120m possible
- Simple assembly: PET cable roll enables a solo installer to complete the job
- Short installation time
- No splicing in apartments
- Pulling aid prepared and ready on cable
- Factory-assembled and tested OTO and cable
- In-wall / surface mounting versions available

ACTIVE NETWORK SOLUTIONS

Industrial networks connect data, computers and people together. Networks like these have very high requirements. Proper component selection is the only means to fulfilling complex virtual and hardware criteria.

Gigabit installation switch
- Compact design
- PoE+ max.30W + built-in power supply
- 45mm snap-in assembly (no screw fastenings)
- Supports all popular management standards: WEB, FTP, SFTP, TFTP
- Forward-looking with V-LAN and IPv6 capability
- Replaceable Micro SD memory card for configurations, scripts and firmware updates
- Passive cooling (no fan)

19” switches
- For small and large applications
- Websmart, layer with a dual or triple switch
- Type-specific stacking
- Standalone or 19” rack version
- User-friendly management
- Future-proof due to IPv6 capability
- Green IT & eco-friendly
- No coded SFPs
- Non-blocking system
- Tailor-made service contracts
PRODUCTS FOR INSTALLATIONS

DiaLink-Saver

Safety interface
A trailing cable like the one linking the fiber-optic socket to a router or workstation is at risk of accidental damage or being torn from its connector. Consequences may include personal injuries, broken connectors and ripped-out fiber-optic sockets. To prevent such occurrences, we offer you the DiaLink-Saver. A defined safety interface can minimise the hazards just mentioned.

- An in-cable connector automatically disengages when subjected to strain of more than 2 kg.

- Tripping hazards can be avoided this way, while protecting fiber-optic devices against damage.

- After an incident, the broken cable connection simply plugs together again with no need to call for specialist help and no lasting outage.

Special features of the DiaLink-Saver
- Increased personal and equipment safety
- Ease of use
- Inconspicuous design
- Outstanding optical performance specification
- Usable as an extension cable

DiaLink connector

The smart plug connector
The DiaLink connector was developed to simplify fiber-optic cabling inside houses and offices. With DiaLink, this cabling is very quickly in place. Preassembled cables complete with end connectors are pulled directly into the installation conduit and plugged into the OTO. This is only possible thanks to the DiaLink connector’s circular, slim profile and end cap with drawcord lug. Splicing inside buildings is made redundant by this very easily installable and affordable method.

- The preassembled cable with DiaLink connector can be pulled directly into the installation conduit by its end cap with drawcord lug.

- A connector pulled through the conduit then plugs into the fiber-optic socket.

- A few quick manoeuvres and the fiber-optic socket is ready for use.

Characteristics and benefits
- Ease of use, push-pull
- Inconspicuous design, 6mm Ø
- Outstanding optical performance specifications, IL/RL
- Versatile deployment in the OTO, at the BEP, as a predetermined breaking point, or as an extension cable.
- End cap with drawcord lug for pulling through conduit
- Protected ferrule end face
- Reconnects without cleaning

Room-to-room extensions
If the fiber-optic socket is not positioned at the point of use, with a DiaLink extension cable it can be relocated to any room or storey of the building. Your choices here are to lay a trailing cable, to pull the cable through an installation conduit, or to route it behind a baseboard.

- Pre installed line
- New DiaLink line
- Provider Gateway
- Optical termination outlet
**OliD NETWORK ACCEPTANCE TEST**

The system enables unique identification of fiber-optic lines by using the OliD coding built into plug connector components such as UGTs, OTOs, plug connectors and splicing points. This allows line integrity and error-free connections to be tested from a single access point. The system does not interfere with standard wavelengths used by network operators. This means it can be used with lines that are already active. The DNA kit is designed for repeated use, with a comprehensively equipped transportation case for flexible deployment.

**Test equipment features**
- Up to 48 unique OliD codes
- Non-interfering with telecom standard wavelengths
- Rapid implementation, single-worker installation, fewer entries into private quarters
- Fast search and identification process for installation errors and outages
- Easy-to-use OliD interrogator
- Cleaning kit and inspection microscope for on-site maintenance
- Evaluation and archiving software

**mfs (mobile fiber-optic service)**

The mobile fiber-optic service from Diamond provides fast and professional on-site services, including on-site error rectification and repairs, technical support and local client training sessions.

The mgs technicians are highly-trained specialists who have the appropriate resources to work with the latest state-of-the-art test and repair equipment for fiber-optic networks.

**Our services**
- Immediate response to fault and repair tasks
- Error rectification
- Acceptance controls incl. test report
- Consulting and planning
- Troubleshooting in the fiber-optic network with the latest technology
- Installations with Diamond Fusion technology
- Maintenance of networks