

KanesBridge Product 2024

# **Passive Optical Products**







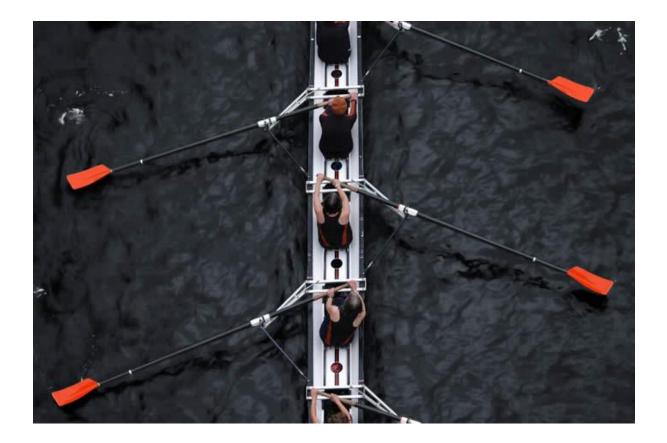
# About KanesBridge Technology

Founded in 2020, KanesBridge Technology is a key member of a global manufacturing group, alongside Esion Optic Inc. and PASV Telecom, specializing in passive optical network products.

Our core product lines include Optical Transceivers, Optical Patch Cables, Passive Optical Solutions, and WDM transmission systems tailored for telecom, data center, wireless and fixed access (FTTX) connectivity applications.

We operate in-house R&D and manufacturing facilities in China and Malaysia, with sales and operations across Asia, Europe, and the USA. Our global reach ensures we deliver exceptional service to customers worldwide. For over 10 years, we have been a trusted technology partner and reliable supplier to Tier 1 telecom carriers, Internet service providers, global network OEMs, and top cloud service providers.

At KanesBridge, we are more than technology experts—we're your partner for business growth and beyond.



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Note: Not all of KanesBridge passive optical products are listed in this product list. Please contact us for any products not listed here.

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# 1. Introduction of Passive Optical Products

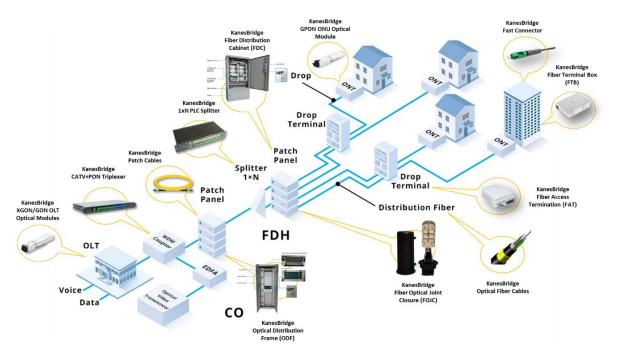
Passive optical devices are the backbone of modern optical systems and networks, enabling data transmission over long distances without active components. The quality of these components is crucial for the performance and reliability of complex optical networks.

KanesBridge offers a comprehensive range of high-quality passive optical devices that are essential for fiber networks, including:

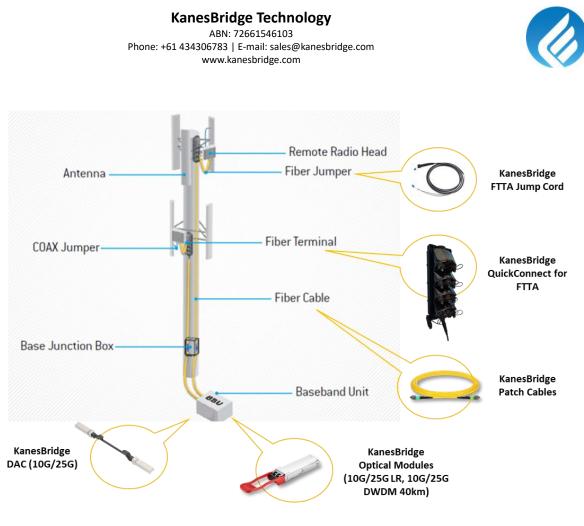
- Optical Patch Cables: MPO Patch Cable, Fiber Patch Cable, FTTA Jump Cords
- **Fiber Distribution Terminals:** Optical Distribution Frame (ODF), Optical Distribution Unit (ODU), Fiber Distribution Cabinet (FDC), Fiber Distribution Box (FDB), Pre-connection Distribution Box
- Fiber Splitters: FBT Splitter and PLC Splitter
- Fiber Optic Closures: Fiber Optical Joint Closure (FOJC), In-Line Aerial Fiber Splice Closure (AFOSC), Vault
- Fiber Access Terminal: Indoor Fiber Access Terminal (Indoor FAT), Inline Fiber Access Terminal (Inline FAT), Fiber Terminal Box (FTB)
- Optical Fiber Cables and Micro-ducts
- Passive MUX/DEMUX: WDM, CWDM, DWDM, OADM, AWG
- Optical Switches: Mechanical Optical Switch, MEMS Switch

Our passive optical products are designed to meet the demands of today's advanced optical transport networks (OTN), passive optical networks (PON) including Fiber to the Home (FTTH) and Fiber to the Antenna (FTTA), data center interconnects (DCI), and data center networks (DCN).

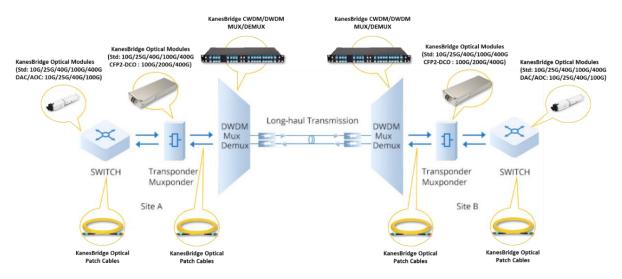
Our optical solutions are illustrated in the diagrams below, showcasing their application in various networking environments.



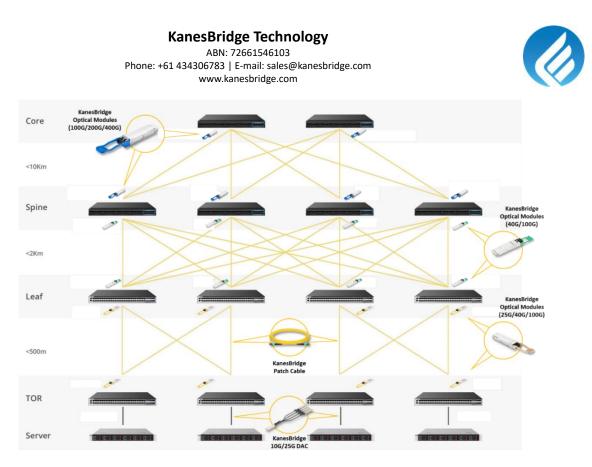
### KanesBridge Passive Products used in FTTH



## KanesBridge Passive Products used in FTTA



KanesBridge Passive Products used in OTN/DCI network



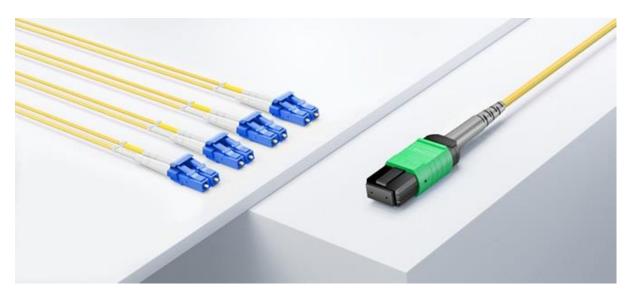
KanesBridge Passive Products used in multi-tier data center network

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# 2. Optical Patch Cable

Optical patch cables, also known as fiber patch cords, fiber jumpers, or fiber patch leads, are essential for modern telecommunications and data center environments. Terminated with fiber optic connectors such as FC, LC, SC, and ST at each end, these cables provide rapid and secure connections to optical switches and other devices. Ideal for indoor use in server rooms and data centers, fiber patch cables offer unparalleled reliability, adaptability, and security, making them the preferred choice over conventional copper cables.



**Key Applications** 

- Telecommunications
- FTTH (Fiber to the Home)
- Optical transmission systems
- LAN (Local Area Networks)
- CATV (Cable Television)
- Fiber optic sensors
- Test equipment

# 2.1 KanesBridge Fiber Patch Cable

At KanesBridge, we categorize our optical patch cables based on their connector types:

- **Fiber Patch Cables**: Equipped with connectors such as FC, LC, SC, and ST, these cables are designed for rapid and reliable connections in various telecommunications and data center applications.
- MPO/MTP® Patch Cables: Featuring MPO/MTP® connectors, these cables are perfect for high-density networks and are optimized for seamless integration with modern data center and telecommunications infrastructure.

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| Network Switch                        | Network Switch    |
|---------------------------------------|-------------------|
| • • • • • • • • • • • • • • • • • • • | • # 10G SFP+      |
| LC                                    | LC                |
|                                       | Fiber Patch Cable |

KanesBridge Fiber Patch Cable options:

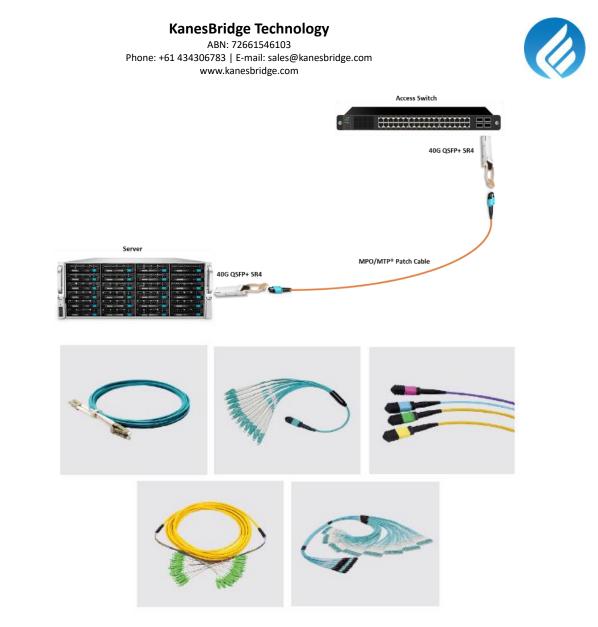
- Standard Fiber Patch Cable
- SN UPC to LC UPC SM DX Fiber Patch Cable
- 12 Fibers MM LC UPC to LC UPC Trunk Cable
- VF/45-LC/UPC MM 50/125 2.0mm LSZH 3M Patch Cable
- MDC to LC UPC SM DX Fiber Patch Cable
- E2000 APC to E2000 UPC SX MM Patch Cable
- E2000 APC to FC APC SX MM
- LC UPC to LC UPC MM Uniboot Fiber Patch Cable
- Singlemode Fiber Optic Pigtail

With KanesBridge Fiber Patch Cables, you get tailored connectivity solutions that offer superior performance and reliability. Use the information below to customize and order your cables today to power up your network.

| KanesBridge Optical Patch Cable Product Ordering Information |                                |                   |              |                |              |  |  |  |  |  |
|--|--------------------------------|-------------------|--------------|----------------|--------------|--|--|--|--|--|
| Connector/Polishing  | Connector/Polishing Cable Type |                   | Cable Jacket | Fiber Diameter | Cable Length |  |  |  |  |  |
| 0=None   |                                |                   |              |                |              |  |  |  |  |  |
| 1=FC/APC   | 1=Simplex                      | 1=SM 9/125 G652D  |              |                |              |  |  |  |  |  |
| 2=FC/UPC   | 2=Duplex                       | 2=SM 9/125 G657A  |              | 0=250um        | 0=0.5m       |  |  |  |  |  |
| 3=SC/APC   | 3=Armoured                     | 3=MM 62.5/125 OM1 | 1=PVC        | 1=900um        | 1=1m         |  |  |  |  |  |
| 4=SC/UPC   | 4=Water-proof                  | 4=MM 50/125 OM2   | 2=LSZH       | 2=2.0mm        | 2=2m         |  |  |  |  |  |
| 5=LC/APC   | 5=Break-out                    | 5=MM 50/125 OM3   | 3=OFNR       | 3=3.0mm        | 3=3m         |  |  |  |  |  |
| 6=LC/UPC   | 6=Ribbon                       | 6=MM 50/125 OM4   |              | S=Specify      | S=Specify    |  |  |  |  |  |
| 7=ST   | 7=Bundle                       | 7=MM 50/125 OM5   |              |                |              |  |  |  |  |  |
| S=Specify  |                                |                   |              |                |              |  |  |  |  |  |

# 2.2 KanesBridge MTP<sup>®</sup>/MPO Patch Cable

KanesBridge offers a wide range of MTP<sup>®</sup>/MPO patch cables designed to meet the diverse needs of high-density cabling environments. These MTP<sup>®</sup>/MPO patch cables are designed to accommodate more fibers in a single multi-fiber connector, making them the ideal solution for high-density cabling in data centers. These cables support 40G, 100G, 400G, and 800G networks, offering a practical and efficient choice for both current and future network speed upgrades.



Key Features:

- **High-Density Connectivity:** MTP<sup>®</sup>/MPO connectors significantly increase cable density, optimizing space in circuit cards and racks.
- **Connector Options:** Available in female (without pins) and male (with pins) types to suit various connection needs.

Ideal Applications:

- Data Center LAN and SAN: Enhance your local and storage area networks with high-speed, reliable connections.
- LAN/SAN Switches: Ensure seamless integration and performance for network switches.
- Equipment Distribution Areas (EDA): Streamline connectivity in high-demand environments.

KanesBridge MTP<sup>®</sup>/MPO Patch Cable Options:

- MPO/MTP<sup>®</sup> Optical Patch Cable
- MPO to LC Optical Patch Cable
- MTP<sup>®</sup> Pro 8-144 Fibers MTP-12 OM4 MM Elite Trunk Cable
- 144 Fibers High-Density MPO-LC Breakout Cassette

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Upgrade your network infrastructure with KanesBridge MTP<sup>®</sup>/MPO Patch Cables. Use the below to customize and order your cables today to achieve optimal network performance and scalability.

| Ка  | nesBridge MPO/MTP® Pat  | tch Cable Product Or                            | dering Informat   | ion                              |   |
|---|---|---|---|----------------------------------|---|
| Connector/Polishing   | Fiber Type  | Cable Type                                      | Fiber Count   | Polarity                         | Cable Length                                |
| 1=MPO/APC-Female<br>2=MPO/UPC-Female<br>3=MPO/UPC-Male<br>4=MPO/UPC-Male<br>5=FC/APC<br>6=FC/UPC<br>7=SC/APC<br>8=SC/UPC<br>9=LC/APC<br>10=LC/UPC<br>11=ST<br>S=Specify | 1=SM 9/125 G652D<br>2=SM 9/125 G657A<br>3=MM 62.5/125 OM1<br>4=MM 50/125 OM2<br>5=MM 50/125 OM3<br>6=MM 50/125 OM4<br>7=MM 50/125 OM5 | 1=Bare-Ribbon<br>2=Oval<br>3=Round<br>S=Specify | 1=8<br>2=12<br>3=24<br>4=48<br>5=72<br>6=96<br>7=144<br>S=Specify | A=Type A<br>B=Type B<br>C=Type C | 0=0.5m<br>1=1m<br>2=2m<br>3=3m<br>S=Specify |

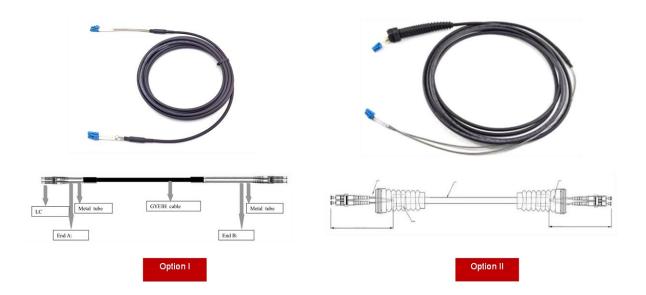
# 2.3 KanesBridge FTTA Jump Cords

FTTA, or fiber to the antenna, is a network architecture utilizing fiber optics to distribute the signals from a BBU (baseband unit) to a remote radio head (RRH) near the top of a cell tower.

KanesBridge FTTA jump cords are available with single-mode and multi-mode fiber. Two design options are available:

- **Option I:** Cable ends protected with metal or plastic coils, with lengths of 50±7mm (end A) and 350±10mm (end B).
- **Option II:** Protective rubber or plastic caps cover the connector block and seal the SFP slot. Both ends measure 50±7mm.

Standard lengths range from 5m to 200m (-0%/+5%), with customizable options available to meet your specific needs.



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# 3. Fiber Distribution Terminals

Fiber distribution terminal is used in FTTH networks to connect feeder cables and distribution cables. These devices can be used to fixe and protect optical cables, terminate and splice fibers, distribute and dispatch fibers, and protect other parts. KanesBridge offers these fiber distribution terminals, Optical Distribution Frame (ODF), Optical Distribution Unit (ODU), Fiber Distribution Cabinet (FDC), Fiber Distribution Box (FDB), and Preconnection Distribution Box (QuickConnect).

# 3.1 Optical Distribution Frame (ODF)

An optical distribution frame (ODF) is a frame used to provide cable interconnections between communication facilities, which can integrate fiber splicing, fiber termination, fiber optic adapters/connectors and cable connections together in a single unit. It can also work as a protective device to protect fiber optic connections from damage.

**KanesBridge Optical Distribution Frame (ODF-1008-TM)** is an advanced Optical Distribution Frame designed for Central Office (CO) and telecommunication rooms in multi-dwelling and multi-tenant buildings. With a 1008-fiber termination capacity, it seamlessly integrates fiber splicing, termination, adapters, and connections, while providing robust protection for your fiber optic network.



Key Features:

- Standard 19" rack system: Dimensions 900mm (W) x 300mm (D) x 2200mm (H)
- Front access termination for easy maintenance
- Modular design: Supports up to 1,008 SC fiber ports with 7x144F sub-racks and optional splitter shelf
- **Pull-out trays**: 12/24F per tray for streamlined operation
- Secure enclosure: Lockable front door and detachable back panel

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- Comprehensive cable management: Handles 1,008 patch cords with 30mm bending radius guides
- Flexible cable ports: Accommodates incoming cables up to 21mm and 2mm patch cords

# 3.2 Optical Distribution Unit (FDU)

**KanesBridge ODU-CL series** offers versatile fiber distribution units designed for seamless integration in 19-inch racks, available in 1U, 2U, and 4U configurations. Featuring a convenient "drawer" design, these sub-racks enable efficient fiber splicing, connection, protection, and management for applications like FTTH, data centers, and telecom rooms.



1U, 2U, and 4U in height in a 19 inch frame

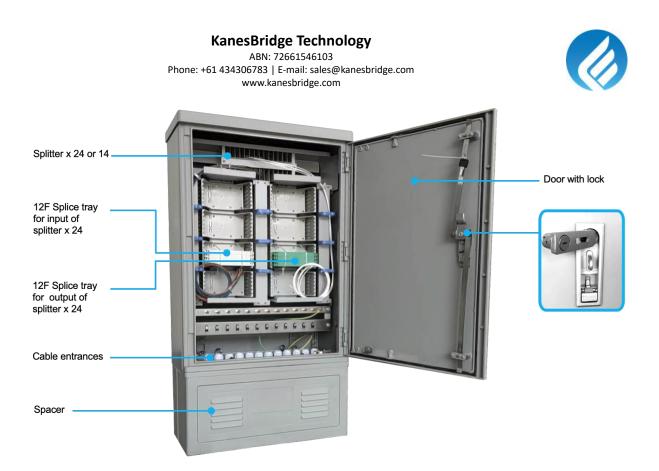


Key Features:

- **Compact options**: Available in 1U, 2U, and 4U heights
- Drawer-style design: Easy access for management and maintenance
- Detachable patch panels: Simplifies replacements and future expansion
- Supports 24F and 48F splice trays
- Cable entrance: Accommodates cables up to Ø25mm
- **Durable enclosure**: Cold-rolled or galvanized steel, finished with anti-static epoxy in RAL9004 black or RAL7035 grey white
- **Temperature range**: Operating from -10°C to 45°C; storage from -40°C to 70°C
- Humidity resistance: Up to 85% at +30°C

# 3.3 Fiber Distribution Cabinet (FDC)

**KanesBridge Fiber Distribution Cabinet (FDC-576-TM)** delivers robust, high-density fiber connectivity for outdoor networks. Designed to support up to 576 splices and 24 splitters, it ensures secure, efficient distribution at critical local convergence points. Built to meet IEC 61753-1 standards for outdoor durability, the FDC-576-TM guarantees reliable performance in demanding environments.



Key Features:

- **IP55 water resistance**: Meets IEC 60529 standards
- Versatile functionality: Supports splicing, jumping, and splitting with or without connectors
- Compact high density: Terminations for up to 576/1152 fibers
- **Splitter capacity**: Accommodates up to 24 splitters
- Universal locking system for secure access
- Independent cable entry: Each cable enters through separate glands for secure, sealed connections
- Mold-resistant materials: Conforms to IEC 60068-2-10 standards, ensuring durability in challenging environments

**KanesBridge HiDen Fibre Distribution Cabinet (HiDen Type 288/576F)** is engineered as a first local convergence point for FTTH networks, offering 288/576 fiber splicing and patching capacity, with or without splitters. Designed to meet IEC 61753 standards for outdoor environments, it delivers superior reliability in the field.

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Key Features:

- Premium Durability: Built with stainless steel 304 for unmatched corrosion resistance
- Weather Protection: IP55-rated for water and dust resistance
- High Density: Compact design supports up to 576 ports on a single side
- Flexible Splicing Options: Includes 24 trays for the 288F model, 48 trays for the 576F model, each with 12 fibers
- Safe Operation: Single front-entry door with an opening limit mechanism for added safety
- **Customizable & Secure**: Universal key system and customizable logo option on the door, with a secure, internal locking mechanism for cable entry
- Versatile Cable Management: Independent entrances for optical cables or tube bundles with sealing and fixture facilities
- Longevity: Designed for over 20 years of above-ground service
- **Fiber Protection**: 30mm minimum bending radius for safe fiber and cord management, preventing cable damage and ensuring operator safety

# 3.4 Fiber Distribution Box (FDB)

**KanesBridge FDB-AG-TM** is a robust aboveground Fiber Distribution Box (FDB) designed to house the KanesBridge FAT-24-TM for seamless fiber management. Supporting up to 16 subscribers and one branching outlet, it integrates fiber splicing, splitting, distribution, and storage in a durable, dome-covered enclosure ideal for outdoor installations.

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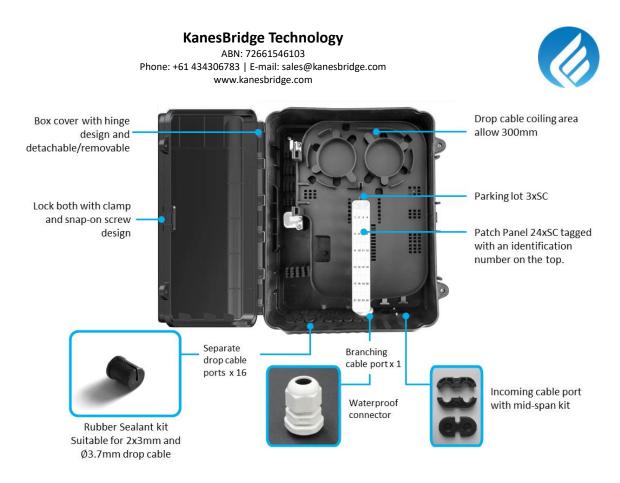




#### Key Features:

- IP55 water resistance: Complies with IEC 60529 standards
- Integrated splicing and splitter installation
- Fiber management: Ensures optimal bending radius for fiber protection
- Flexible splicing options: Supports both fusion and mechanical splicing
- Splitter capacity: Accommodates up to 5 splitters (1x16, 3x1:8, or 5x1:4 configurations)
- Cable ports: 3 distribution cable ports and 16 drop cable entrances
- Mold-resistant sealants: Conforms to IEC 60068-2-10 standards
- Mechanical sealants: No heat shrink, ensuring secure sealing
- Safe, neat design: Prevents cable damage and installer injury
- Heavy load protection: Maintains enclosure integrity even under pressure, ensuring IP protection
- Durable outdoor use: Meets IEC 61753-1 Table A.1 standards for ground-level environments

**KanesBridge Aerial/Wall mount FDP (FAT-24-TM)** is used as a termination point for connecting feeder cable with drop cable in FTTx network system. It is designed to be pole-mounted or wall-mounted.



Key Features:

- IP55 water resistance: Meets IEC 60529 standards for waterproofing
- Integrated splicing and splitter installation: Supports fusion or mechanical splicing
- Optimal fiber management: Ensures proper bending radius for fiber protection
- **Splitter capacity**: Accommodates up to 5 splitters (1x16, 3x1:8, 5x1:4 options)
- Multiple cable entries: 3 distribution cable ports and 16 separate drop cable entrances
- Mold-resistant sealants: Compliant with IEC 60068-2-10 standards
- Mechanical sealing system: No heat shrink required
- Safe, organized design: Prevents cable damage and operator injury
- Durable under heavy loads: Maintains ingress protection with secure cover closure
- Outdoor-ready: Meets IEC 61753-1 Table A.1 standards for aerial environments

### 3.5 Pre-connection Distribution Box (QuickConnect)

KanesBridge Outdoor Pre-connection Distribution Box series (ECDB-65, ECDB-68) leverages QuickConnect technology for fast and easy FTTH last-mile deployment, supporting up to 16 QuickConnect drop cables.



QuickConnect drop cable



QuickConnect harden adapters

Key Features:

- Compact and sleek design
- Supports micro 1x8 and 1x16 splitters
- Modular design with dedicated functions
- Plug-and-play QuickConnect: No fusion splicing required
- **Easy installation**: Attach drop cables without opening the box
- Reliable sealing for fiber protection
- Mid-span cable support
- Flexible, detachable splicing trays
- Versatile mounting: Pole, wall, and aerial in-line installation
- **IP65-rated protection** for outdoor durability



Installation finished without opening the box

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# 4. Fiber Optical Splitters

Fiber optical splitters are vital for dividing optical signals into multiple paths, enabling simultaneous transmission to various recipients without compromising signal quality. These passive devices optimize fiber cable usage, eliminating the need for dedicated cables for each connection.

Types of Fiber Optical Splitters:

- 1. **FBT (Fused Biconical Taper) Splitters:** 
  - Technology: Fused biconical taper design.
  - Application: Cost-effective for many general-purpose applications.

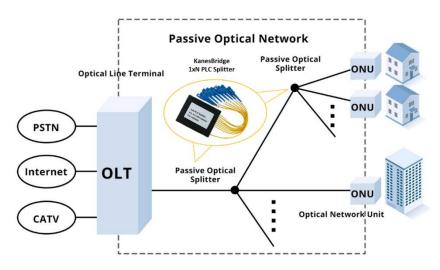
### 2. PLC (Planar Lightwave Circuit) Splitters:

- Technology: Planar lightwave circuit design.
- **Application:** Ideal for precise and reliable splitting, suitable for higher channel counts and complex networks.

Key Considerations:

- **Splitter Types:** Choose between FBT or PLC splitters based on your needs.
- **Fiber Mode:** Single-mode or multimode, depending on your fiber type.
- **Split Ratio:** Options range from equal 50/50 splits to various asymmetrical ratios, depending on power distribution requirements.
- Packaging Options:
  - Bare Fiber: Compact and cost-effective, ideal for FTTH, PON, LAN, CATV, and testing.
  - **Blockless:** Durable stainless-steel tube for enhanced protection, suitable for above distribution boxes or cabinets.
  - **ABS Module:** Plastic case with good protection for outdoor use in PON, FTTH, FTTX, and GOPN networks.
  - LGX and FHD Cassette: Metal box for standalone use or standard patch panels, plug-and-play integration.
  - **Rack-Mount:** Available in 1U and 2U sizes, fits 19-inch racks, excellent for EPON, GPON, FTTX, and high-density cabling environments.

KanesBridge offers a comprehensive range of fiber optical splitters tailored to meet your network's needs with superior performance and reliability.



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# 4.1 KanesBridge FBT Splitter

FBT (Fused Biconical Taper) splitters use traditional technology to divide optical signals by fusing multiple fibers together. This fusion process aligns fibers through controlled heating and protects them with a glass tube, reinforced by a stainless-steel cover. Despite being an older technology, FBT splitters offer a reliable and economical solution with notable advancements in quality.

Advantages and Considerations:

- Wavelengths: Supports 850nm, 1310nm, and 1550nm. Limited to these wavelengths.
- **Splitting Ratio:** Maximum of 1:32, allowing one or two inputs to be split into up to 32 outputs. Custom ratios include 1:3, 1:7, and 1:11.
- Splitting Uniformity: Slightly uneven signal distribution can affect transmission distance.
- Failure Rate: More suitable for networks with fewer splits (less than 4). Higher split ratios (above 1:8) may increase the failure rate and errors.
- Price: Generally lower-cost compared to PLC splitters due to simpler manufacturing.
- Size: Typically, bulkier compared to the more compact PLC splitters.

KanesBridge FBT splitters offer an affordable, reliable solution for various applications, especially where cost efficiency and simplicity are priorities. Use the information below to customise and order KanesBridge FBT Splitter products.

| KanesBridge FBT Splitter Product Information |  |   |   |  |   |  |  |  |  |  |
|--|--|---|---|--|---|--|--|--|--|--|
| Configurat<br>ion (Port)                     | Fiber<br>Mode  | Fiber<br>Diameter                                     | Connector/<br>Polishing   | Fiber Type   | Wavelength  | Split Ratio  | Package  |  |  |  |
| 0102=1x2<br>0202=2x2                         | 1=WBC<br>2=DWC<br>3=TWC<br>4=ABC<br>5=MMC<br>S=Specify | 0=250um<br>1=900um<br>2=2.0mm<br>3=3.0mm<br>S=Specify | 0=None<br>1=FC/APC<br>2=FC/UPC<br>3=SC/APC<br>4=SC/UPC<br>5=LC/APC<br>6=LC/UPC<br>7=ST<br>S=Specify | 1=G.657.A1<br>2=G.657.A2<br>3=G.657.B3<br>4=OM1<br>5=OM2,<br>OM3, OM4<br>S=Specify | 1=1310nm<br>2=1550nm<br>3=1310/1550<br>nm<br>4=1310/1490/<br>1550nm<br>5=1260-<br>1620nm<br>S=specify | 1=1/99<br>2=2/98<br>3=3/97<br>5=5/95<br>10=10/90<br>20=20/80<br>30=30/70<br>40=40/60<br>50=50/50 | 1=D2.4x30mm<br>2=D3x30mm<br>3=D3x40mm<br>4=D3x50mm<br>5=D3x54mm<br>6=90x20x10mm<br>7=100x80x10mm |  |  |  |

\*WBC is Wide Band Coupler, DWC is Dual Window Coupler, TWC is Three Window Coupler, ABC is All Band Coupler, and MMC is Multi Mode Coupler.

# 4.2 KanesBridge PLC Splitter

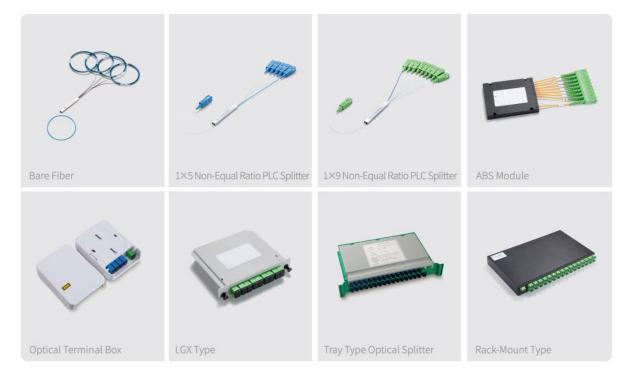
PLC (Planar Lightwave Circuit) splitters use cutting-edge technology to deliver precise, reliable optical signal splitting. Comprising a substrate, waveguide, and lid, PLC splitters ensure consistent signal distribution across various split ratios.

Key Features:

- Wavelength Range: Supports 1260 to 1650nm, making it versatile for diverse applications.
- **Splitting Ratio:** Available up to 1:64, allowing up to 64 outputs from one or two inputs. Standard ratios include 1:2, 1:4, 1:8, 1:16, and 1:32.
- Splitting Uniformity: Provides equal distribution across all branches for stable optical performance.
- Failure Rate: Lower failure rate compared to FBT splitters, ensuring higher reliability.
- Price: Generally higher than FBT splitters due to complex manufacturing processes.
- Size: Compact design, ideal for tight spaces such as patch panels or optical network terminals.

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KanesBridge PLC splitters offer exceptional performance and reliability for high-density and precision applications, balancing cost with advanced technology.



Use the information below to customise and order KanesBridge PLC Splitter products.

|  | KanesBridge P   | LC Splitter Product In                                | formation   |   |
|--|---|---|---|---|
| Configuration (Port)   | Package   | Fiber Diameter  | Connector/Polishing Type  | Fiber Length  |
| 0102=1x2<br>0104=1x4<br>0108=1x8<br>0116=1x16<br>0132=1x32<br>0164=1x64<br>1128=1x128<br>0202=2x2<br>0204=2x4<br>0208=2x8<br>0216=2x16<br>0232=2x32<br>0264=2x64<br>2128=2x128 | 1=Bare<br>2=Blockless<br>3=ABS<br>4=Insert<br>5=Pallet Type<br>6=Rackmount<br>S=Specify | 0=250um<br>1=900um<br>2=2.0mm<br>3=3.0mm<br>S=Specify | 0=None<br>1=FC/APC<br>2=FC/UPC<br>3=FC/APC<br>4=SC/APC<br>5=SC/UPC<br>6=LC/APC<br>7=LC/UPC<br>8=ST<br>S=Specify | 0=0.5m<br>1=1m<br>2=1.5m<br>3=2m<br>4=3m<br>5=4m<br>S=Specify |

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# 5. Fiber Optic Closures

KanesBridge Fiber Optic Closures provide secure, durable solutions for fiber optic splicing and cable protection in both outdoor and indoor environments. Available in dome (vertical) and horizontal types, they ensure reliable performance in harsh conditions while safeguarding fiber joints from damage.

# 5.1 KanesBridge Fiber Optic Joint Closures FOJC-96 & FOJC-144 (Dome Type)

Designed for outdoor cable connection and branching, these dome closures integrate fiber splicing, branching, bypass, and storage functions. They offer superior dust-proof and waterproof protection, ideal for challenging environments.



### Key Features:

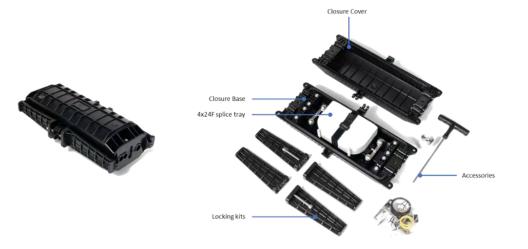
- Supports aerial and underground installations (accessories included)
- Modular splice trays for efficient fiber storage
- IP68 protection level (IEC 60529)
- Heat-shrinkable sealing for secure cable entry
- Easy re-entry without degrading performance
- High-impact thermoplastic body, mould-resistant per IEC 60068-2-10
- Reusable O-ring made of silicon-rubber
- Stainless steel components for corrosion resistance
- Cable entrance accommodates 8mm to 20mm shrinkage
- Operating temperature: -40°C to +65°C

# 5.2 KanesBridge FOJC 96H (Horizontal Type)

This horizontal closure provides reliable cable splicing, branching, and storage, with IP68 protection for outdoor applications.

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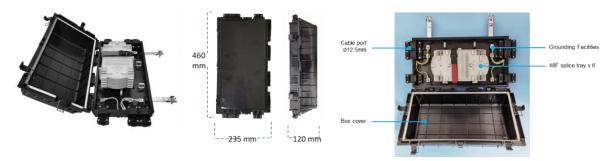


### Key Features:

- Mechanical sealing for optical cables
- IP68 protection level (IEC 60529)
- Supports aerial and underground installations (accessories included)
- Modular splice trays for organized fiber storage
- Durable thermoplastic body, mould-resistant
- Reusable sealing materials and stainless-steel components for corrosion resistance
- Supports 24-96 fiber cores with 3 in/out cable ports
- Operating temperature: -40°C to +65°C

# 5.3 KanesBridge In-Line Aerial Fiber Optic Splice Closure (AFOSC) Series

Perfect for aerial cable connections, the AFOSC series integrates fiber splicing, branching, and storage. Available in three sizes (AFOSC-60, AFOSC-144, and AFOSC-288), it supports up to 288 fiber splices and is designed for installation on messenger wires.



### KanesBridge AFOSC-288 (large type)

### Key Features:

- Durable plastic body for outdoor and aerial use
- Stainless steel components for corrosion resistance
- Easy installation and re-entry with modular splice trays
- Grounding facilities for lightning protection
- Protection level: IP55

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## 5.4 KanesBridge Vault

**KanesBridge Vault (VAT-S)** offers premium protection for telecommunications equipment in underground environments. Its modular, high-strength SMC design ensures quick, efficient on-site assembly and installation.



Key Features:

- Durable Construction: Made from high-strength, anti-corrosive, non-conducting SMC material
- Modular Design: Simplifies on-site assembly and allows for easy conduit drilling
- Efficient Installation: Equipped with internal mounting kits for fast, secure device setup
- **Compliance**: Meets SCTE-77 TIER 22 standards for durability and safety
- **Superior Efficiency**: Outperforms traditional concrete handholes and manholes in engineering efficiency
- **Customizable**: Logo customization available for branding

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# 6. Fiber Access Terminals

# 6.1 KanesBridge Indoor Fiber Access Terminal (24F & 48F FAT)

**KanesBridge Indoor FAT** is designed for MDU buildings, supporting 8-48 subscribers in FTTH networks with integrated splicing, splitting, distribution, and cable connections in a compact, wall-mounted enclosure.

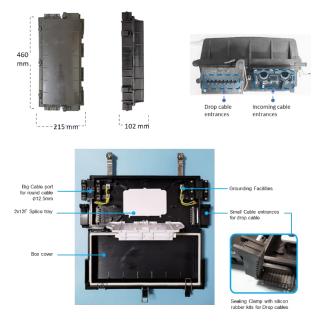
Key Features:

- Available in plastic or metallic options
- Integrated splicing and splitter installation
- Supports multiple splitter configurations (1:32, 1:16, 1:8, 1:4)
- Compatible with SC, LC, and FC connectors
- Mid-span, separate, or multi-in-one drop cable entrances
- Mechanical sealant system (no heat shrink required)



### 6.2 KanesBridge In-Line Fiber Access Terminal (In-Line FAT) with Splitter

This aerial FAT serves as a fiber distribution point in FTTH networks, offering splicing, termination, splitting, bypass, and cable storage. Supports up to 16 drop cables and integrates 1x8 or 1x16 splitters.



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Key Feature:

- Durable plastic body for outdoor and aerial use
- Stainless steel components for corrosion resistance
- Easy installation and re-entry design
- Integrated cassette splitters (1x8 or 1x16) and SC adapters
- Detachable, modular splice trays
- Grounding for lightning protection
- IP55 protection level

# 6.3 KanesBridge Fiber Terminal Box (FTB-ID-2F & FTB-OD-2F)

A wall-mounted indoor fiber socket for end-user access, providing fiber splicing, termination, and cable management.



Key Feature:

- Flame-retardant plastic, UL94 compliant
- Integrated splicing and termination functions
- Easy identification with embedded charts and logo positioning
- Supports fiber splicing or mechanical assembly with fast connectors
- Accommodates up to 2 fiber ports (SC or LC, APC or UPC)
- Mechanical locking system (no heat shrink required)

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# 7. Optical Fiber Cables and Mciro-ducts

# 7.1 PASV Optical Fiber Cables by KanesBridge

With 20 years of expertise and cutting-edge production facilities, PASV Telecom, a KanesBridge affiliate, manufactures high-performance optical fiber cables with an annual capacity of 14 million core-km and 360,000 km of finished cable. We offer fully customizable solutions, including product design and performance testing, as well as customized drums in size and printing.

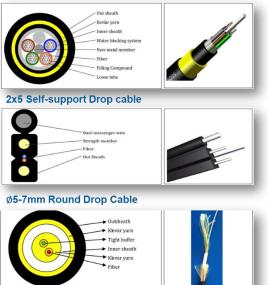
Our Optical Fiber Cable Range Includes:

- Duct Cables
- Buried Cables
- FIG-8 Self-Support Aerial Cable
- ADSS Cable
- Micro Fiber and Cable
- Underwater Installation Cable
- Ribbon Cable
- All Dry Cable
- Colour Stripe Cable
- Three-Strand Light Short Span Aerial Cable
- Easy Branch FIG-8 Self-Support Aerial Cable
- Lightning Protective Flat Cable
- Micro-Bundle Cable
- Low-Friction Drop Cable
- Invisible Drop Cable
- Anti-Rodent and Anti-Termite Cable
- Sewer Cable
- Pavement Cable

#### Loose tube duct cable



#### ADSS aerial cable



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# 7.2 KanesBridge Air Blown Micro-Ducts and Fiber Cable

KanesBridge Air Blown Micro-Ducts are designed for durability and effortless fiber cable installation, ideal for airblown fiber cable systems.

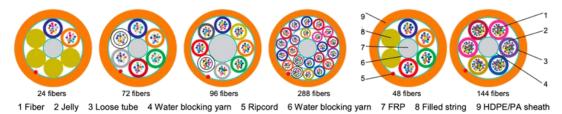


Key Features:

- Pre-installed micro-ducts for cost efficiency
- Easy to install and eco-friendly
- Symmetrical wall thickness for optimal performance
- Excellent blowing performance

# 7.3 KanesBridge Air Blown Fiber Cable

Our air-blown fiber cable features a compact, lightweight design with a durable thermoplastic outer sheath, ensuring high protection and superior installation capabilities for air-blown systems.



| P/N                     | Fiber count<br>(F) | Nominal diameter<br>(mm) | Nominal weight<br>(kg/km) | Max tensile strength<br>(N) | Temperature<br>(℃) |
|-------------------------|--------------------|--------------------------|---------------------------|-----------------------------|--------------------|
| MICRO-24G657A1200µm-PA  | 24                 | 4.4±0.2                  | 19                        | 200                         |                    |
| MICRO-36G657A1200µm-PA  | 36                 | 4.4±0.2                  | 19                        | 200                         |                    |
| MICRO-48G657A1200µm-PA  | 48                 | 4.4±0.2                  | 19                        | 200                         |                    |
| MICRO-60G657A1200µm-PA  | 60                 | 4.4±0.2                  | 19                        | 200                         |                    |
| MICRO-72G657A1200um-PA  | 72                 | 4.4±0.2                  | 19                        | 200                         |                    |
| MICRO-96G657A1200µm-PA  | 96                 | 5.3±0.2                  | 28                        | 500                         | -40 to +70         |
| MICRO-144G657A1200µm-PA | 144                | 6.0±0.2                  | 33                        | 500                         |                    |
| MICRO-192G657A1200µm-PA | 192                | 6.9±0.2                  | 52                        | 1000                        |                    |
| MICRO-240G657A1200µm-PA | 240                | 7.9±0.2                  | 60                        | 1000                        |                    |
| MICRO-288G657A1200µm-PA | 288                | 7.9±0.2                  | 60                        | 800                         |                    |
| MICRO-432G657A1200µm-PA | 432                | 9.3±0.2                  | 75                        | 800                         |                    |

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# 8. Passive WDM MUX and DEMUX

Enhance your optical communication systems with KanesBridge Wavelength Division Multiplexing (WDM) MUX and DEMUX devices. These critical components enable the simultaneous transmission of multiple signals over a single pair of optical fibers or a single optical fiber, boosting capacity and efficiency across your network.

Key Features:

- Efficient Signal Management: MUX devices combine multiple optical signals at different wavelengths into a single composite signal, while DEMUX devices separate them at the receiving end, optimizing data flow.
- Advanced Technology: Our solutions utilize cutting-edge techniques like arrayed waveguide gratings (AWGs) and thin-film filters (TFF) to ensure high performance and reliability.
- **Versatile Applications:** Ideal for telecommunications, data centers, cable television, and other high-speed, high-volume data transmission environments.

Types of MUX/DEMUX:

- **CWDM and DWDM:** Choose between Coarse Wavelength Division Multiplexing (CWDM) and Dense Wavelength Division Multiplexing (DWDM) to suit your specific network needs.
- Active and Passive Options: Our passive DWDM MUX/DEMUX devices require no power supply, offering a maintenance-free, plug-and-play solution that simplifies network management.

Key Benefits of KanesBridge WDM MUX/DEMUX:

- **Optimal for Metro, Long Haul, and Data Center Interconnect (DCI):** Seamlessly integrates with EDFA, OLP, OEO, and third-party WDM products, allowing for flexible and scalable network configurations.
- Supports Varied Transmission Rates: Transmit data at different rates simultaneously, compatible with coloured transceivers for applications such as 1G/10G/25G/40G/100G Ethernet, SDH/SONET, Fibre Channel, OTU3, and OTU4.
- User-Friendly and Cost-Effective: Each channel is clearly marked for easy identification, ensuring quick and accurate installation. The toolless, plug-and-play design simplifies the deployment of CWDM/DWDM MUX/DEMUX and MPO cassettes within a 1U space.

Choose KanesBridge for reliable, high-performance WDM solutions that enhance your network's capability and efficiency.

# 8.1 KanesBridge CWDM MUX/DEMUX

KanesBridge CWDM (Coarse Wavelength Division Multiplexing) solutions are perfect for enterprises and telecom access networks looking to enhance their connectivity with efficient, short-range applications. CWDM is ideal for point-to-point topologies, supporting up to 18 channels with data rates up to 10Gb, making it the go-to choice for networks that require reliable performance without the complexity of long-haul systems.

Key Applications:

- Line Monitoring: Keep track of network performance with real-time insights.
- WDM Networks: Seamlessly integrate with existing wavelength division multiplexing infrastructure.
- Telecommunications: Enhance voice and data transmission with high-quality connections.
- Cellular Networks: Boost mobile data traffic capacity and reliability.
- **Fiber Optical Amplifiers:** Extend the reach of your optical signals.
- Access Networks: Connect end-users with efficient and scalable solutions.

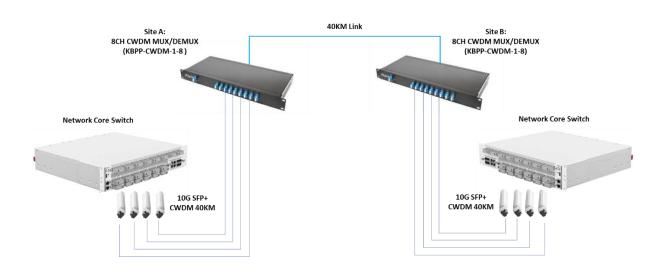
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Why Choose KanesBridge CWDM MUX/DEMUX:

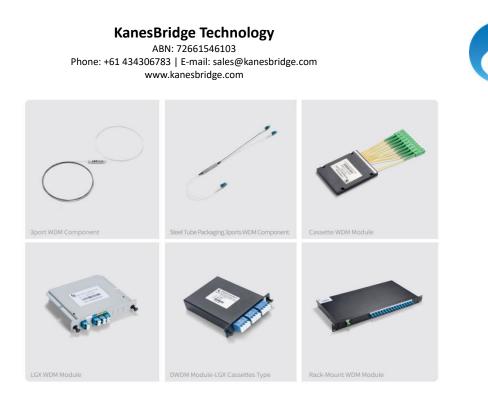
- **Tailored Solutions:** Our products can be customized to fit your specific network requirements, ensuring the perfect match for your unique needs.
- **Reliable Performance:** Designed for efficiency and reliability in environments that do not exceed 10Gb and 18 channels.

KanesBridge provides cutting-edge CWDM MUX/DEMUX devices, designed to enhance your network's efficiency and capacity. Our solutions leverage advanced technologies and proprietary designs to ensure superior performance and reliability.



KanesBridge CWDM MUX/DEMUX Types:

- Type 1: CWDM MUX/DEMUX Devices (4, 8, 16 Channels)
  - Utilizes thin-film coating technology.
  - Features a proprietary design with non-flux metal bonding micro-optics packaging.
  - o Ideal for high-performance multiplexing and demultiplexing.
- Type 2: 1x2 CWDM Devices (3 Ports)
  - Employs thin-film coating technology.
  - o Incorporates a proprietary design of non-flux metal bonding micro-optics packaging.
  - Perfect for efficient signal routing in compact applications.
- Type 3: Mini CWDM Devices (4, 8, 18 Channels)
  - o Integrated optical modules using a proprietary optical bench platform.
  - o Designed for compact, high-density environments requiring robust performance.



For a robust and adaptable network, trust KanesBridge to deliver high-performance CWDM solutions. Use the information below to customize, order KanesBridge CWDM and DWDM MUX/DEMUX products.

|   |                    | KanesBridge CWDM  | 1 MUX/DEMUX   | Product Ordering   | , Information   |  |                           |
|---|--------------------|---|---|--|---|--|---------------------------|
| Туре  | Channel<br>Spacing | Channels  | First<br>Channel  | Package  | Connector/<br>Polishing   | Fiber<br>Diameter                        | Fiber<br>Length           |
| Type 1:<br>CDWM<br>MUX/DEMUX<br>(1: 4, 8, 16<br>Channels) | 20nm               | 4= 4 Channels<br>8=8 Channels<br>16=16 Channels<br>18=18 Channels<br>N=N Channels | 27=1270nm<br><br>47=1470nm<br>49=1490nm<br><br>61=1610nm      | 1=ABS<br>2=Rackmount<br>3=LGX<br>4=Insert<br>S=Specify                                   | 0=None<br>1=FC/APC<br>2=FC/UPC<br>3=SC/APC<br>4=SC/UPC<br>5=LC/APC<br>6=LC/UPC<br>7=ST<br>S=Specify | 0=250um<br>1=900um<br>2=2.0mm<br>3=3.0mm | 1=1m<br>2=2m<br>S=Specify |
| Туре  | Channel<br>Spacing | Channels  | Pass<br>Channel   | Package  | Connector/<br>Polishing   | Fiber<br>Diameter                        | Fiber<br>Length           |
| Type 2:<br>1x2 CWDM<br>MUX/DEMUX<br>(3 Ports)             | 20nm               |   | 27=1270nm<br><br>47=1470nm<br>49=1490nm<br><br>61=1610nm      | 1=Steel Tube<br>2=ABS<br>S=Specify   | 0=None<br>1=FC/APC<br>2=FC/UPC<br>3=SC/APC<br>4=SC/UPC<br>5=LC/APC<br>6=LC/UPC<br>7=ST<br>S=Specify | 0=250um<br>1=900um<br>2=2.0mm<br>3=3.0mm | 1=1m<br>2=2m<br>S=Specify |
| Туре  | Channel<br>Spacing | Channels  | Express Port  | Package  | Connector/<br>Polishing   | Fiber<br>Diameter                        | Fiber<br>Length           |
| Type 3:<br>Mini CWDM<br>Devices (4, 8,<br>18 Channels)    | 20nm               | 4= 4 Channels<br>8=8 Channels<br>18=18 Channels<br>N=N Channels                   | 0=None<br>1=1310(±50<br>nm)<br>2=1260-<br>1458nm<br>S=Specify | 1=42.6x25x6.<br>2<br>2=44x28x6.2<br>3=44x25x6.2<br>4=54x32x7.4<br>5=60x50x6<br>S=Specify | 0=None<br>1=FC/APC<br>2=FC/UPC<br>3=SC/APC<br>4=SC/UPC<br>5=LC/APC<br>6=LC/UPC<br>7=ST<br>S=Specify | 0=250um<br>1=900um                       | 1=1m<br>2=2m<br>S=Specify |

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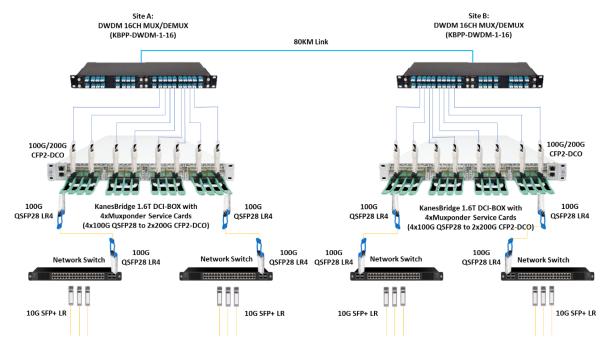


# 8.2 KanesBridge DWDM MUX/DEMUX

KanesBridge DWDM (Dense Wavelength Division Multiplexing) technology is your go-to solution for networks demanding higher speeds, greater channel capacity, and long-distance data transmission. Our DWDM solutions support amplifier integration, ensuring robust performance across extended distances.

Key Applications:

- **DWDM Networks:** Expand your network's capacity and reach with advanced wavelength division multiplexing.
- Wavelength Routing: Efficiently manage optical signals across complex networks.
- Channel Add/Drop: Seamlessly integrate new channels without disrupting existing traffic.
- CATV Fiber Optic Systems: Enhance cable television networks with high-speed data transmission.
- Fiber Optical Amplifiers: Boost signal strength and transmission distance.



KanesBridge Passive DWDM MUX/DEMUX Types:

- Type 1: 100/200GHz DWDM (4, 8, 16 Channels)
  - Features thin-film coating technology and a proprietary non-flux metal bonding micro-optics design.
  - Achieves optical add/drop at ITU wavelengths for precise channel management.
- Type 2: 100/200GHz 1x2 DWDM (3 Ports)
  - Incorporates thin-film coating and a proprietary non-flux metal bonding micro-optics design.
  - Offers ITU channel center wavelength, low insertion loss, high channel isolation, and wide passband.
  - Designed for wavelength add/drop in telecommunications networks with low temperature sensitivity and an epoxy-free optical path.

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### Type 1: 100/200GHz DWDM (4, 8, 16 Channels)

Choose KanesBridge DWDM MUX/DEMUX solutions for unparalleled network performance and scalability. Use the information below to customise and order KanesBridge DWDM MUX/DEMUX products today.

|  | KanesBridge DWDM MUX/DEMUX Product Ordering Information |   |                                    |  |   |  |                           |  |  |  |
|--|---|---|------------------------------------|--|---|--|---------------------------|--|--|--|
| Туре   | Channel<br>Spacing                                      | Channels  | First<br>Channel                   | Package  | Connector/<br>Polishing   | Fiber<br>Diameter                        | Fiber<br>Length           |  |  |  |
| Type 1:<br>100/200GHz<br>DWDM (4, 8,<br>16 Channels) | 1=100GHz<br>2=20GHz                                     | 4=4<br>Channels<br>8=8<br>Channels<br>16=16<br>Channels<br>N=N<br>Channels<br>S=Specify | 21=C21<br><br>34=C34<br><br>60=C60 | 1=ABS<br>2=Rackmount<br>3=LGX<br>4=Insert<br>S=Specify | 0=None<br>1=FC/APC<br>2=FC/UPC<br>3=SC/APC<br>4=SC/UPC<br>5=LC/APC<br>6=LC/UPC<br>7=ST<br>S=Specify | 0=250um<br>1=900um<br>2=2.0mm<br>3=3.0mm | 1=1m<br>2=2m<br>S=Specify |  |  |  |
| Туре   | Channel<br>Spacing                                      | Channels  | Pass<br>Channel                    | Package  | Connector/<br>Polishing   | Fiber<br>Diameter                        | Fiber<br>Length           |  |  |  |
| Type 2:<br>100/200GHz<br>1x2 DWDM (3<br>Ports)       | 1=100GHz<br>2=20GHz                                     |   | 01=CH01<br>02=CH02<br><br>60=CH60  | 1=Steel Tube<br>2=ABS<br>S=Specify                     | 0=None<br>1=FC/APC<br>2=FC/UPC<br>3=SC/APC<br>4=SC/UPC<br>5=LC/APC<br>6=LC/UPC<br>7=ST<br>S=Specify | 0=250um<br>1=900um<br>2=2.0mm<br>3=3.0mm | 1=1m<br>2=2m<br>S=Specify |  |  |  |

# 8.3 KanesBridge DWDM Optical Add/Drop Multiplexer (OADM)

KanesBridge DWDM Optical Add/Drop Multiplexers (OADM) are passive optical devices designed for advanced WDM networks. They efficiently add or drop one or multiple 100/200GHz DWDM channels in the C-band, while bypassing other wavelengths, to streamline and expand your network.

Key Features:

- Flexible Configurations: Available in single-sided (East or West) and dual-sided (East and West) models.
- **Channel Management:** Add or drop 4 or 8 data channels at any point along a single-mode fiber trunk.
- Seamless Integration: Compatible with matching MUX/DEMUX units for transmitting multiple data channels over a single fiber.
- **Extended Reach:** Enhances WDM capabilities and extends optical signal transmission distances.

Ideal For:

- 10/1G Ethernet
- 16/8/4/2/1G Fibre Channel
- SDH/SONET
- Video and CATV
- FTTx Applications

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KanesBridge DWDM OADMs offer modular and scalable solutions to meet your network's evolving needs. Upgrade with KanesBridge for reliable, high-performance optical networking.







Use the information below to customise and order KanesBridge DWDM OADM products today.

| KanesBridge DWDM OADM Product Ordering Information |                                    |                                    |  |   |  |                           |  |  |  |
|--|------------------------------------|------------------------------------|--|---|--|---------------------------|--|--|--|
| Channel Spacing                                    | Channels                           | First<br>Channel                   | Package  | Connector/Polishing   | Fiber<br>Diameter                        | Fiber<br>Length           |  |  |  |
| 1=100GHz<br>2=200GHz                               | 1=4<br>Channels<br>2=8<br>Channels | 21=C21<br><br>34=C34<br><br>60=C60 | 1=ABS<br>2=Rackmount<br>3=LGX<br>4=Insert<br>S=Specify | 0=None<br>1=FC/APC<br>2=FC/UPC<br>3=SC/APC<br>4=SC/UPC<br>5=LC/APC<br>6=LC/UPC<br>7=ST<br>S=Specify | 0=250um<br>1=900um<br>2=2.0mm<br>3=3.0mm | 1=1m<br>2=2m<br>S=Specify |  |  |  |

### 8.4 KanesBridge Arrayed Waveguide Grating (AWG) WDM

KanesBridge offers advanced Wavelength Division Multiplexing (WDM) technologies to meet diverse networking needs. Choose from Thin Film Filter (TFF) and Arrayed Waveguide Grating (AWG) technologies for your applications. **Thin Film Filter (TFF)** is Ideal for networks with ≤16 channels and best suited for low-channel-capacity CWDM metropolitan applications. **Arrayed Waveguide Grating (AWG)** is perfect for high-channel-capacity DWDM systems needing 40 or 48 wavelengths, utilising Planar Lightwave Circuit (PLC) technology for superior wavelength isolation, high channel count, and bandwidth. This is ideal for long-distance, high-speed optical communication.



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KanesBridge AWG WDM Products:

- 40/48CH 100G Athermal AWG
- Mini 100G Athermal AWG
- 40/48CH 200G Athermal AWG
- 80CH 50G Athermal AWG
- 96CH 50G PM Athermal AWG

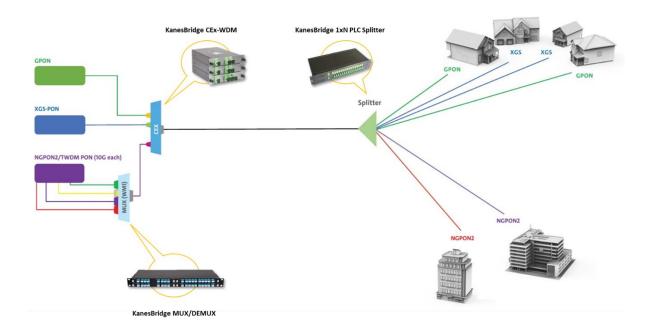


Choose KanesBridge for reliable, high-performance WDM solutions tailored to your network's demands. Use the information below to customise and order KanesBridge AWG products.

|                      |   | KanesBri  | idge Atherma  | AWG Product C                     | ordering Information  |                           |                          |
|----------------------|---|---|---|-----------------------------------|---|---------------------------|--------------------------|
| Channel<br>Spacing   | Band  | Channels  | First<br>Channel                                      | Package                           | Connector/Polishing   | Fiber<br>Length           | Filter Shape             |
| 1=100GHz<br>2=200GHz | C=C Band<br>L= L band<br>D=C+L<br>Band<br>S=Specify | 16=16<br>Channels<br>32=32<br>Channels<br>40=40<br>Channels<br>48=48<br>Channels<br>S=Specify | C60=C60<br>H59=H59<br>C59=C59<br>H58=H58<br>S=Specify | 1=ABS<br>2=Rackmount<br>S=Specify | 0=None<br>1=FC/APC<br>2=FC/UPC<br>3=SC/APC<br>4=SC/UPC<br>5=LC/APC<br>6=LC/UPC<br>7=ST<br>S=Specify | 1=1m<br>2=2m<br>S=Specify | 1=Flat Top<br>2=Gaussian |

# 8.5 KanesBridge Coexistence Element WDM (CEx-WDM)

KanesBridge Coexistence Elements (CEx) for xWDM/xPON multiplexers are designed to integrate existing G-PON FTTH services with new XGS-PON and NG-PON2 technologies. These versatile WDM devices also support additional wavelengths for RF, Point-to-Point (PtP), and OTDR monitoring.



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Key Features:

- **Comprehensive Integration:** Combines G-PON with XGS-PON and NG-PON2 technologies in a single device.
- Versatile Provisioning: Supports RF, PtP, and OTDR monitoring wavelengths.
- **High Compliance:** Meets ITU-T G.984.5 standards for superior performance.
- **Exceptional Quality:** Utilizes premium optical components for low loss, high stability, and excellent thermal performance.

Why Choose KanesBridge CEx?

- Flexible Platform: Tailor your CEx to include all required PON services or select only the specific services you need.
- **Superior Performance:** Ensures robust network reliability and the highest operational stability across the spectral range.

Elevate your network with KanesBridge's reliable and cost-effective Coexistence Elements for seamless PON technology integration.



Use the information below to customise and order KanesBridge CEx-WDM products.

| KanesBridge Coexistance WDM (CEx-WDM) Product Ordering Information  |  |   |  |                           |  |  |  |
|---|--|---|--|---------------------------|--|--|--|
| Channels  | Package  | Connector/Polishing   | Fiber<br>Diameter                        | Fiber Length              |  |  |  |
| 1=GPON/XGPON<br>2=GPON/XGPON/OTDR<br>3=GPON/XGPON/NGON2<br>4=GPON/XGPON/NGPON2/OTDR<br>5=GPON/NGPON2/OTDR<br>6=GPON/NGPON2/OTDR | 1=ABS<br>2=Rackmount<br>3=LGX<br>4=Insert<br>S=Specify | 0=None<br>1=FC/APC<br>2=FC/UPC<br>3=SC/APC<br>4=SC/UPC<br>5=LC/APC<br>6=LC/UPC<br>7=ST<br>S=Specify | 0=250um<br>1=900um<br>2=2.0mm<br>3=3.0mm | 1=1m<br>2=2m<br>S=Specify |  |  |  |

### 8.6 KanesBridge CATV + PON Triplexer

FTTH networks deliver exceptional signal quality and high bitrate, making them ideal for offering television services via CATV (optical television). CATV typically operates on a dedicated optical wavelength, commonly 1550 nm in FTTH networks. However, using 1310 nm for CATV requires a separate fiber, doubling infrastructure costs and equipment.

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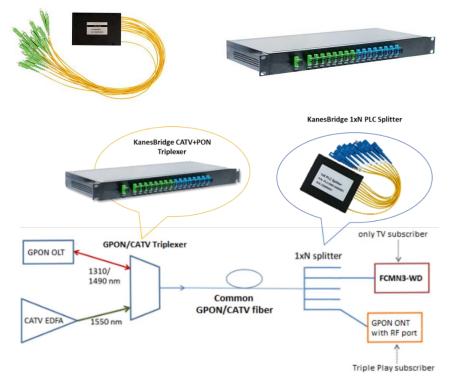
Seamless Integration with RF Overlay

To streamline deployment and reduce costs, KanesBridge offers PON/CATV triplexers that combine GPON and CATV signals into a single fiber. This RF overlay solution enables:

- 1550 nm CATV Integration: Allows CATV and GPON to share a single fiber using WDM technology.
- Efficient Multiplexing: Combines 1310nm(GPON), 1490nm(GPON), & 1550nm(CATV) signals in one fiber.
- **Customizable Solutions:** Available with customizable channels and packaging to meet specific network requirements.

Key Benefits:

- **Cost-Effective Deployment:** Reduces the need for additional fibers, splitters, and equipment.
- **Simplified Network:** Minimizes subscriber equipment and infrastructure.



Choose KanesBridge's PON/CATV triplexers for a cost-effective and efficient solution to integrate CATV services with your FTTH network. Use the information below to customise and order KanesBridge CEx-CATV+PON Triplexer products.

| KanesBridge CATV+PON WDM Triplex Product Ordering Information |  |  |   |  |                           |  |  |
|---|--|--|---|--|---------------------------|--|--|
| Wavelength  | Channels Package   |  | Connector/Polishing   | Fiber<br>Diameter                        | Fiber Length              |  |  |
| 5/34=1550 pass/1310 &<br>1490 reflect                         | 4= 4<br>Channels<br>8=8 Channels<br>16=16<br>Channels<br>32=32<br>Channels | 1=ABS<br>2=Rackmount<br>3=LGX<br>4=Insert<br>5=Specify | 0=None<br>1=FC/APC<br>2=FC/UPC<br>3=SC/APC<br>4=SC/UPC<br>5=LC/APC<br>6=LC/UPC<br>7=ST<br>S=Specify | 0=250um<br>1=900um<br>2=2.0mm<br>3=3.0mm | 1=1m<br>2=2m<br>S=Specify |  |  |

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# 9. Fiber Optical Switch

Fiber optical switches are crucial components in optical networks, allowing for flexible management of optical signals. They enable signal routing, wavelength switching, and network protection with high precision.

Basic Types of Fiber Optical Switches:

- **Mechanical Optical Switches**: Ideal for traditional switching needs with proven reliability. These switches use moving optical fibers, prisms, and reflectors to manage light paths.
  - **Advantages**: Low insertion loss (<1dB), high isolation (>45dB), and wavelength-independent.
  - Limitations: Larger size, slower switching times (milliseconds), and potential issues with mechanical durability.
- MEMS (Micro-electro-mechanical System) Optical Switches: Cutting-edge technology combining micro-optics and semiconductor processing. MEMS switches use tiny movable mirrors controlled by electrostatic or electromagnetic forces.
  - o Advantages: Compact size, fast switching times (microseconds), and high integration.
  - **Limitations**: May have higher initial costs.

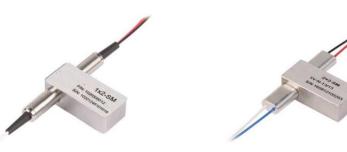
KanesBridge Offers:

- Mechanical Optical Switches: 1x1, 1x2, 2x2, 2x2B, 1xN, D1x2, D2x2, D2x2B
- MEMS Switches: 1xN

Applications:

- Wavelength Division Multiplexing (WDM) systems
- Optical Time Division Multiplexing (OTDM) systems
- Optical Cross-connect (OXC) systems
- Network protection and monitoring
- Optical add/drop multiplexing
- Optical testing and sensing

Choose KanesBridge for reliable, high-performance fiber optic switches to meet your network demands.





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Use the information below to customise and order KanesBridge optical switch products.

|   | KanesBridge Fiber Optical Switch Product Information |  |                 |                                  |   |  |   |                             |
|---|--|--|-----------------|----------------------------------|---|--|---|-----------------------------|
| Switch Type   | Fiber<br>Mode  | Wavelength   | Voltage<br>Type | Control<br>Mode                  | Connector<br>/Polishing   | Fiber Type   | Fiber<br>Diameter                                     | Fiber<br>Length             |
| 1=1x1<br>Mechanical<br>Optical Switch<br>2=1x2<br>Mechanical<br>Optical Switch<br>3=2x2<br>Mechanical<br>Optical Switch<br>4=2x2B<br>Mechanical<br>Optical Switch<br>5=1xN<br>Mechanical<br>Optical Switch<br>6=D1x2<br>Mechanical<br>Optical Switch<br>7=D2x2<br>Mechanical<br>Optical Switch<br>8=D2x2B<br>Mechanical<br>Optical Switch<br>9=1xN MEMS<br>Switch | S=SM<br>M=M<br>M                                     | 85=850nm<br>13=1310nm<br>15=1550nm<br>65=1650nm<br>35=1310/15<br>50nm<br>S=Specify | 3=3V<br>5=5V    | L=Latching<br>N=Non-<br>Latching | 0=None<br>1=FC/APC<br>2=FC/UPC<br>3=SC/APC<br>4=SC/UPC<br>5=LC/APC<br>6=LC/UPC<br>7=ST<br>S=Specify | 1=SM<br>9/125<br>2=MM<br>50/125<br>3=MM<br>62.5/125<br>S=Specify | 0=250um<br>1=900um<br>2=2.0mm<br>3=3.0mm<br>S=Specify | 1=1m<br>2=1.5m<br>S=Specify |

KanesBridge Product 2024
Passive Optical Products





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