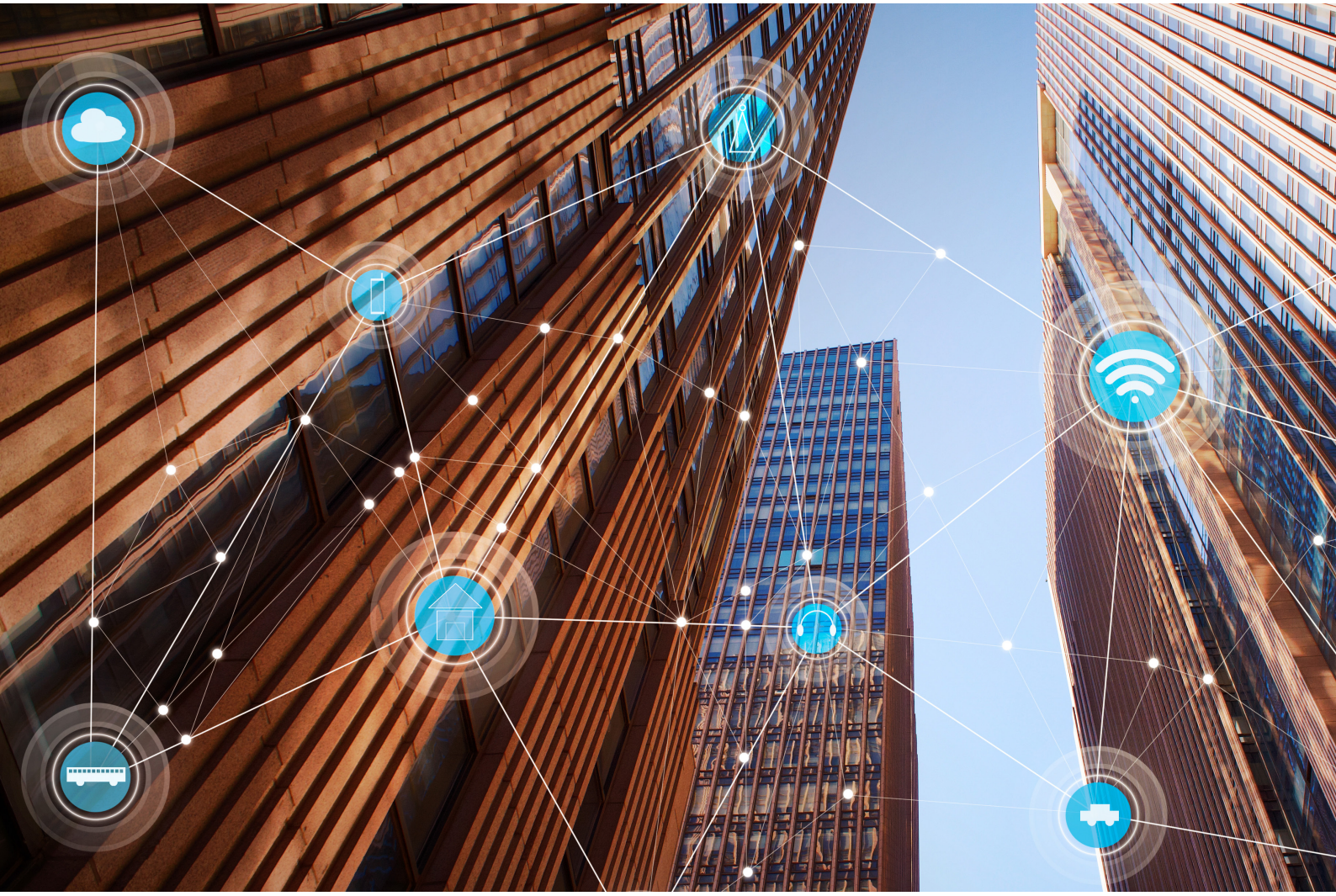
FIBER TO THE X (FTTx) ›
NEXT GENERATION NETWORK ACCESS



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Optimized Solutions for Next Generation Passive Optical Network Challenges

Increased bandwidth demand is driving Passive Optical Network (PON) implementation. Where there is existing PON infrastructure, providers are extending the life of the existing network by upgrading or adding to the existing network. These so-called “brownfield deployments” of new PON infrastructure require new optical devices in order to leverage the existing Passive Optical Network and allow coexistence (CEx) of different generations of PON.

Since Optical Network Terminations (ONT) can now receive multiple wavelengths, a blocking filter (WBF) may become necessary to avoid interference issues. In the case of NGPON-2 deployments, a solution for muxing and demuxing wavelengths at the Optical Line Termination (OLT) is required as well.

Molex integrates its optical expertise with a strong capability in mechanical design, software development, electronic integration and supply chain management to deliver market-leading solutions and services. We have a long track record of providing many of the highest performing, field-proven wavelength management products in the market. We deliver end-to-end solutions for the optical infrastructure of next-generation networks.

Molex can provide technically optimized solutions for the new PON challenges

- Manufacturer with 3,000-employee factory making WDMs from filter/subcomponent level
- Manufacturing excellence with more than 20 years’ track record of delivering WDM products
- Large production capacity of 3,000+ devices per day
- Advanced proprietary automation WDM alignment and testing processes
- Manufacturing automation for scale, flexibility and consistency
- Vertically integrated with in-house thin-film filter coating and filter packaging capabilities which are critical to WDM’s performance, cost and quality
- Reduce total cost of ownership by consolidating the supply base with one global leading optical solution partner

As a strong vertically integrated company, Molex meets each customer’s unique challenge by offering wavelength management solutions that include a broad portfolio of products and capabilities — from components to intelligent modules and from circuit packs to transport boxes.

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Coexistence Module (CEx)

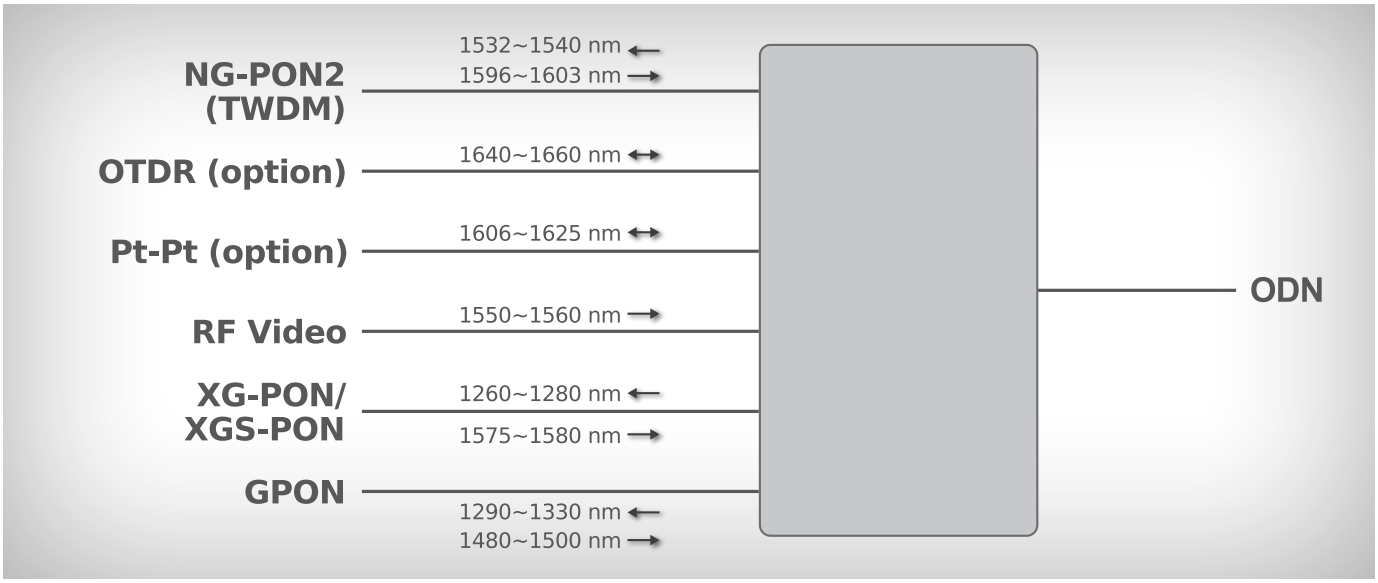
The Molex Coexistence Module (CEx) supports coexistence of all legacies (ITU G.984.5) and can be customized to your requirements.

The module fits in a 19” 2RU chassis and can accomodate up to 6 pluggable cassettes with each capable of hosting two CEx or Wavelength Multiplexer Modules (WM1) (1RU and 3RU chassis also available).

Features

- Very flexible design to accommodate any combination of legacy and future services and standards
- High quality and reliability to support industrial environment temperature range (-40° to +85°C)
- Unique athermal TFF device packaging design to achieve high performance with low insertion loss as well as low temperature dependent loss
- Assembled inside standard LGX style cassette or any customized cassettes, including outside plant enclosures

Optical network spectrum



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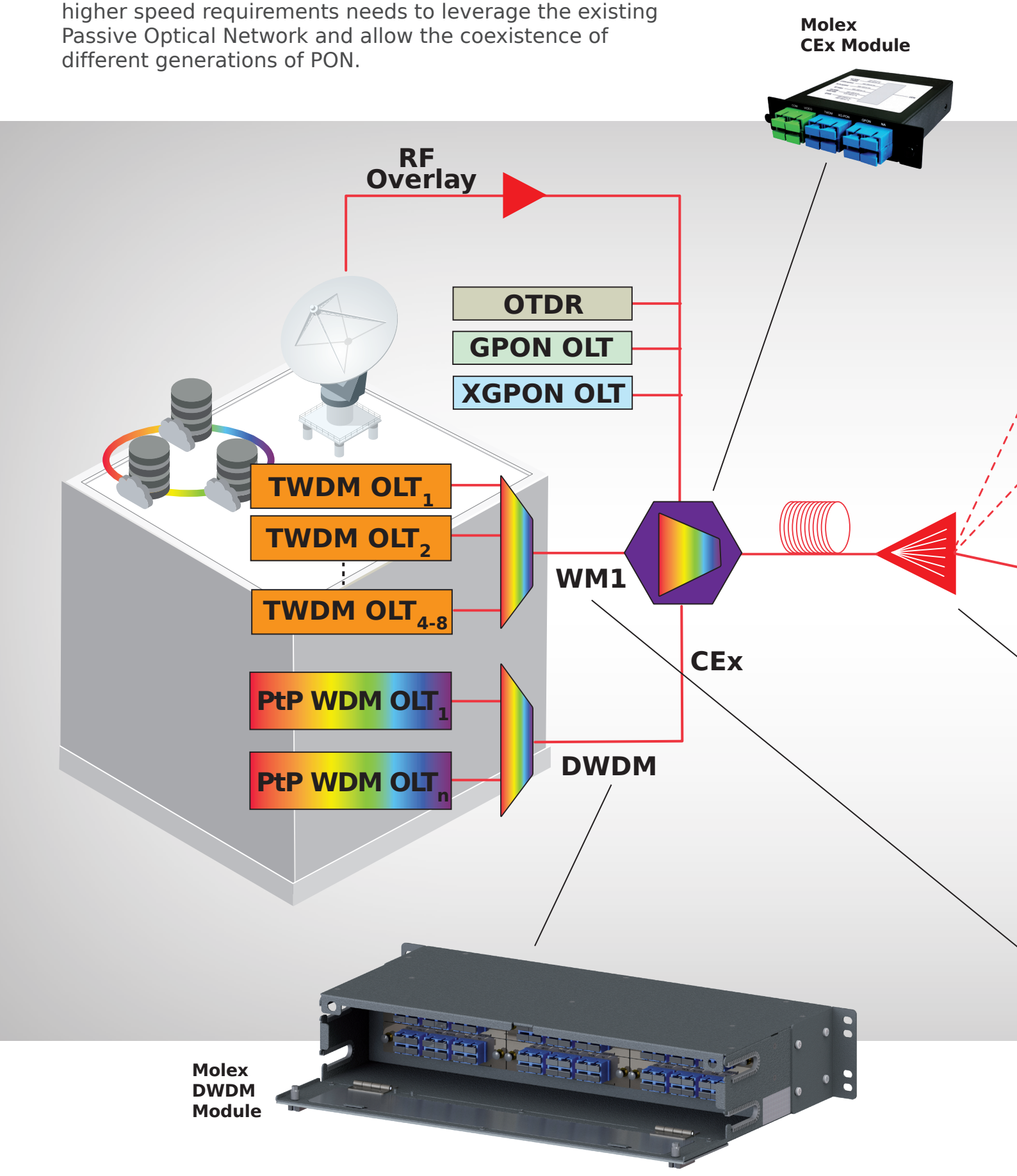
FTTx / Passive Optical Network (PON) ›

Progress in Passive Optical Network standards to adapt to higher speed requirements needs to leverage the existing Passive Optical Network and allow the coexistence of different generations of PON.



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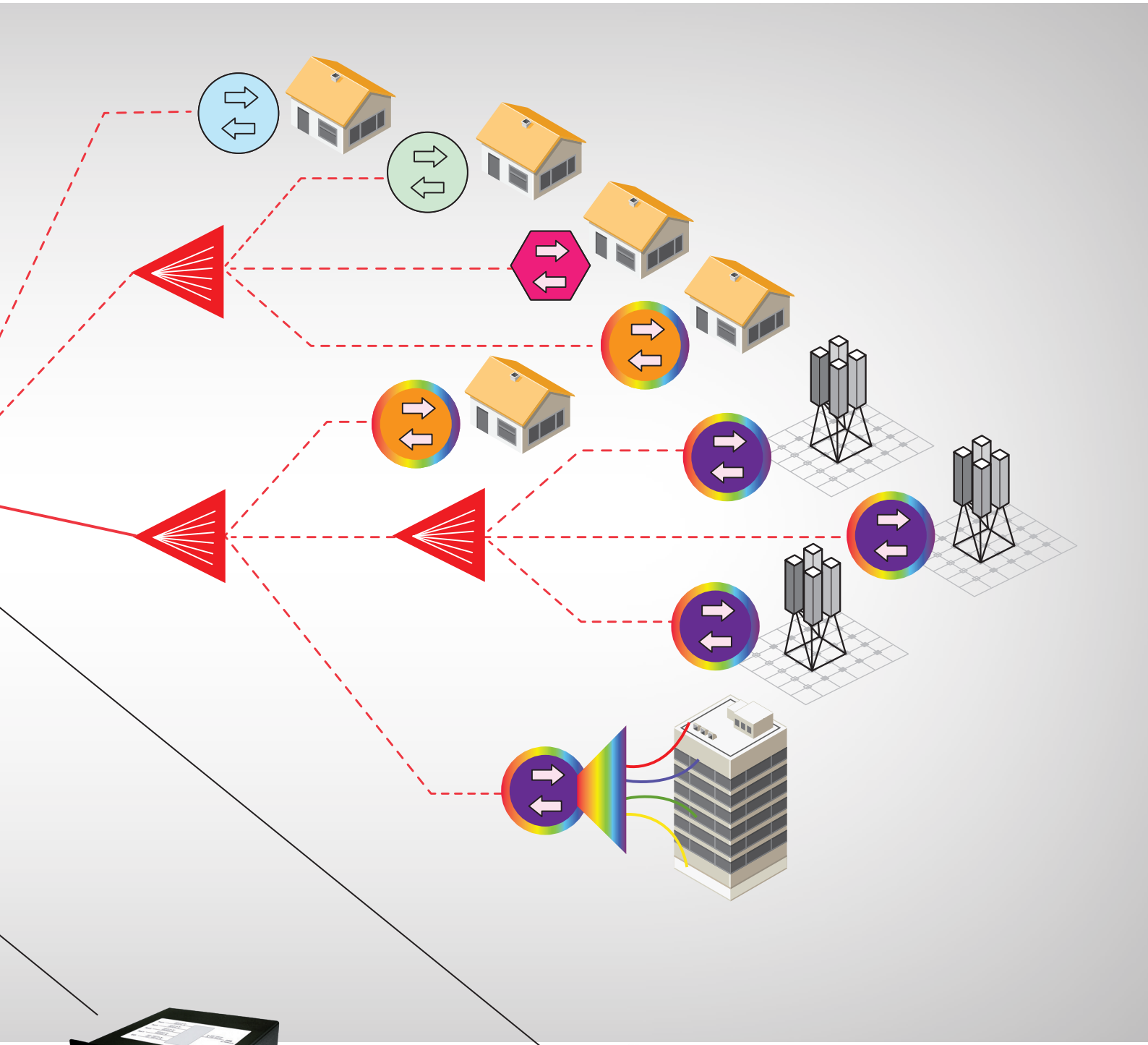

Molex WM1 Module

Molex Splitter Module

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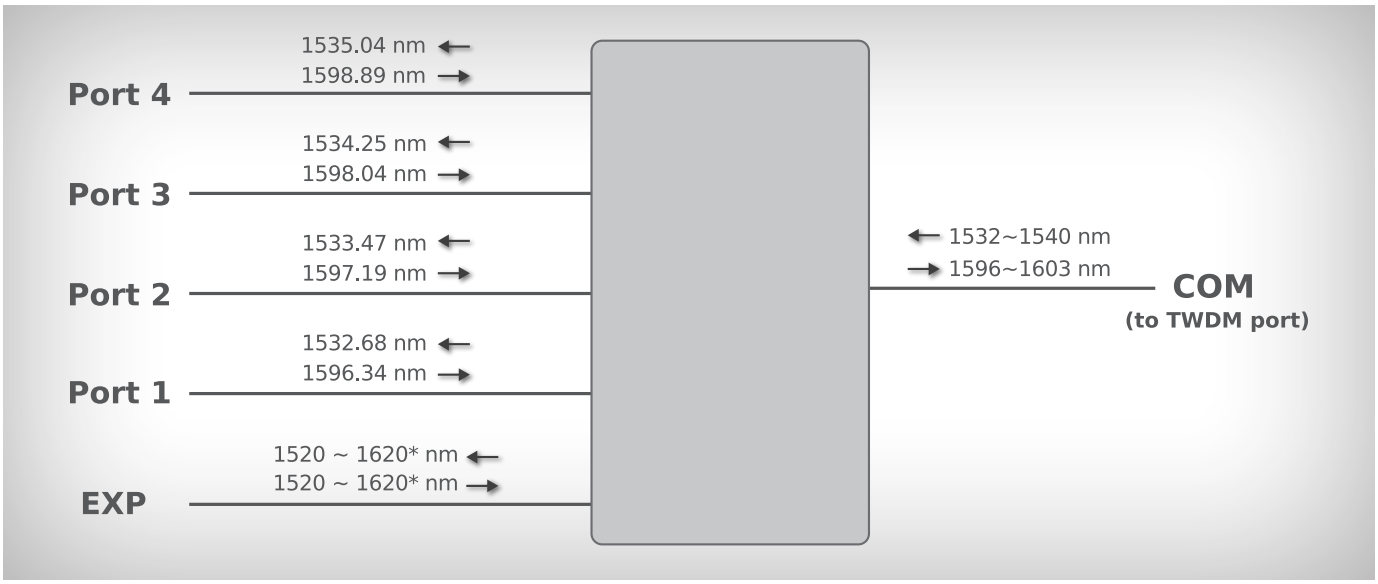
Wavelength Multiplexer (WM1) and Dense Wavelength Division Multiplexing (DWDM) Solutions

Features

- Supports both C and L band DWDM bi-directional transmission
- Supports NG-PON2 4 channel and 8 channel standards as well as any proprietary design
- High reliability and excellent performance
- Supports industrial temperature range (-40° to +85°C) and various standard or proprietary cassettes and enclosures



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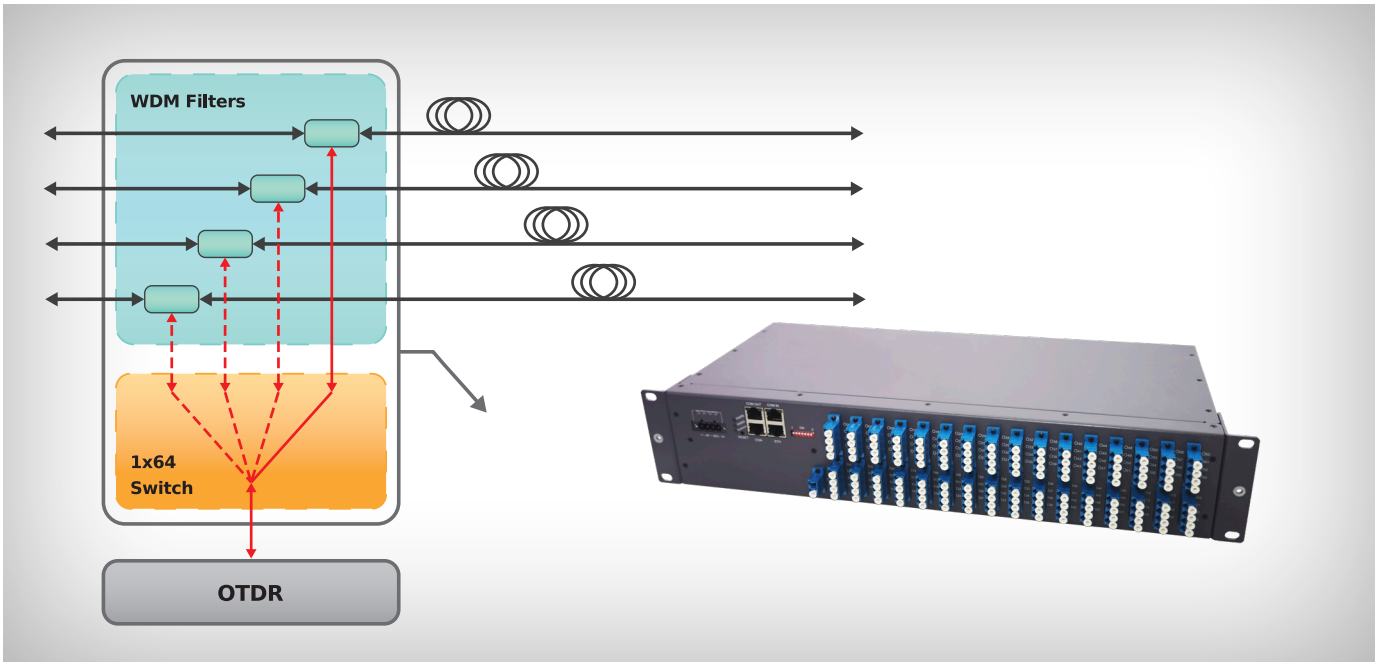
1x48 /1x64 Switch for OTDR Multi-point Monitoring

Features

- Injects OTDR light source into fiber via WDM filter
- Monitor 64 fibers with one OTDR through 1x64 switch
- WDM filters and switch can be assembled in one chassis to save space, or housed in separated chassis



Attenuator

Features

- Excellent performance with variously fixed attenuation values for industrial standard connectors
- Wide attenuation range
- Low return loss
- Polarization insensitive
- Various connector type

Fiber Optic Cross Connection Outdoor Cabinet

Features

- Designed for outdoor optical nodes in access networks
- High intensity and anti-erosion performance
- Able to counter abrupt climate change and extreme environment
- Capacity can be flexibly customized as required
- Installation is quick and convenient
- Built-in direct splice unit is capable for providing direct connection function
- With secure and reliable fastening and grounding protection devices for the optic fiber
- Applicable to strap-shaped and non-strap shaped fibers

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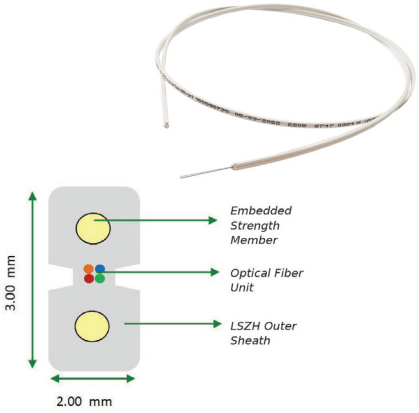
1-4 Fiber All Dielectric 250µm FTTH Flat Drop Cable

Features

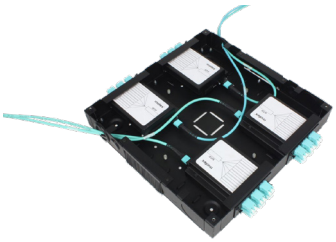
- 1-4 250µm individually colored optical fibers with fiber reinforced plastic (FRP) strength members and Low smoke Zero Halogen (LS0H) jacket
- Choice of fiber types
- Individually colored optical fibers
- Notched construction for easy stripping
- White LS0H jacket for internal use
- Internal FTTH applications - horizontal and riser



Zone Enclosures

Features

- Robust, versatile product designed to house passive and active network equipment in a conveniently located ceiling space
- Accommodates up to 96 fiber splices or MTP/MPO fibers and active equipment
- Manufactured from aluminum with a steel network platform
- Access door finished in white powder coat
- Lockable for network equipment security
- Network equipment platform incudes 19” equipment mounting rails, allowing 5U of capacity including an integral cable management plate for the support of incoming and outgoing cable bundles
- Also available in a raised-floor format



Modular Splitter Box

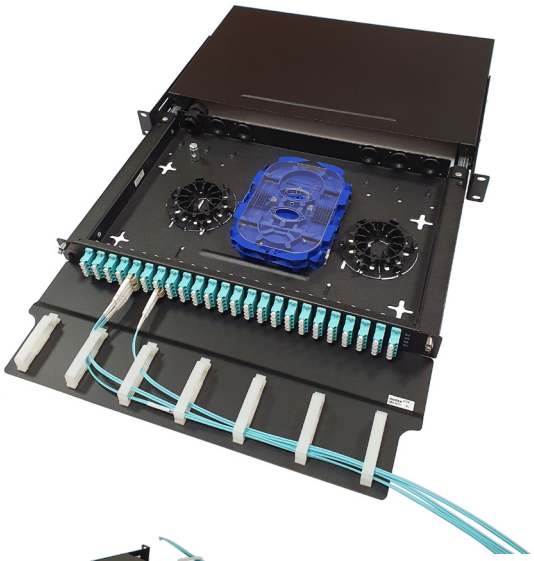
Features

- Splits the optical light power from one route into different routes
- Wide operating wavelength range: 1260-1650nm
- Supports NG-PON2, XG-PON, GPON, EPON
- Excellent Channel IL Uniformity
- Low PDL
- Support industrial temperature range (-40° to +85°C)
- 6-PAK standard footprint

1U Multi-Function Fiber Enclosure

Features

- Self-adhesive fiber management hub is stackable and can be segmented providing individualisation of fiber routing
- Optional front cable management allows for secure routing of patch cords can be retrofitted
- Optional front cable management allows secure routing of patch cords
- Compatible with Molex’s 6 Pak Adapter plate program that allows 6-24 fiber connections per plate / 72 fiber MTP connections per plate
- Accommodates up to 4 ModLink Quick Connect Cassettes which allows 12-24 fiber connections per cassette with various interfacing adapters
- Accommodates up to 4 Modular Splice Cassettes which allows 6-24 fiber connections per cassette.
- Optional locking kit provides security
- Incorporates heavy duty ball bearing slides for smooth and limited extension of the drawer, allowing access
- LC adapter plate options designed specifically for FTTx applications



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Wall-Mounted Steel Enclosure

Features

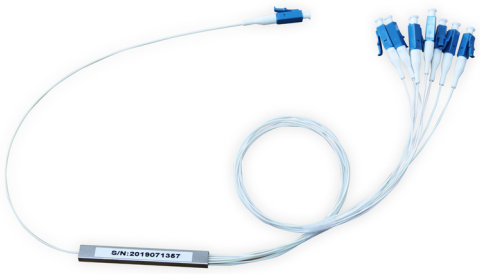
- Rugged steel (CRS) construction in black
- Up to 48 fibers
- Accepts SC Duplex and LC Quad Adapters
- Multiple entry points top and bottom
- Fully secured with lockable secured steel doors
- Robust cable management shelf ensures bend radius compliance

Outdoor Splice Enclosure

Features

- Used for optical fiber cable splicing and protection in outdoor environment
- Dome style or In-Line style
- Various choice based on fiber counts
- Wide capability range 12-576 fibers
- IP68(Dome) and IP65(In-Line)
- Compact size
- High reliability

PLC Splitter Solution



Features

- Splits the optical light power from one route into different routes
- Wide operating wavelength range: 1260-1650nm
- From 1X2 to 1X64 Capability
- Excellent Channel IL Uniformity
- Low PDL
- Supports industrial temperature range (-40° to +85°C)
- Low loss connector optional

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Fiber-To-The-Desk Modules

50 x 50mm and 25mm x 50mm Modules

- Singlemode or Multimode solution, supporting SC, ST and LC fiber technology
- Permits a 30mm bend radius
- For use within Euromod Wallplates

Single Bezel Modules

- Available in Singlemode or Multimode versions
- Available in 5 colors
- DataGate footprint
- Fits into Synergy, Streamline, Signature, USO II and Euromod wallplates and surface blocks

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www.molexces.com/solutions-overview/passive-optical-networks/

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Order No. FTTX-PON CES/SK/2022.12