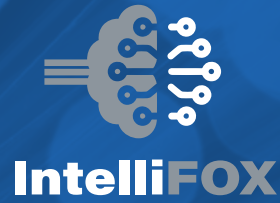




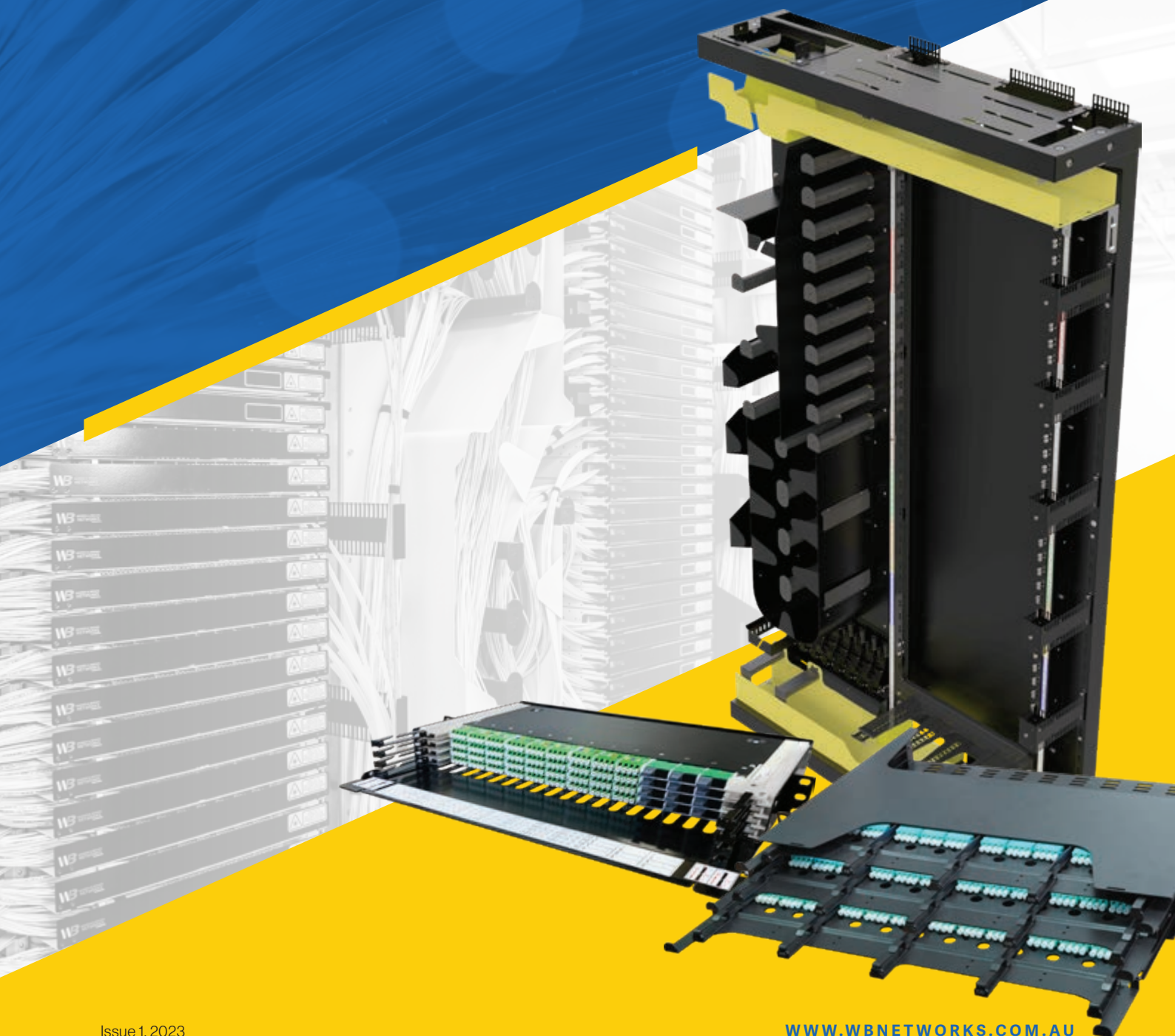
Leading the way in
Comms, Rail and
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Intelligent Fibre Optic Infrastructure

Data Centre & Telecom Networks



About Warren & Brown Technologies

Warren & Brown Technologies (WBT) was originally established in 1921 as a tool-making factory in Melbourne, Australia. Since then, the company has evolved to become a leader in precision tools and ICT connectivity infrastructure, specializing in optical fibre infrastructure.

WBT has remained wholly Australian owned and operated for over 100 years, with local and overseas design and manufacturing facilities. This commitment to the ICT industry has provided ongoing innovation and operational efficiencies for network operators worldwide, as WBT continue to grow its presence on a global scale.



Australian

Owned and Operated



300+ Employees



3 Manufacturing facilities



6 Sales offices



Worldwide Distribution

We don't believe in network downtime, anywhere and at anytime!



Product Design & Manufacturing

innovative & world leading solutions



Technology Leadership

telecom, data centre & enterprise networks



Fast Product Development Cycle

weeks not months



Quality Products & Systems

ISO 9001 third party certified



Proven Track Record

official supplier to NBN & Telstra



Supply Chain Management

progressive logistics solutions

About the IntelliFOX solution range










Intelligent Fibre optic infrastructure

The WBT IntelliFOX infrastructure solution is a world leading product range, that provides network operators with unrivalled flexibility and deployment options.

For Data centre and telecom network operators, the IntelliFOX solution provides technical, commercial and operational efficiencies, allowing them to build and operate a world class network.

The key advantages which elevate the IntelliFOX solution include the following:

- **Scalability.** Future proofing networks and providing the ability to easily scale and increase density as required.
- **High density.** Leading density of up to 144F LC per RU across various product sets, with up to 5,184LC fibre per ODF in only 1200mm wide x 300mm deep footprint
- **Usability.** Rapid deployment with fast plug and play infrastructure options and simplified installation practices for managing cross connects and new links.
- **Resilience.** The use of quality components to provide leading mechanical and optical performance.
- **End to end infrastructure.** Complete system of ODF hardware, termination panels, pre-terminated modules, trunk cabling and patchleads.
- **Customer support.** Full suite of installation and operational documentation to streamline every deployment.

SPLICE INTERCONNECTS AND IR REQUIREMENTS	PRE-TERM INTERCONNECTS AND IR REQUIREMENTS	CROSS CONNECTS AND ZONE FRAMES	EQUIPMENT RACK
			
<p>Optical distribution frame - TC4050310BDC</p>	<p>Optical distribution frame - TC4050310BDC</p>	<p>Optical distribution frame - TC4050310BDC or TC4050 patch /cross connect frame</p>	
			
<p>Fibre termination panels - 7106 series - LC, LC/A or MTP splicing</p>	<p>Fibre termination panels and cassettes (MTP-LC or LC/A) - TC7010 series or IntelliFOX Blade</p>	<p>Fibre termination panels and cassettes (MTP-LC or LC/A) - TC7010 series or IntelliFOX Blade</p>	<p>Fibre termination panels and cassettes (MTP-LC or LC/A) - HypaFOX or HypaFOX Z-Slim</p>
<p>ACCESSORIES IF REQUIRED</p>			
			
<p>Cable breakout kits</p>		<p>Mass fusion splice tray</p>	

Plus, trunk cables, patch leads and accessories as required

IntelliFOX Optical Fibre Infrastructure solution overview

WBT fibre optic infrastructure solutions have elevated cable management to the next level. These scalable, high density solutions can be deployed separately or as an end to end solution in a Data Centre or Telecommunications network.

Application options and solution include:

- Interconnect / Meet Me Room (IR/MMR) and carrier ODF/FTP solution for splicing onto LC, LC/A or MTP
- Interconnect / Meet Me Room (IR/MMR) and carrier ODF/FTP solution for pre-terminated LC, LC/A or MTP
- Data Hall Zone frame/cross-connect ODF/FTP solution for preterm MTP/MPO-LC distribution or cross connects
- Customer or Equipment rack deployment with MTP-LC chassis and cassettes
- MTP/MPO pre-terminated trunk cabling from 12-144F
- Patchleads and accessories

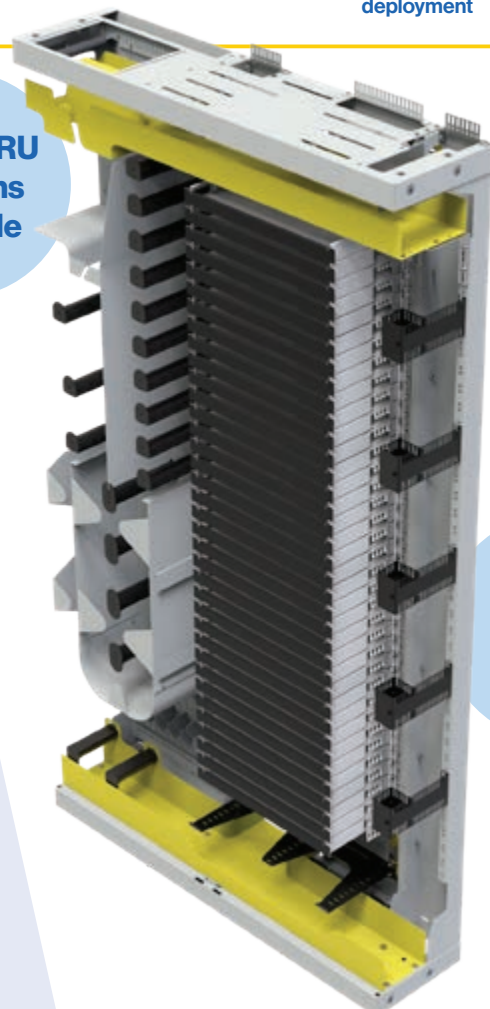


ODF scalability of up to 144 Fibres per RU

144 Fibres
LC-LC/A
per RU modules
(splice &/or patch)

5,184F
in 300mm deep,
single side ODF*
deployment

**96F per RU
solutions
available**



**3624F
per ODF
available**

Optical Distribution Frames & Optical Cross Connect Frames

Warren & Brown Technologies (WBT) IntelliFOX optical distribution frames (ODF's) play a crucial role in the management and distribution of fibre optic cables in a network. It provides a centralized location for terminating, splicing, and managing delicate optical fibre cables, ensuring that the network is well-organized, secure, and easily maintainable.

WBT IntelliFOX ODF's can be configured to operate as a splicing/patching frame or pre-terminated MTP-LC cross connect frame in a Data centre interconnect room. Furthermore, they can also be configured as a Data Centre zone frame, or simply as a patch only cross connect frame.

One of the main benefits of the WBT IntelliFOX ODF, is its front single sided access capability, allowing it to be placed against walls, back to back (1200 x 600mm), or at the end of aisles, requiring minimal floor space.

These are leading edge and proven advanced solutions, with similar variations of the footprints currently being deployed with major telecommunication carriers.

Many variations are available of the WBT optical distribution frames, however the recommended product for Data Centre and Telecom Exchange applications is as follows:

- High density size 1200mm (W) x 300mm (D) x 2200mm (H). Shallow depth footprint. Shorter 1800mm high ODF also available
- High density port count, based on LC/APC or LC/PC connectivity, thereby significantly reducing floor space and associated lease costs within the DC environment
- Premium fibre cable management. Simplified splicing, patching and cable management
- Optimized balance between density and usability, thereby minimizing points of failure and operational risks
- Various patch cord and connectivity options
- ODF suitability and compatibility with high density cable sizes for future expansion
- Modular solution with ability to customize the IntelliFOX ODF range as splice only, splice/patch, pre-terminated MTP-LC cabling for standard or cross connect requirements, depending on fibre trays installed.
- ODF's have internal cross patching flexibility to allow for easy transition from external cable to internal tie cables
- Internal ducting (top & bottom) and pathways for ODF side by side and back to back installation and patch cord routing for suite deployment
- Various door locking and security options, including electronic locks or open (no doors or side panels)
- Available in Light Grey (RAL 7035) or Black (RAL 9005)
- Provided with full installation guidelines and compatible with ultra high density fibre patch panels
- Lower density and space saving 600mm wide also available

IntelliFOX Optical distribution Frame – TC4050310 series

1200mm wide x 300mm deep, single sided access

The 310 series ODF range is a 21" rear mounting configuration rack (with or without optional side panels and/or doors). ODF's can be joined back to back and side to side to form an optical suite, or they can be installed as a stand alone deployments.

Compatible with left pivot swing trays or pre-terminated cabling systems.

Application

- Telecom Carrier Network ODF
- Splicing / patching or pre-terminated cabling for Data Centre MMR / IR
- Data Hall Zone Frame
- Fibre entrance facility/room splice and patch frame
- Optical Fibre Cross connect frame

Features & Benefits

- Maximum ODF LC fibre density of up to 5,184 fibre ports (splice & Patch, or patch only), when using LC duplex uniboot patchcords
- Suitable for 96F and 144F per RU high density deployment configuration
- Space saving, single sided access solution with dimensions of 1200mm (W) x 300mm (D) x 2200mm (H)
- 1.8m high ODF also available
- The central rack area holds up to 18 x 2RU or 36 x 1RU subrack/panels, which are available separately
- 21" Rails for high density application while still allowing 19" mounting
- Integrated internal ducting for ODF suite deployment (back to back and/or side to side)
- Cable slack management provided (can accommodate a maximum of 4.1m patch cord overlength)
- ODF suitability and compatibility with high density cable sizes for future expansion
- Offset design to provide increased patchcord management capacity
- Cable breakout and tie off points
- Oversized cable entry ports to allow for high capacity of cables and patchleads
- Available with optional side panels and door kits
- Scalable and modular system with additional FTP's deployed as required
- Additional accessories available, including mass fusion splice trays and cable breakout kits

Suitable for use with the following fibre termination panels –

- 7106 series splice / patch FTPs – 144F per RU
- TC7010 series chassis and cassettes – 144F per RU
- IntelliFOX Blade chassis and cassettes – 144F per RU
- HypaFOX front access solutions – 96F per RU
- 7006 series – 96F per RU
- Mass fusion splice tray
- Legacy HypaFOX front access chassis and cassettes, 3RU 6010 series and 2RU 6008 series



TC4050310E
shown

PART NO.	DESCRIPTION
TC4050310EDC	ODF 1200mm (W) x 300mm (D) x 2200mm (H) (top&bottom internal duct), IntelliFOX, grey
TC4050310BDC	ODF 1200mm (W) x 300mm (D) x 2200mm (H) (top&bottom internal duct), IntelliFOX, black

Accessories

PART NO.	DESCRIPTION
TC4050-170DCKITE	Door and side panel kit to suit 2200mm high ODF. Grey side panels, grey doors
TC4050-170DCKITB	Door and side panel kit to suit 2200mm high ODF. Black side panels, black doors
TC4050-349KIT-GY10	Duct cover side panels for ODF, grey
TC4050-349KIT-BK10	Duct cover side panels for ODF, black
TC4050TMKIT	Underfloor mounting kit for ODF

IntelliFOX Optical distribution Frame – TC4050200 series

600mm wide x 300mm deep, single sided access

The 200 series ODF range is a 19" rear mounting configuration rack (with or without optional side panels and/or doors). Two frames can be installed back to back and can easily be added / integrated to an existing 1200mm wide or 600mm wide ODF installations, as well as be deployed as a standalone ODF.

Compatible with left pivot swing trays or pre-terminated cabling systems, 2 models are available for splice/patch, or patch only pre-terminated cabling systems.

Medium Density Optical Distribution Frame, Splice and patch, top fibre management and storage – 600mm wide x 300mm deep

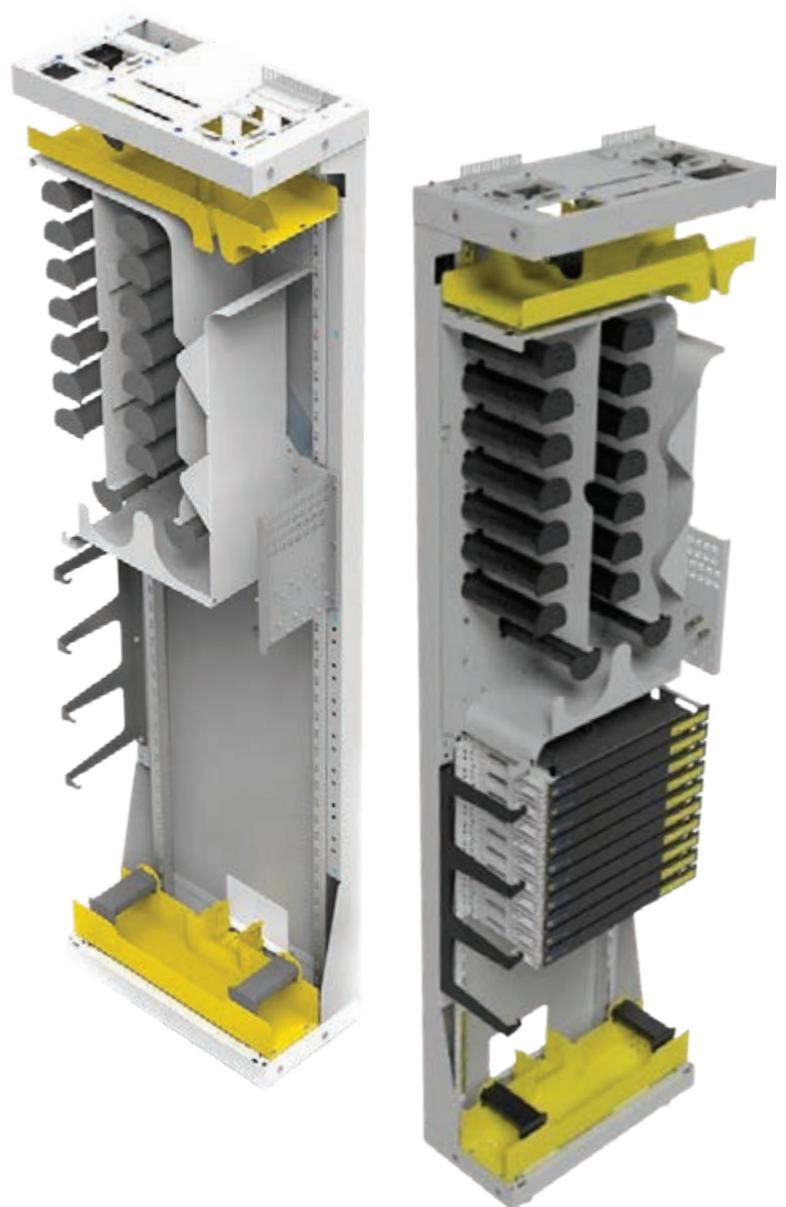
Product Number - TC4050200

Features & benefits:

- Capacity for 2RU 72F SC/A 6008 series FTP's
- 576 fibre terminations (8 x 72F 2RU SC/A patch panels) with underfloor cable entry.
- Capacity for 1RU 144F LC 7106 series FTP's
- Up to 1,440LC fibre terminations. Can accept up to 10 x 144F 1RU High density FTP's (7106 series).
Use with 2mm uniboot duplex patch cords
- Stand alone or optical suite deployment.
- Accepts a variety of left hand pivot, 19", rear mount, 2RU 6008 series WBT patch panels, or ultra high density 7106 series FTP's.
- Optional 2-point locking doors, and side panels.
- Cable breakout manifold kits can be purchased separately.
- Patchcord overlength storage and routing.

Suitable fibre trays

- 6008 series 2RU left pivot – 72F SC/A
- 7106 series 1RU left pivot – 144F LC
- IntelliFOX blade
- HypaFOX front access cassettes and chassis – 96F per RU



Optical Fibre Cross Connect Frame, IntelliFOX ODFCX, centralised fibre management and storage – 600mm wide x 300mm deep

Product Number - TC4050200ECX

The IntelliFOX ODFCX Optical Distribution Frame (ODF) is designed to be used as a cross connect ODF in a Telecommunications or Data centre network, or as a Data Hall Zone frame. The innovative, compact design allows for more deployment options in a reduced footprint of 600mm (W) x 300mm (D) x 2200mm (H), providing network operators with great flexibility.

Incoming and outgoing cabling is segregated into top and bottom clusters, with fibre patch cord storage and management along the left hand side and central fibre spool compartment.

The ODFCX is scalable, allowing for low, medium, and high-density fibre network options based on the type and number of fibre panels deployed.

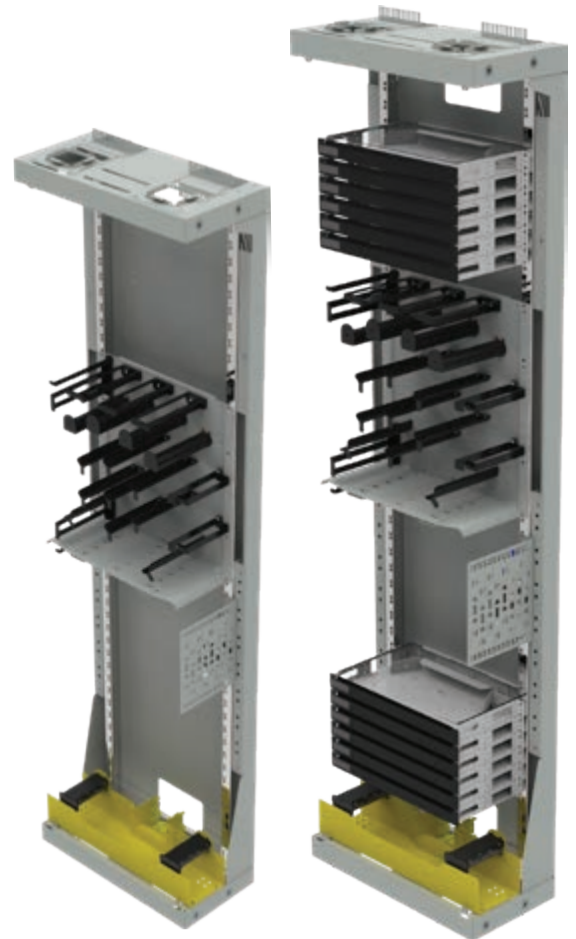
Benefits

- Space saving 600mm wide x 300mm deep footprint. 2200mm high
- Centralised fibre optic cable management spools and storage
- Standardised 19" rear mount rails
- Simplified single sided access
- Scalable for low, medium and high density fibre optics
- Suitable for splice/patch applications with bespoke cable breakout manifolds and accessories available.
- Suitable for pre-terminated LC-MTP cabling and cross connects
- Internal top/bottom cross connect functionality
- Additional extras such as side panels and lockable doors are available
- All fibre management subracks and accessories can be purchased separately and deployed as required
- Minimum capacity of 864F LC ports for both top and bottom clusters. Minimum of 1,728 fibres when using 2mm uniboot round duplex cord
- Simplified deployment and installation of ODF's, FTP's with ongoing time saving operational efficiencies
- Can be configured and deployed as a Data Hall zone frame

Suitable fibre management trays for scalable deployments

- 7106 High density 1RU 144 fibres LC or LC/A splice and patch FTP
- IntelliFOX Blade front access chassis and cassettes – up to 144LC & 12 MTP/MPO fibres per RU
- HypaFOX front access cassettes and chassis – 96F per RU

PART NO.	DESCRIPTION
TC4050200	Medium Density Optical Distribution Frame, Splice and patch, top fibre management and storage – 600mm wide x 300mm deep
TC4050200ECX	Optical Fibre Cross Connect Frame, IntelliFOX ODFCX, centralised fibre management and storage – 600mm wide x 300mm deep
TC4050-171DCKITME	600mm wide ODF door & side panel kit, mechanical door, grey
TC4050-349KIT2-GY10	600mm wide ODF-Side panel duct covers for TC4050-171DCKITME



Optical Fibre Cross connect frame

Patch only, 1200mm (w) x 300mm (d) x 2200mm (h)

Product Number - TC4050111EDC

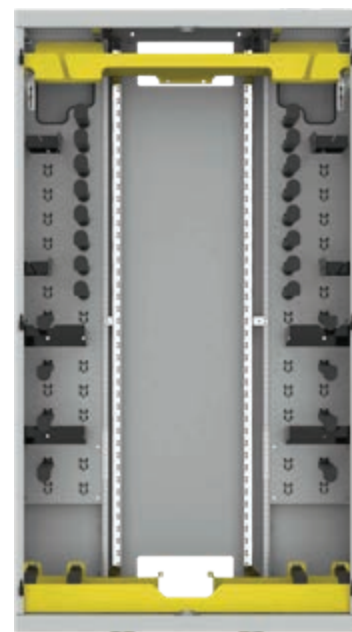
This Patch only ODF can be deployed as a cross connect frame and can accommodate up to 27x 1RU LC/A or LC modular and scalable patch only subracks. Each fully equipped subrack allows up to 192x patch connections (Total of 96x uniboot cords), giving the HDODF a total capacity of up to 5,184 LC/A patch connections (Total of 2,592 uniboot cords).

Offers an intra-suite cross connect patching solution of up to 5,184x LC/A patch connections

- Accepts 1RU IntelliFOX Blade patch-patch chassis and cassette
- Optical fibre cord storage unit provided on either side of the HDODF, with 2x columns of storage/guiding bollards.
- Series of cable management brackets installed throughout the side panels.
- Cut-out openings on either top side of the back panel and 2x cut-out openings on either top side of the side panels, for incoming cable segregation / management.
- Optical fibre cords can leave the HDODF at either the top or bottom of the fibre storage units.
- Storage units provide a smooth transition for leaving fibre cables from the subracks, i.e., there are no sharp edges.
- Security doors available for purchase.
- System designed for LC-LC patching, or MTP-LC patching

Features and benefits

- 1RU IntelliFOX Blade chassis can accommodate up to 4x ¼ RU Slide-out Subassembly trays.
- Each ¼ RU IntelliFOX Blade cassette is fitted with 12x LC/A or LC quad through adapters. Total of 48 fibre LC or LC/A cross connect patch connections.
- Each cassette features 24 fibre LC or LC/A in, and 24 fibre LC or LC/A out connections
- Customisation options and MTP, SC, SC/A, LC, CS Connector support (Any mix of connectors supported)
- All ports and cassettes are clearly labelled and numbered for easy port identification.



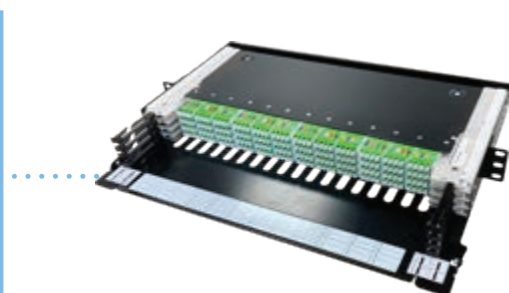
PART NO.	DESCRIPTION
TC4050111EDC	Optical Fibre Cross connect frame - Patch only, 1200mm (w) x 300mm (d) x 2200mm (h)
720632403L01A	IntelliFOX Blade 1RU slimline, horizontal 4 slot patch panel (to suit 300mm deep ODF)
812632403B09A	IntelliFOX Blade cassette - slimline cross connect cassette - LC/A-LC/A singlemode, 48 Fibre
812632403B10A	IntelliFOX Blade cassette - slimline cross connect cassette - LC-LC singlemode, 48 Fibre
72063243006041B	IntelliFOX Blade 1RU Optical Cross connect subrack with 4x ¼RU Subassembly Trays, LC-LC Patch-Patch, 192 fibre Patch capacity, Mid-rear mount
72063243005041B	IntelliFOX Blade 1RU Optical Cross connect subrack with 4x ¼RU Subassembly Trays, LC/A - LC/A Patch-Patch, 192 fibre Patch capacity, Mid-rear mount

Also suitable for the HypaFOX front access solution

IntelliFOX Blade

In relation to the modular chassis and cassette system installed in the TC4050111EDC optical cross connect frame, IntelliFOX Blade 1RU chassis and cassette system is recommended. For cross connect fibre management, each 1RU chassis can be loaded with 4x ¼ RU slide-out Patch-Patch cassettes. Each ¼ RU cassette can accommodate 48 fibre patch connections via 12x LC/A quad through adapters situated at the front of each sub-tray. A fully loaded 1RU subrack equates to a total of 192 fibre LC/A or LC patch connections.

Each ¼ RU Subassembly tray can slide in and out independently via the main subrack chassis' side rails, making it easy for connecting and connector maintenance work.



Find out more on page 13

Solutions for splicing – 7106 series

7106 series FTPs (1RU) for ODF and Equipment Rack applications

144 fibres, splice & patch, swing out

Application Rollable ribbon
Loose tube / stranded fibre cable
Splicing microcore / distribution cabling

The 7106 Series is an innovative ultra high density Fibre Termination Panel (FTP), providing up to 144 fibres LC or LC/A ports, splice and patch in only 1RU. Suitable for deployment in WBT 300mm deep ODF's or standard equipment racks, this solution provides unmatched density and usability.

- 1RU, LC or LC/A
- Single row fibre access, allowing for easy patching and access to ports. Perfect balance between density and usability
- Models to suit loose tube, stranded fibre or rollable ribbon fibre
- Each 1/4" RU panel row pivots and slides out separately to allow for finger access to each port
- Each LC or LC/A FTP has 4 x 1/4" RU tray, each with a 36-fibre capacity, providing 144F LC or LC/A per RU
- Pivot tray design allows for easy access to splice area
- Innovative pivot and slide function for each row to allow for simplified patching management
- Compatible with WBT ODF systems and patch cords
- Narrow depth – mounts in a 300mm deep rack. Other comparable products require mounting in a 600mm/800mm deep rack
- Supplied fully loaded with adaptors and stripped pigtailed, ordered as one part number
- Compact and shallow depth to suit 300mm deep ODF, providing total ODF density of up to 5,472 ports
- 72F SC/A FTP also available



PART NO.	RU	FIBRES	CONNECTORS	DESCRIPTION
71063241008081L			LC Singlemode	Stranded fibre, Splice & Patch, 19&21" mounting
71063241007081L			LC/A Singlemode	Stranded fibre, Splice & Patch, 19&21" mounting
71063241001081L			LC/A Singlemode, Grade A	Stranded fibre, Splice & Patch, 19&21" mounting
71063241010081L			LC Singlemode, Grade A	Stranded fibre, Splice & Patch, 19&21" mounting
71063241011081L	1RU, left pivot	144 fibres	LC Multimode OM4 aqua	Stranded fibre, Splice & Patch, 19&21" mounting
71063241012081L			LC Multimode OM4 violet	Stranded fibre, Splice & Patch, 19&21" mounting
71063241009081L			LC Singlemode	Rollable Ribbon fibre, Splice & Patch, 19&21" mounting
71063241014081L			LC/A Singlemode	Rollable Ribbon fibre, Splice & Patch, 19&21" mounting

7106 series FTPs (1RU) for ODF and Equipment Rack applications

432 fibres, splice & patch, swing out

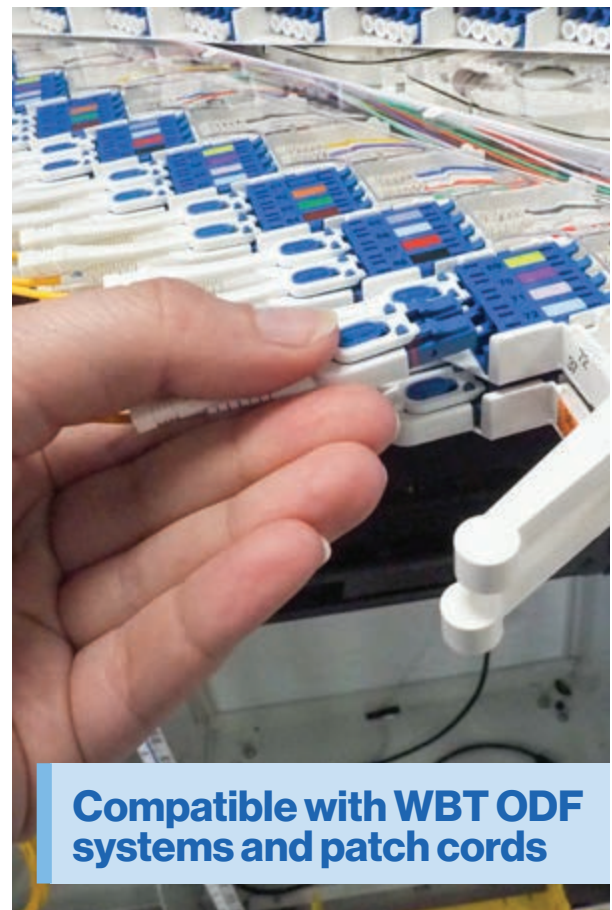
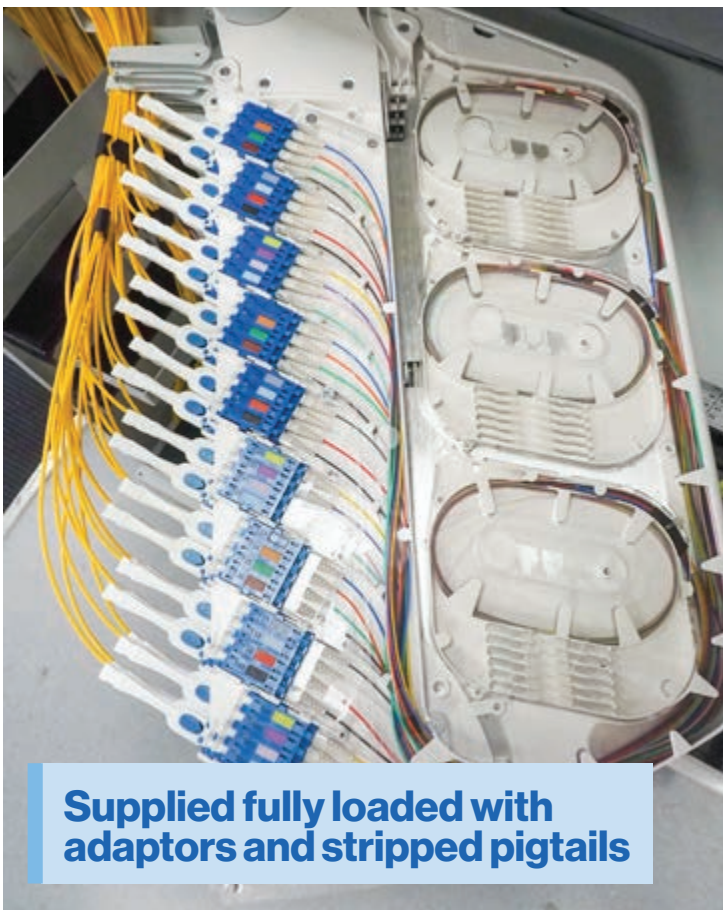
Application Rollable ribbon

This innovative offering can be used if using ultra high density rollable ribbon fibre (e.g. 864F, 1728F, 3456F), which allows for direct splicing onto MTP connectivity, thereby further increasing density and reducing additional connectors.

- Single row fibre access, allowing for easy patching and access to ports. Perfect balance between density and usability
- MTP / MPO connectivity
- Each 1/4" RU panel row pivots and slides out separately to allow for finger access to each port
- Each 1/4" RU row has a 108-fibre capacity, 432F per RU
- Compatible with WBT ODF systems and patch cords
- Supplied fully loaded with adaptors and stripped pigtailed, ordered as one part number



PART NO.	RU	FIBRES	CONNECTORS	DESCRIPTION
71063241013081L	1RU, left pivot	432 fibres	MTP/A Elite Singlemode	Rollable Ribbon fibre, Splice & Patch, 19&21" mounting



Solutions for pre-terminated ODF cabling – TC7010 series

TC7010 series FTPs

144 fibres, splice &/or patch, swing out

Application Pre-terminated microcore (MTP®/MPO) cabling

The TC7010 series fibre optic trays and cassettes are a modular, pre-terminated 12F MTP/MPO cassette based solutions, providing a total fibre port capacity of 144 Fibres in 1RU of rack space.

- Modular chassis/subrack, which accepts 12 x 12F MTP-LC or LC/A mini cassettes
- 1RU density of 144F LC or LC/A fibre optic ports
- Swing out, pivot design. Pivot tray design allows for easy access to rear MTP/MPO patching fields
- Compatible with WBT ODF systems and patch cords
- Improved cable management and reduced congestion when using 2mm duplex uniboot patch leads or 1.6mm simplex patch leads. Need to use low profile LC patch cords
- Narrow depth – mounts in a 300mm deep ODF
- Can be deployed in standard equipment racks with 19" or 21" mounting rails

Solution for preterminated MTP/MPO microcore cabling

The TC7010 Series FTP and MTP-LC cassette solution, can be used for pre-terminated microcore distribution cabling within Data Centre environments.

- 12F stackable MTP cassettes (LC and LC/A), polarity A
- MTP male pinned cassette
- MTP Elite or standard connectivity options
- Modular system allows for scalable network growth
- Excellent cable management and minimal movement with pivot tray design
- Accepts microcore 12F – 144F trunk cables for side or rear tray entry
- Multimode OM4 options also available

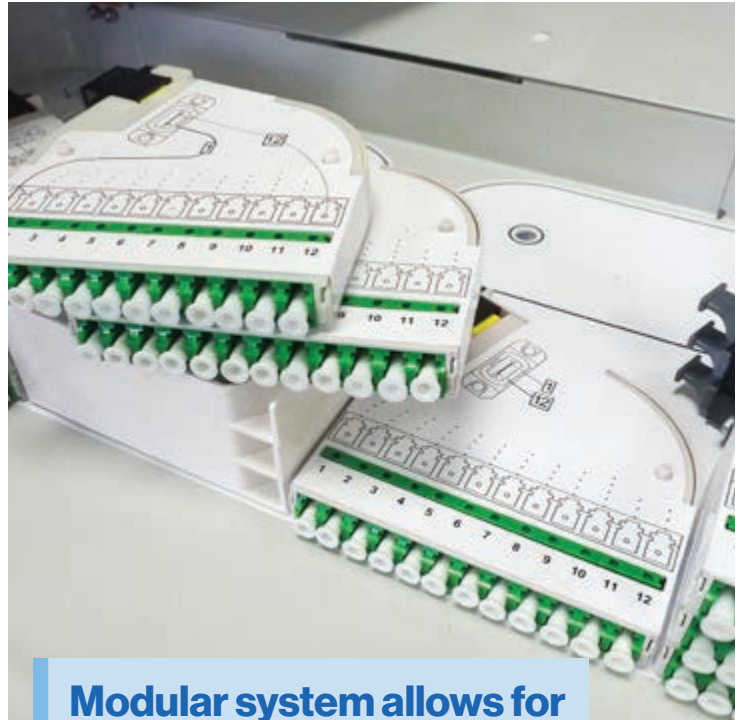


PART NO.	DESCRIPTION
TC7010-01NDC	1RU swing out chassis (empty) for 12 x 12F MTP-LCA micro cassettes, 19" & 21" offset mounting
TC7010-14LCAS	MPO/MTP Angled, Standard- LC/A, 12F cassette, Polarity A (micro cassette)
TC7010-14LCAE	MPO/MTP Angled, Elite - LC/A, 12F cassette, Polarity A (micro cassette)
TC7010-14LCS	MPO/MTP Angled, Standard- LC, 12F cassette, Polarity A (micro cassette)
TC7010-14LCE	MPO/MTP Angled, Elite - LC, 12F cassette, Polarity A (micro cassette)
TC7010-20K	MTP to MTP through cassette (micro) - Polarity A (key up to key down)

PART NO.	DESCRIPTION
TC7010-54	MPO/MTP, Standard LC OM4 multimode aqua, 12F cassette, polarity a (micro cassette)
TC7010-55	MPO/MTP, Elite LC OM4 multimode aqua, 12F cassette, polarity a (micro cassette)
TC7010-56	MPO/MTP, Standard LC OM4 multimode aqua, 12F cassette, polarity b (micro cassette)
TC7010-57	MPO/MTP, Elite LC OM4 multimode aqua, 12F cassette, polarity b (micro cassette)



Compatible with WBT ODF systems and patch cords



Modular system allows for scalable network growth



Swing out, pivot design. Pivot tray design allows for easy access to rear MTP/MPO patching fields

Solutions for pre-terminated ODF cabling – IntelliFOX blade

IntelliFOX Blade MTP/MPO chassis and slimline cassettes

The IntelliFOX Blade system can be deployed in a 1200mm wide ODF and is a pre-terminated patching system for MTP/MPO and LC or LC/A connectivity.

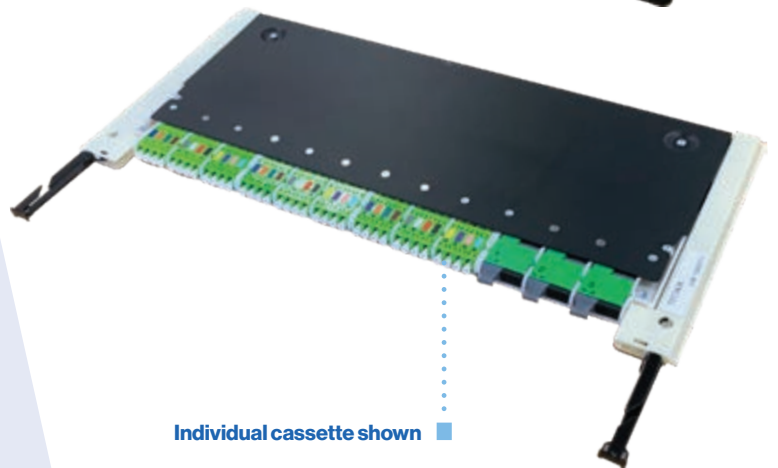
This modular solution features a 4 slot horizontal blade chassis which can be scaled incrementally with 36F LC – MTP 3 x 12F blade cassettes, up to a total density of 144F LC – MTP 12 x 12F with 4 blade cassettes per 1RU chassis. It features impressive cable management and is easy to deploy and use, with each blade cassette being able to slide and lock into a pre-set patching position for single row access.

3 x MTP 12F ports are segregated on the RHS of each blade cassette for segregation and management of incoming 12F MTP cables, whilst the LHS of the blade cassette features either LC or LC/A. In addition, a patch through MTP-MTP blade cassette is also available.

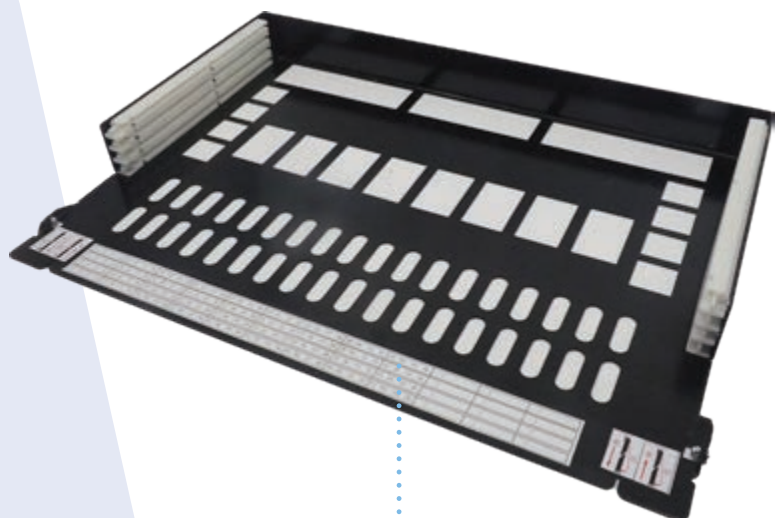
This solution is ideal for use in a 300mm deep ODF (600mm or 1200mm wide), providing scalable high density deployment options. For example, up to 36 x 1RU 144F chassis can be deployed in a Warren & Brown IntelliFOX ODF, providing up to 5,184 fibre density!

The flexible configuration allows for it to be deployed in an Interconnect Data centre room, Data Hall zone frame, or equipment rack.

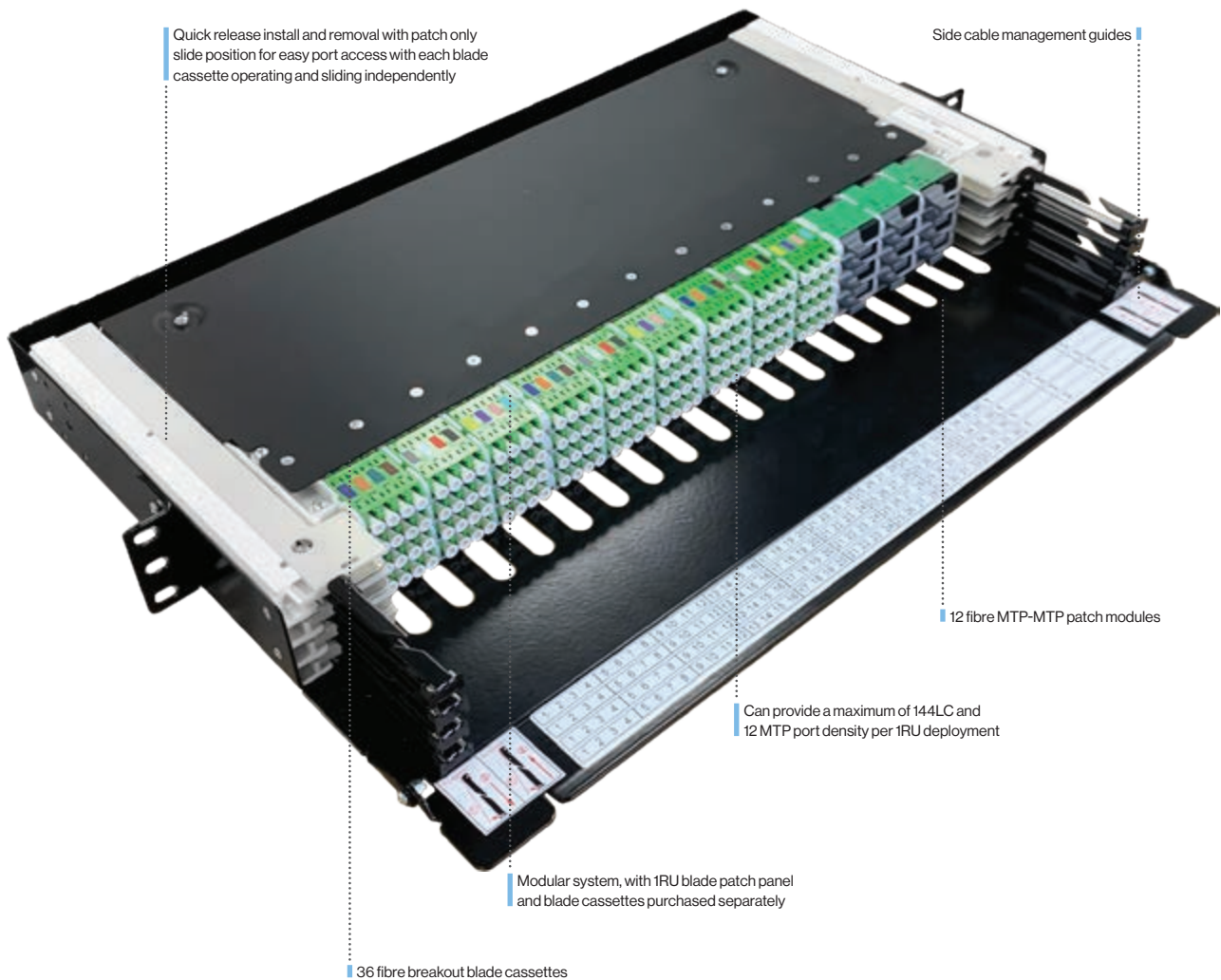
- Modular system, with 1RU blade patch panel and blade cassettes purchased separately
- Can accept MTP-LC or LC/A 36 fibre breakout blade cassettes with 3 x 12 MTP ports, or 12 fibre MTP-MTP patch modules.
- Can provide a maximum of 144LC and 12 MTP port density per 1RU deployment
- Allows for each MPO/MTP-LC blade cassette to slide and operate independently
- 19" or 21 mounting options
- Front hinged cover for record labelling
- Compatible for WBT ODF systems, providing RHS trunk cable access and LHS patchcord access and routing
- Front cable management tray and cable tie off points
- Available with MTP Standard or Elite connectors
- Side cable management guides
- Quick release install and removal with patch only slide position for easy port access with each blade cassette operating and sliding independently
- Various configurations available – singlemode, multimode, etc
- Scalable system.



Individual cassette shown



Chassis shown



PART NO.	DESCRIPTION
720632403L01A	IntelliFOX Blade 1RU slimline, horizontal 4 slot patch panel / chassis (to suit 300mm deep ODF)
812632403L37A	IntelliFOX Blade slimline Singlemode MTP/A Standard (3x12 MTP) - 36F LC/A cassette, polarity A, front access/left patching
812632403L40A	IntelliFOX Blade slimline Singlemode MTP/A Elite (3x12 MTP) - 36F LC/A cassette, polarity A, front access/left patching
812632403L38A	IntelliFOX Blade slimline Singlemode MTP/A Standard (3x12 MTP) - 36F LC cassette, polarity A, front access/left patching
812632403L39A	IntelliFOX Blade slimline Singlemode MTP/A Elite (3x12 MTP) - 36F LC cassette, polarity A, front access/left patching
812632403L41A	IntelliFOX Blade slimline Multimode OM4 aqua MTP Standard (3x12 MTP) - 36F LC cassette, polarity A, front access/left patching
812632403L42A	IntelliFOX Blade slimline Multimode OM4 aqua MTP Elite (3x12 MTP) - 36F LC cassette, polarity A, front access/left patching
812632403L43A	IntelliFOX Blade slimline Multimode OM4 aqua MTP Standard (3x12 MTP) - 36F LC cassette, polarity B, front access/left patching
812632403L44A	IntelliFOX Blade slimline Multimode OM4 aqua MTP Elite (3x12 MTP) - 36F LC cassette, polarity B, front access/left patching
Product Number TBA	IntelliFOX Blade slimline MTP/MPO Patch only module - Polarity A - Key up to Key down, 12 ports
Product Number TBA	IntelliFOX Blade slimline MTP/MPO Patch only module - Polarity B - Key up to Key up, 12 ports

HypaFOX solution for equipment racks, MTP/MPO-LC connectivity

HypaFOX solution for equipment racks, up to 144 fibres per RU

Equipment racks - top of rack infrastructure

To complete the end to end fibre network and access to active equipment, or to simply provide connectivity between active equipment using direct links, the 1RU HypaFOX modular solution is also an excellent solution, providing industry leading usability and density of up to 144LC ports per RU.

Data centre side – Fibre MTP®/MPO trays and cassettes

- High density port count, 4 slot 1RU chassis
- LC/PC connectivity, 36F MTP®/MPO cassette based solution. Lower density 24F cassettes available
- Using 4 x 36F MTP®/MPO cassettes, the maximum density per RU is 144 fibres
- Using 4 x 24F MTP®/MPO cassettes, the maximum density per RU is 96 fibres
- Other options include MTP®/MPO patching modules – 9 port per cassette, 36 port per RU, or up to 432 fibres per RU

**To see options for HypaFOX patch panels (chassis) accessories, patch modules and cable assemblies please view our website or catalogue*

MTP®/MPO to LC or LC/A singlemode cassettes

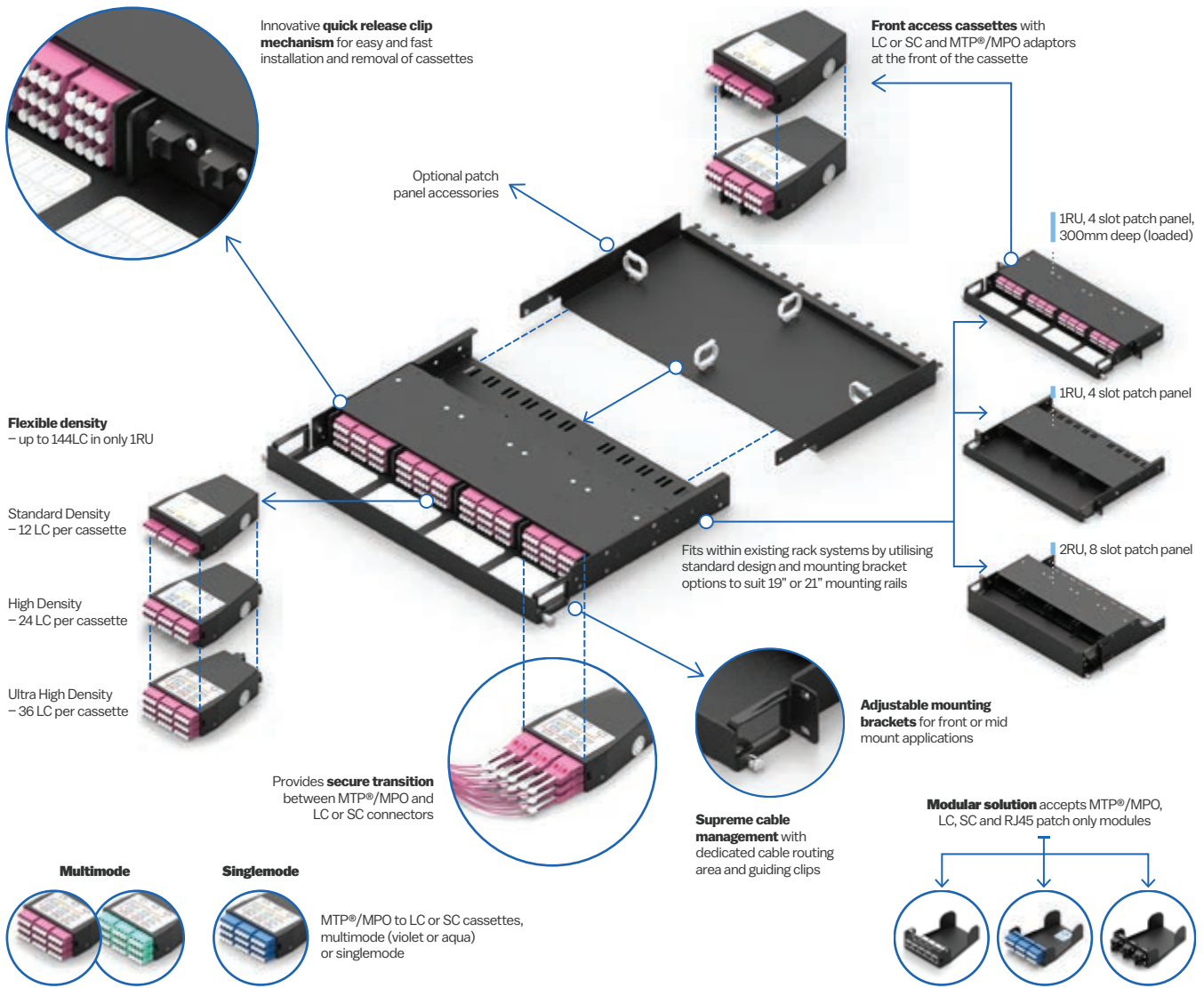
- Features singlemode G657A2 fibre as standard
- G652D fibre option also available
- Standard or elite MTP®/MPO connectors
- High performance LC/APC connectors
- Choice of fibre capacity - 12F, 24F and 36F
- 8 fibre and 16 fibre options also available
- Polarity A (other polarity options are available)
- MTP®/MPO connectors at rear of cassette
- Choice of extreme low loss Grade A LC/APC connectors
- Multimode cassettes are also available in OM4 violet

**SC and SC/A options and other Multimode cassettes are also available*

1RU patch panel, loaded with cassettes with MTP®/MPO and LC/A ports



PART NO.	DESCRIPTION
HXTS02U1W1	1RU panel, 19", 4-slot, black
HXTS02U1W2	1RU panel, 21", 4-slot, black
HXTS12U1W1	1RU panel, 19", 4-slot, flex, black
HXTS12U2W1	2RU panel, 19", 8-slot, flex, black



36 Fibre cassette with 3 x 12 rear MTP®/MPO adaptors and 36 LC/A adaptors



36 Fibre cassette with 3 x 12 rear MTP®/MPO adaptors and 36 LC adaptors

PART NO.	DESCRIPTION
HXCS01K4G2Z5P3	MTP/MPO Elite cassette 36F, LC singlemode polarity A
HXCS02K4G2Z5P3	MTP/MPO Elite cassette 24F, LC singlemode polarity A
HXCS04K4G2Z5P3	MTP/MPO Elite cassette 12F, LC singlemode polarity A
HXCS01K4G2Z2P3	MTP/MPO standard cassette 36F, LC singlemode polarity A
HXCS02K4G2Z2P3	MTP/MPO standard cassette 24F, LC singlemode polarity A
HXCS04K4G2Z2P3	MTP/MPO standard cassette 12F, LC singlemode polarity A
HXCS01K5G2Z5P3	MTP/MPO Elite cassette 36F, LC/A, singlemode polarity A
HXCS02K5G2Z5P3	MTP/MPO Elite cassette 24F, LC/A, singlemode polarity A
HXCS04K5G2Z5P3	MTP/MPO Elite cassette 12F, LC/A, singlemode polarity A
HXCS01K5G2Z2P3	MTP/MPO standard cassette 36F, LC/A, singlemode polarity A
HXCS02K5G2Z2P3	MTP/MPO standard cassette 24F, LC/A, singlemode polarity A
HXCS04K5G2Z2P3	MTP/MPO standard cassette 12F, LC/A, singlemode polarity A

PART NO.	DESCRIPTION
HXCS01K6G2Z6P3	MTP/MPO Elite cassette 36F, LC multimode OM4 aqua, polarity A
HXCS01K6G2Z6P1	MTP/MPO Elite cassette 36F, LC multimode OM4 aqua, polarity B
HXCS02K6G2Z6P3	MTP/MPO Elite cassette 24F, LC multimode OM4 aqua, polarity A
HXCS02K6G2Z6P1	MTP/MPO Elite cassette 24F, LC multimode OM4 aqua, polarity B
HXCS02K6G2Z3P3	MTP/MPO Standard cassette 24F, LC multimode OM4 aqua, polarity A
HXCS02K6G2Z3P1	MTP/MPO Standard cassette 24F, LC multimode OM4 aqua, polarity B

HypaFOX Z-Slim solution for equipment racks - MTP/MPO - LC connectivity

The HypaFOX Z-Slim series is a leading edge scalable, pre-terminated cabling system with MTP/MPO-LC connectors, providing capacity of up to 144F LC in 1RU. It is a modular solution designed to increase port density, improve connector access, and efficiently utilize valuable rack space in data centres.

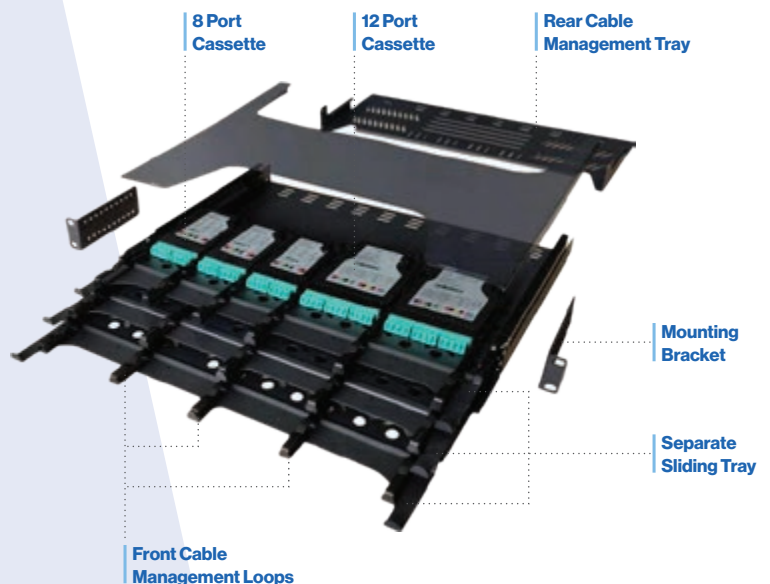
This cabling system has a maximum capacity of twelve 12F cassettes or sixteen 8F cassettes installable (per 1RU), that allows multiple fibre connections to be quickly and efficiently installed and maintained, while supporting regular moves, adds, changes. Integrated fibre management secures trunk cables, separate patch cords, and maintain a safe bend radius during fibre routing.

Modular chassis for MTP/MPO-LC or LC/A cassettes

- High density port count, 12 slot 1RU chassis for 12 Fibre cassettes, providing a potential scalable density of 144 fibres in 1RU
- LC/PC connectivity, 12F MTP®/MPO cassette based solution. 8 fibre cassettes also available
- Sliding trays for individual row access
- Rear and front cable management
- Easy install of cassettes
- 1RU 12 slot chassis option for 12 fibre cassettes, as well as 18 slot chassis option for 8 fibre cassettes
- 2RU and 4RU chassis options also available

HZC series - MTP®/MPO to LC multimode OM4 cassettes, 12 fibre, Z-Slim

- Standard or elite MTP®/MPO connectors
- High performance LC/APC or LC connectors
- Scalable 12 fibre cassette system (MTP-LC)
- 6 fibre SC, as well as 8 fibre LC & LC/A cassette options also available
- Singlemode or Multimode OM4 options
- Polarity A or B (other polarity options are available)
- MTP®/MPO connectors at rear of cassette
- Cassettes are MTP male (pinned)
- Splicing and patch only cassettes also available



MTP®/MPO to LC multimode OM4 cassettes, 12 fibre, Z-Slim

PART NO.	MTP/ MPO PRODUCT RANGE
HZCS03K3G2Z6P3E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 12 FIBRE LC-MULTIMODE OM4 AQUA - POLARITY A
HZCS03K3G2Z6P1E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 12 FIBRE LC-MULTIMODE OM4 AQUA - POLARITY B
HZCS03K3G2Z3P3E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 12 FIBRE LC-MULTIMODE OM4 AQUA - POLARITY A
HZCS03K3G2Z3P1E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 12 FIBRE LC-MULTIMODE OM4 AQUA - POLARITY B
HZCS03J3G2Z6P3E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 12 FIBRE LC-MULTIMODE OM4 VIOLET - POLARITY A
HZCS03J3G2Z6P1E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 12 FIBRE LC-MULTIMODE OM4 VIOLET - POLARITY B
HZCS03J3G2Z3P3E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 12 FIBRE LC-MULTIMODE OM4 VIOLET - POLARITY A
HZCS03J3G2Z3P1E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 12 FIBRE LC-MULTIMODE OM4 VIOLET - POLARITY B

MTP®/MPO to LC Singlemode cassettes, 12 fibre, Z-Slim

PART NO.	MTP/ MPO PRODUCT RANGE
HZCS03K1G2Z5P3E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 12 FIBRE LC-SINGLEMODE POLARITY A
HZCS03K1G2Z5P1E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 12 FIBRE LC-SINGLEMODE POLARITY B
HZCS03K1G2Z2P3E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 12 FIBRE LC-SINGLEMODE POLARITY A
HZCS03K1G2Z2P1E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 12 FIBRE LC-SINGLEMODE POLARITY B

MTP®/MPO to LC/A Singlemode cassettes, 12 fibre, Z-Slim

PART NO.	MTP/ MPO PRODUCT RANGE
HZCS03K2G2Z5P3E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 12 FIBRE LC/A - SINGLEMODE POLARITY A
HZCS03K2G2Z5P1E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 12 FIBRE LC/A - SINGLEMODE POLARITY B
HZCS03K2G2Z2P3E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 12 FIBRE LC/A - SINGLEMODE POLARITY A
HZCS03K2G2Z2P1E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 12 FIBRE LC/A - SINGLEMODE POLARITY B

MTP®/MPO to LC Multimode OM4 cassettes, 8 fibre, Z-Slim

PART NO.	MTP/ MPO PRODUCT RANGE
HZCS02K3G2Z6P3E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 8 FIBRE LC-MULTIMODE OM4 AQUA - POLARITY A
HZCS02K3G2Z6P1E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 8 FIBRE LC-MULTIMODE OM4 AQUA - POLARITY B
HZCS02K3G2Z3P3E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 8 FIBRE LC-MULTIMODE OM4 AQUA - POLARITY A
HZCS02K3G2Z3P1E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 8 FIBRE LC-MULTIMODE OM4 AQUA - POLARITY B
HZCS02J3G2Z6P3E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 8 FIBRE LC-MULTIMODE OM4 VIOLET - POLARITY A
HZCS02J3G2Z6P1E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 8 FIBRE LC-MULTIMODE OM4 VIOLET - POLARITY B
HZCS02J3G2Z3P3E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 8 FIBRE LC-MULTIMODE OM4 VIOLET - POLARITY A
HZCS02J3G2Z3P1E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 8 FIBRE LC-MULTIMODE OM4 VIOLET - POLARITY B

MTP®/MPO to LC Singlemode cassettes, 8 fibre, Z-Slim

PART NO.	MTP/ MPO PRODUCT RANGE
HZCS02K1G2Z5P3E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 8 FIBRE LC-SINGLEMODE POLARITY A
HZCS02K1G2Z5P1E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 8 FIBRE LC-SINGLEMODE POLARITY B
HZCS02K1G2Z2P3E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 8 FIBRE LC-SINGLEMODE POLARITY A
HZCS02K1G2Z2P1E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 8 FIBRE LC-SINGLEMODE POLARITY B

MTP®/MPO to LC/A Singlemode cassettes, 8 fibre, Z-Slim

PART NO.	MTP/ MPO PRODUCT RANGE
HZCS02K2G2Z5P3E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 8 FIBRE LC/A - SINGLEMODE POLARITY A
HZCS02K2G2Z5P1E	HYPAFOX Z-SLIM, MTP/MPO ELITE CASSETTE, 8 FIBRE LC/A - SINGLEMODE POLARITY B
HZCS02K2G2Z2P3E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 8 FIBRE LC/A - SINGLEMODE POLARITY A
HZCS02K2G2Z2P1E	HYPAFOX Z-SLIM, MTP/MPO STANDARD CASSETTE, 8 FIBRE LC/A - SINGLEMODE POLARITY B

MTP/MPO and LC and Patch through cassettes, Z-Slim

PART NO.	MTP/ MPO PRODUCT RANGE
HZPS04K1G0F0P0E	HYPAFOX Z-SLIM, PATCH CASSETTE, 12 FIBRE LC SINGLEMODE
HZPS04K2G0F0P0E	HYPAFOX Z-SLIM, PATCH CASSETTE, 12 FIBRE LC/A - SINGLEMODE
HZPS04K3G0F0P0E	HYPAFOX Z-SLIM, PATCH CASSETTE, 12 FIBRE LC MULTIMODE OM4 AQUA
HZPS05K0G0F0P6E	HYPAFOX Z-SLIM, MTP/MPO PATCH CASSETTE, 6 MTP PORTS MTP KEY UP TO KEY DOWN, POLARITY A
HZPS05K0G0F0P4E	HYPAFOX Z-SLIM, MTP/MPO PATCH CASSETTE, 6 MTP PORTS MTP KEY UP TO KEY UP, POLARITY B

Splice cassettes, Z-Slim

PART NO.	MTP/ MPO PRODUCT RANGE
HZCS04K1G0F0P0E	HYPAFOX Z-SLIM, SPLICE CASSETTE, 12 FIBRE LC SINGLEMODE (NO PIGTAILS)
HZCS04K1G2F1P0E	HYPAFOX Z-SLIM, SPLICE CASSETTE, 12 FIBRE LC SINGLEMODE (WITH PIGTAILS)
HZCS04K2G2F2P0E	HYPAFOX Z-SLIM, SPLICE CASSETTE, 12 FIBRE LC/A SINGLEMODE (WITH PIGTAILS)
HZCS04K3G2F4P0E	HYPAFOX Z-SLIM, SPLICE CASSETTE, 12 FIBRE LC MULTIMODE OM4 AQUA (WITH PIGTAILS)

HZT Series - Z-Slim Modular High Density Patch Panels

PART NUMBER	DESCRIPTION	SPECS
HZTS02U1W1	HypaFOX Z-Slim, 1RU high density modular patch panel, 12 slots, sliding, 19", Black	3 layer separate sliding rail, 12 slot for 12 LC core cassette
HZTS04U1W1	HypaFOX Z-Slim, 1RU high density modular patch panel, 18 slots, sliding, 19", Black	3 layer separate sliding rail, 18 slot for 8 LC core cassette
HZTS02U2W1	HypaFOX Z-Slim, 2RU high density modular patch panel, 24 slots, sliding, 19", Black	6 layer separate sliding rail, 24 slot for 12 LC core cassette
HZTS02U4W1	HypaFOX Z-Slim, 4RU high density modular patch panel, 48 slots, sliding, 19", Black	12 layer separate sliding rail, 48 slot for 12 LC core cassette

96F per RU Solutions – Splicing

7006 series FTPs (1RU)

48-96 fibres, splice &/or patch, slide out

This high-density 1RU up to 96-fibre splice &/or patch shelf is loaded with 4 sub trays. Each sub tray can be equipped with 24 LC/APC or LC/UPC pigtailed and 12 LC duplex adaptors. The shelf can accommodate max. 4 splice &/or patch trays with a total max. capacity of 96 LC connections.

The sub trays slide independently on side rails with a locking step at 40mm for patch management at the front. This provides excellent cable management and access to each rows of connectors.

The outgoing patch cords are managed with an individual releasable cable management bracket, securing 24x patch cords per tray.

When installed in a chassis, each tray can slide out 40mm from home position, making patch cords installation easy, eliminating the need for pull-tab connectors.

Solution for 300mm deep single sided ODF deployment (front tube / cable entry)

- Solution allows for potential ODF deployment of 3,648 LC fibres. Up to 38 x 1RU 96F FTPs
- Left angled adaptors only
- Front tube entry only (individual 24-fibre tubes)
- 48 or 96-fibre options
- Cable entry: Front only
- High-density patch labelling and colour coding for each adaptor
- Possibility of left-hand and right-hand side cable management for patch cords
- Supplied, fully loaded with adaptors and stripped pigtailed, ordered as one part number
- Can be supplied with SC/APC, LC/APC or LC/UPC connectivity
- Splice & Patch, Splice only or Patch only versions are available



70063241001082L
shown



PART NO.	RU	FIBRES	CONNECTORS	DESCRIPTION
70063241046081L		96	LC/APC Splice & Patch	Left Hand, 21" 50mm offset mounting, all accessories
70063241044081L		96	LC Splice & Patch	Left Hand, 21" 50mm offset mounting, all accessories
70063241042081L		48	LC/APC Splice & Patch	Left Hand, 21" 50mm offset mounting, all accessories
70063241040081L		48	LC Splice & Patch	Left Hand, 21" 50mm offset mounting, all accessories
70063241054081L	1RU	48	SC/A Splice & Patch	Left Hand, 19&21" mounting, all accessories
70063241055081R		48	SC/A Splice & Patch	Right Hand, 21" 50mm offset mounting, all accessories
70063244002081R		96	- Splice Only	Right Hand, 21" 50mm offset mounting
70063244001081L		96	- Splice Only	Left Hand, 21" 50mm offset mounting
70063242005081L		96	LC/APC Patch Only	Left Hand, 21" 50mm offset mounting, all accessories
70063242007081L		96	LC Patch Only	Left Hand, 21" 50mm offset mounting, all accessories



Solution for standard equipment racks (rear and front tube/cable entry)

- Rear or front tube/cable entry
- Left or right angled adaptors
- 48, 72 or 96-fibre options
- Cable entry: Front and Rear
- High-density patch labelling and colour coding for each adaptor
- Possibility of left-hand and right-hand side cable management for patch cords
- Supplied, fully loaded with adaptors and stripped pigtails, ordered as one part number
- Optional lid and 2RU 19" brackets for 192 fibre OSP cable
- Can be supplied with SC/APC, LC/APC or LC/UPC connectivity
- Splice & Patch or Patch only versions available

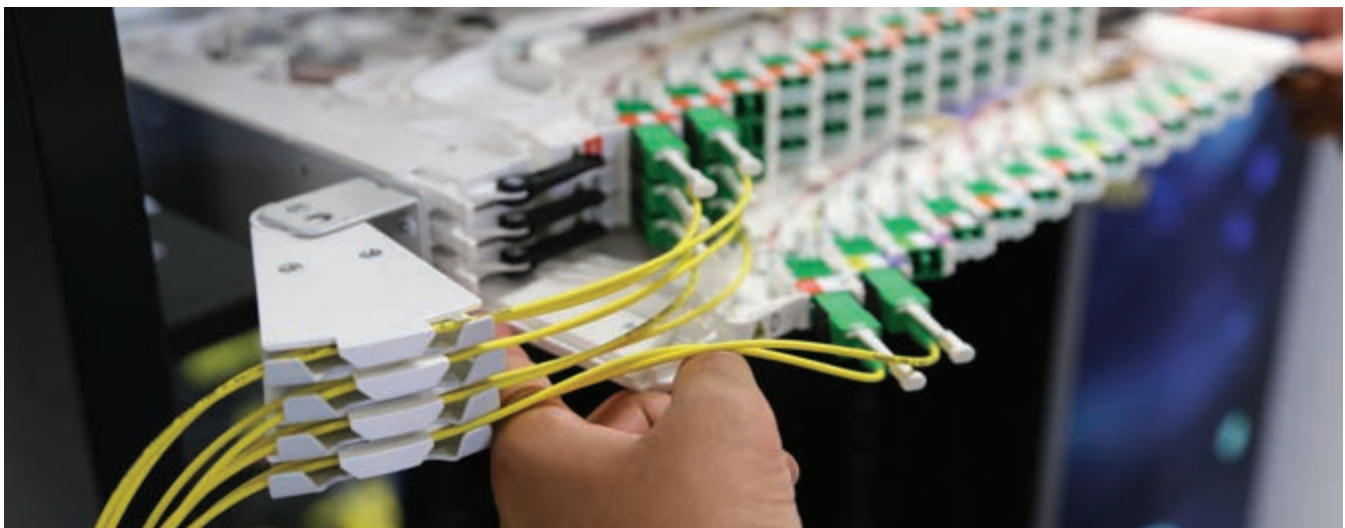


Accessories for standard equipment racks solutions

PART NO.	DESCRIPTION
825232401081	Metal Lid to suit 7006 series tray
835632417KIT	Rear cable gland and tube entry kit - v2. Symmetrical. Includes M20 gland
835632419KIT	Rear RH entry - tube breakout/protection. Cable entry from right hand side to breakout tubes Left hand entry. Suitable for LH adaptor fibre trays (L product numbers)
835632420KIT	Rear LH entry - tube breakout/protection. Cable entry from left hand side to breakout tubes Left hand entry. Suitable for RH adaptor fibre trays (R product numbers)
109X102X10KIT	Splice through kit, RED SC adaptor inserts (splice only applications)

PART NO.	RU	FIBRES	CONNECTORS	DESCRIPTION
70063242004081R		96	LC Patch only	Right Hand, 19&21" mounting
70063242003081L		96	LC Patch only	Left Hand, 19&21" mounting
70063242002081R		96	LC/APC Patch only	Right Hand, 19&21" mounting
70063242001081L		96	LC/APC Patch only	Left Hand, 19&21" mounting
70063241018081L		96	LC/APC Splice & Patch	Left Hand, 19&21" mounting, all accessories
70063241019081R		96	LC/APC Splice & Patch	Right Hand, 19&21" mounting, all accessories
70063241028081L		96	LC Splice & Patch	Left Hand, 19&21" mounting, all accessories
70063241029081R	1RU	96	LC Splice & Patch	Right Hand, 19&21" mounting, all accessories
70063241038081L		72	LC Splice & Patch	Left Hand, 19&21" mounting, all accessories
70063241036081L		48	LC Splice & Patch	Left Hand, 19&21" mounting, all accessories
70063241024081L		48	SC/APC Splice & Patch	Left Hand, 19&21" mounting, all accessories
70063241025081R		48	SC/APC Splice & Patch	Right Hand, 19&21" mounting, all accessories
70063243003081L		96	LC/APC Patch only preterm	Left Hand, 19&21" mounting, with tail cable
70063243007081L		96	LC Patch only preterm	Left Hand, 19&21" mounting, with 35m tail cable

* Multimode OM4 options also available



96F per RU Solutions – cross connect of pre-terminated cabling

HypaFOX front access preterm solution for distribution of internal cabling, Up to 96 fibres per RU

- For patching / distribution using pre-terminated MTP – LC/A modules
- Distribution of internal cabling – 96 fibres per RU

Similar to the HypaFOX 1RU patch panel used in the equipment rack, this patch panel has a narrow depth, which can mount in a 300mm deep ODF. The front access chassis is available in a 1RU or a 2RU flex version, which has a removable base for easy port access.

This solution utilizes the same modular cassette system deployed in equipment racks for uniformity.

Suitable for either singlemode or multimode fibre distribution. Simply select the appropriate MTP®/MPO cassette.

This provides a secure front patch only solution for all optical ports and is compatible with Warren & Brown ODF's.

The 8 slot 2RU patch panels accept the same footprint HypaFOX cassette. Each cassette has a maximum LC capacity of 24 fibres. 2 x 12 fibre MTP®/MPO ports are located at the front of the cassette.

The total capacity per RU is 96 fibres. With a 2RU subframes / patch panels, the total capacity is 192 fibres.

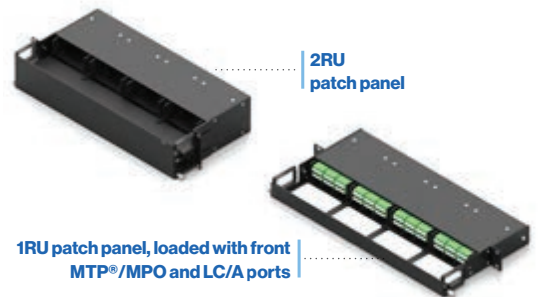
This is part of an innovative solution, which simplifies Data Centre operations and cable management.

** To see other options for HypaFOX patch panels (chassis) accessories, patch modules and cable assemblies please view our website or catalogue*

MTP®/MPO to LC or LC/A front access singlemode cassettes

- Features singlemode G657A2 fibre as standard
- G652D fibre option also available
- Standard or elite MTP®/MPO connectors at the front of cassette
- High performance LC or LC/APC connectors at the front
- Choice of fibre capacity - 12F and 24F
- 8 fibre and 16 fibre options also available
- Polarity A (other polarity options are available)
- Suitable for use with any HypaFOX patch panel, including 300mm deep rack version
- Designed for use when rear cable access is not possible
- Choice of extreme low loss Grade A LC/APC connectors

** Multimode cassettes are also available in OM4 violet*



PART NO.	DESCRIPTION
HXTG13U1W5	1RU Slim flex panel, 21" offset, 4-slot, grey
HXTS13U1W1	1RU Slim flex panel, 19", 4-slot, black
HXTG13U1W1	1RU Slim flex panel, 19", 4-slot, grey
HXTG13U2W5	2RU Slim flex panel, 21" offset, 8-slot, grey



PART NO.	DESCRIPTION
HXCS03K4G2Z5P3	MTP/MPO Elite cassette (front access) 24F, LC singlemode polarity A
HXCS05K4G2Z5P3	MTP/MPO Elite cassette (front access) 12F, LC singlemode polarity A
HXCS03K4G2Z2P3	MTP/MPO standard cassette (front access) 24F, LC singlemode polarity A
HXCS05K4G2Z2P3	MTP/MPO standard cassette (front access) 12F, LC singlemode polarity A
HXCS03K5G2Z5P3	MTP/MPO Elite cassette (front access) 24F, LC/A singlemode polarity A
HXCS05K5G2Z5P3	MTP/MPO Elite cassette (front access) 12F, LC/A singlemode polarity A
HXCS03K5G2Z2P3	MTP/MPO standard cassette (front access) 24F, LC/A singlemode polarity A
HXCS05K5G2Z2P3	MTP/MPO standard cassette (front access) 12F, LC/A singlemode polarity A



PART NO.	DESCRIPTION
HXCS03K6G2Z6P3	MTP/MPO Elite cassette (front access only) 24F, LC multimode OM4 aqua, polarity a
HXCS03K6G2Z6P1	MTP/MPO Elite cassette (front access only) 24F, LC multimode OM4 aqua, polarity b
HXCS01K6G2Z3P3	MTP/MPO Standard cassette 36F, LC multimode OM4 aqua, polarity a
HXCS01K6G2Z3P1	MTP/MPO Standard cassette 36F, LC multimode OM4 aqua, polarity b
HXCS03K6G2Z3P3	MTP/MPO Standard cassette (front access only) 24F, LC multimode OM4 aqua, polarity a
HXCS03K6G2Z3P1	MTP/MPO Standard cassette (front access only) 24F, LC multimode OM4 aqua, polarity b



HYPACONNECT

 HYPAFox

25



HYPACONNECT

Fibre Patch Cords

Every connector assembly supplied by WBT is made using quality parts in a high quality termination facility, according to recognised and approved international standards.

The quality and inspection procedures employed, ensure only high quality, individually inspected and approved pigtailed and patch cords are supplied. Therefore, customers can have confidence knowing that the product supplied will perform reliably to a high standard in the telecommunications and data networks for many years. Each patch cord is individually inspected and tested at the time of production.

T99 series Multimode OM4 patch cords

- Connector types - LC, LC duplex, SC, SC duplex, ST, FC
- OM4 fibre as standard (OM3 also available)
- Low loss connectors for high performance and reliability
- Multi-fibre patch cord options available
- Available colours - Aqua, Violet

Multimode connectors performance information:

	SC	ST	FC	LC
FERRULE	2.5 mm dia Zirconia	2.5 mm dia Zirconia	2.5 mm dia Zirconia	1.25 mm dia Zirconia
STANDARD POLISH	UPC	UPC	UPC	UPC
INSERTION LOSS	0.2 dB typ 0.3 dB max	0.2 dB typ 0.4 dB max	0.2 dB typ 0.3 dB max	0.2 dB typ 0.3 dB max
RETURN LOSS	35 dB	35 dB	35 dB	35 dB
TERMINATIONS	>500	>500	>500	>500
SERVICE TEMP °C	-20 to +60	-20 to +60	-20 to +60	-20 to +60

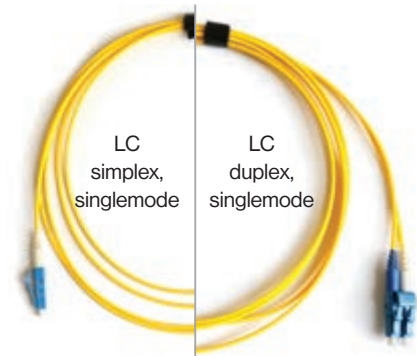
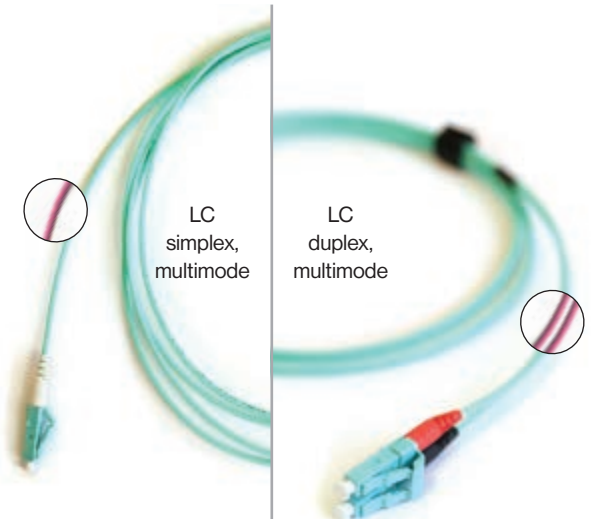
T99 series Singlemode patch cords

- Connector types - LC, LC duplex, LC/A, SC, SC duplex, SC/A, SC/A duplex, ST, FC
- Bend insensitive G657A2 fibre as standard (G652D also available)
- Low loss connectors for high performance and reliability
- Extreme low loss Grade A connector options available
- Multi-fibre patch cord options available

Singlemode connectors performance information:

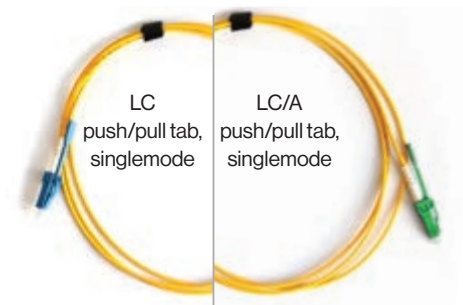
	SC	ST	FC	LC	LC/A	SC/A
FERRULE	2.5 mm dia Zirconia	2.5 mm dia Zirconia	2.5 mm dia Zirconia	1.25 mm dia Zirconia	1.25 mm dia Zirconia end angle 8°	2.5 mm dia Zirconia end angle 8°
STANDARD POLISH	UPC	UPC	UPC	UPC	APC	APC
INSERTION LOSS	0.2 dB typ 0.3 dB max	0.2 dB typ 0.4 dB max	0.2 dB typ 0.3 dB max	0.2 dB typ 0.3 dB max	0.2 dB typ	0.2 dB typ
RETURN LOSS	≤50-55 dB	≤50-55 dB	≤50-55 dB	≤50-55 dB	≤60-65 dB	≤60-65 dB
TERMINATIONS	>500	>500	>500	>500	>500	>500
SERVICE TEMP °C	-20 to +60	-20 to +60	-20 to +60	-20 to +60	-20 to +70	-20 to +70

- Singlemode G657A2, G652D or multimode OM4 fibre options
- Simplex, duplex as well as multi-fibre patch cord options
- LSZH sheath
- Complies with ANSI, Bellcore, TIA / EIA, IEC standards
- Factory terminated and tested
- Choice of connector types - LC, LC duplex, SC/UPC, SC/APC, etc
- Reduced diameter LC duplex uniboot patch cord options
- Various patch cord lengths
- Fast delivery and stock availability



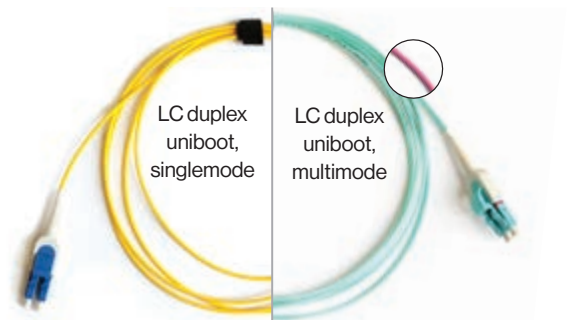
T99 series LC or LC/A Simplex push/pull tab patch cords

- Singlemode G657A2 LC or LC/A
- Push/pull tab allows for easy connection and disconnection around congested patching areas



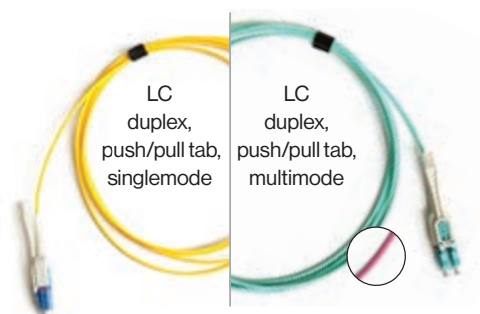
T99 series LC-LC Duplex uniboot, reversible polarity patch cords

- Singlemode G657A2 or multimode OM4 aqua or violet fibre options
- Uniboot, slim cable design. 2mm OD for duplex cable



T99 series LC-LC Duplex uniboot, reversible polarity push/pull tab patch cords

- Singlemode (G657A2) or multimode OM4 aqua or violet fibre options
- Uniboot, slim cable design 2mm OD for duplex cable
- Push/pull tab allows for easy connection and disconnection around congested patching areas



MTP/MPO Trunk cables and patchcords

In addition to providing a high density solution for optical fibre networks, one of the other major benefits of an MTP®/MPO cabling system, is its modularity and its ability to support high speed links.

New links can be easily added and the network can also be upgraded to support higher networking speeds – 40G, 100G, etc. Furthermore, the fibre cable construction has a smaller OD than regular fibre optic cable, which reduces cable load in raised floors and cable ducts, as well as reducing congestion.

HXF Series

12 to 144F MTP trunk cables

Either 12, 24, 36, 48, 72, 96 or 144 fibre MTP®/MPO trunk cables can be routed from the main distribution ODF to the equipment racks.

The MTP®/MPO trunk cable can be pre-terminated on each end, which will cable runs to be pre-measured and cables manufactured to that exact length. As an alternative, the equipment rack end may be preterm MTP®/MPO and the ODF end may be spliced into FTP, instead of HypaFOX cassette.

- Singlemode G657A2 or Multimode OM3 / OM4
- Singlemode MTP/A standard or Elite connectors
- Multimode MTP/A standard or Elite connectors
- Hauling sock and deployment reel options
- LSZH outer sheath
- Made to length
- Polarity A for singlemode. Polarity A or B for multimode
- 3mm OD internal subunits & 2mm OD subunits available for 144F trunk cable assemblies for space saving in cable pathways.

HXH Series

12F MTP patch cables

- Singlemode G657A2 or Multimode OM3 / OM4
- Singlemode MTP/A standard or Elite connectors
- Multimode MTP/A standard or Elite connectors
- 4.5mm outer diameter for double sheath trunk cable or 3mm outer diameter for single sheath cable
- LSZH outer sheath
- Made to length
- Polarity A for singlemode applications
- Polarity A for singlemode. Polarity A or B for multimode

MTP®/MPO connectivity is recommended due to the following benefits

- Ability to support high networking speeds – 1G, 10G, 40G, 100G
- Reduction in cabling footprint – high density
- Maximum capacity of 144 fibres/cores per 1RU of rack space in patch panels modules housed in equipment racks
- 144 or 96 fibre /cores for cross connect frames.
- Plug and play pre-connectorised solution based on 12 fibre MTP connectivity and cassette modules
- Can support parallel optics
- Modular and scalable



Optical fibre cable breakout manifold kits

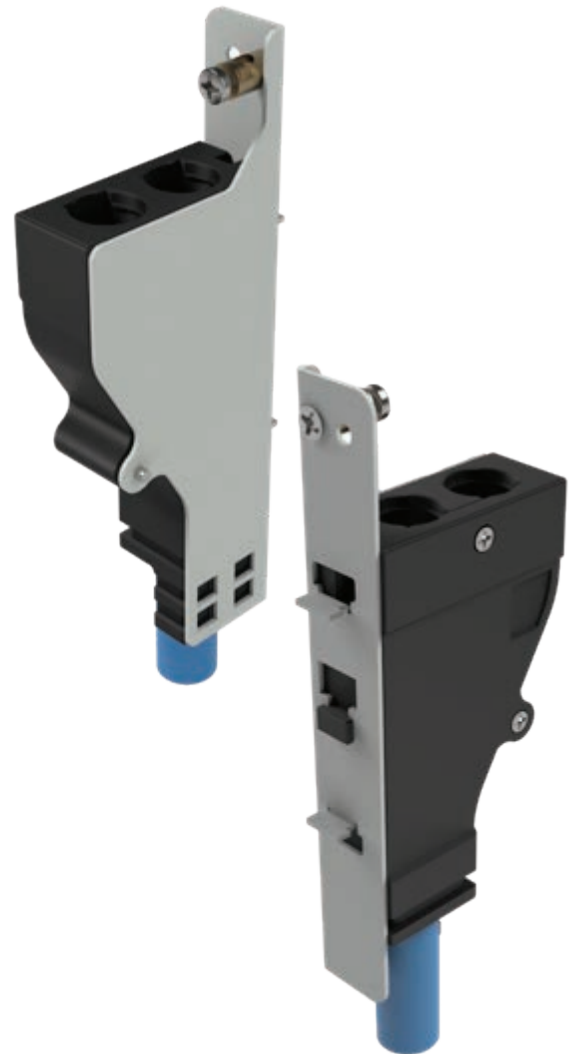
Breakout manifold kits for optical fibre cables, are designed to be used with either rollable ribbon, or stranded fibre cable and perform the function of dividing large core cables into smaller and manageable sub-units. The cable manifold has a single entry port for incoming fibre optic cable, and multiple outgoing exit ports for individual buffer tubes.

Cable breakout manifold kits are designed to suit specific cable types and can be customized to suit exact deployment requirements.

Benefits

- Suitable for use with the IntelliFOX ODF system
- Capable of dividing cables into smaller sub-units
- Kits are supplied with breakout manifold, mounting brackets and installation accessories
- Plastic 3D printed and can be custom made to suit various cable types and sizes
- Kits available for stranded fibre and ribbon fibre cables
- Can be used with various cable brands – Prysmian, Sumitomo, Furukawa, etc
- Breakout manifolds can be mounted onto cable management brackets secured via cable central strength member
- To suit fibre cable sizes including 144F, 288F, 360F, 432F, 864F, 1728F, 3456F, 6912F

CABLE TYPE	MANIFOLD CONFIGURATION
360F Flextube - stranded fibre cable	1 x 3 buffer tubes. Outgoing Fibres per tube – 2 x 144F and 1 x 72F
432F Flextube - stranded fibre cable	1 x 3 buffer tubes. Outgoing Fibres per tube – 3 x 144F
720F Flextube - stranded fibre cable	1 x 5 buffer tubes. Outgoing Fibres per tube – 5 x 144F
144F - Flat ribbon fibre cable	1 x 2 buffer tubes Outgoing Fibres per tube – 2 x 72F
864F - rollable ribbon fibre cable	1 x 6 buffer tubes Outgoing fibres 6 x 144F
1728F - rollable ribbon fibre cable (Sumitomo)	1 x 12 buffer tubes Outgoing fibres 12 x 144F
1728F - rollable ribbon fibre cable (Prysmian)	1 x 12 buffer tubes, or 1 x 6 buffer tubes Outgoing fibres 12 x 144F, or 6 x 288F



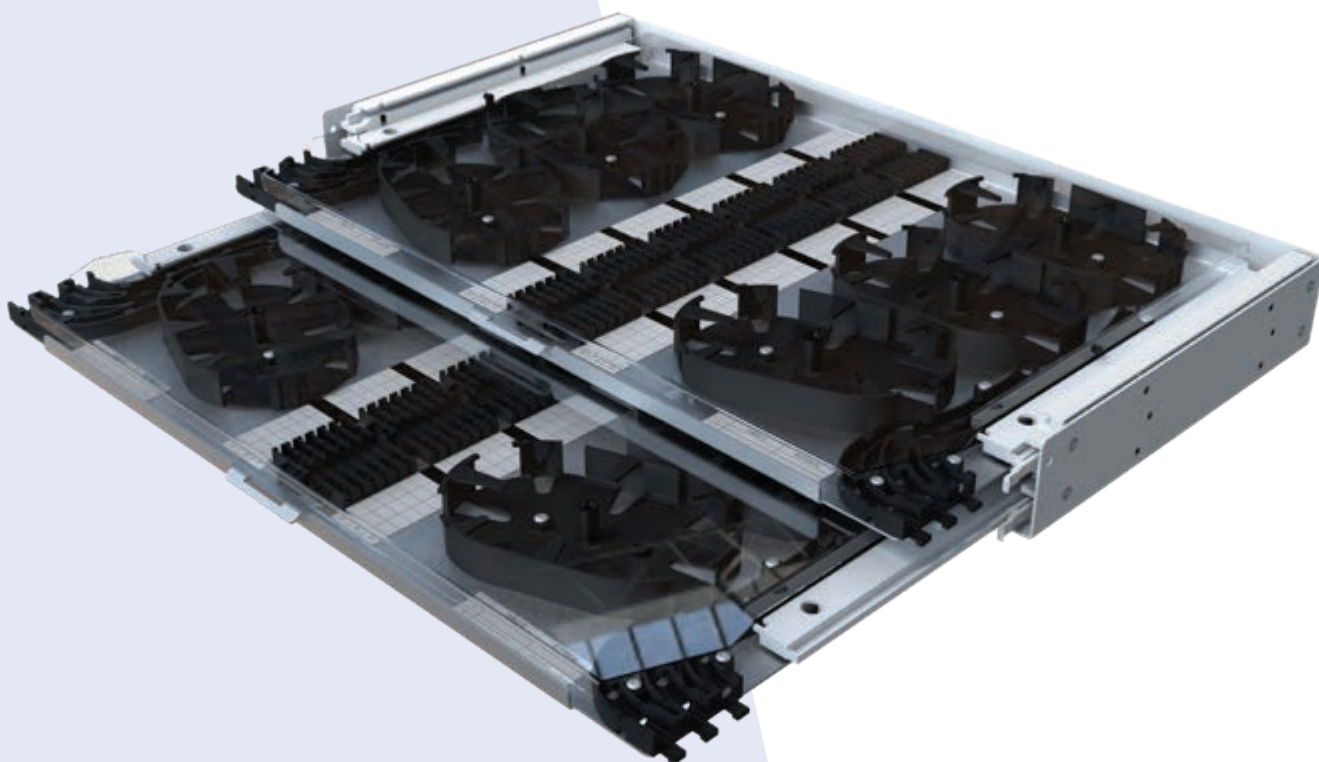
IntelliFOX Mass fusion splice tray – Rack/ODF mount

IntelliFOX mass fusion splice trays allow splicing of incoming multi core fibre cables onto smaller distribution cables.

This device can be used in a Telecom Exchange or Data Centre entrance facility for transitioning larger outdoor cables (e.g. 864 fibre rollable ribbon), into multiple smaller indoor/distribution cables, which can be routed to different parts of the facility (e.g. 6 x 144 fibre cables)

These Mass fusion splice trays are 1RU 19" or 21" rack mount trays, which can be rear or mid mounted at the bottom of an ODF or inside a demarcation / splice wall box.

- 1RU Mass Fusion Splice Tray (rollable ribbon fibre)
 - 432 max splice capacity per ½ RU Tray, 864F per RU
 - 2 Trays per 1RU Drawer
- 1RU Mass Fusion Splice Tray (standard fibre)
 - 96 max splice capacity per ¼ RU Tray, 384 per RU
 - 4 Trays per 1RU Drawer.



Fibre ducting raceway

Cable pathways / ducting

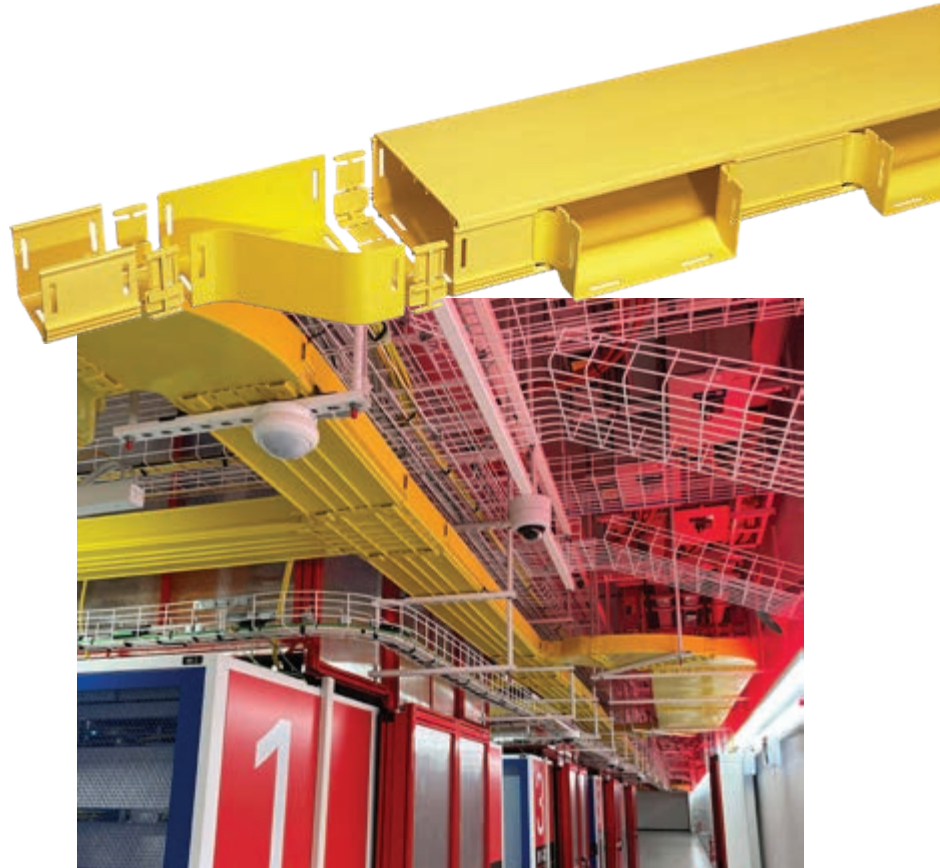
Most double sheath cable assemblies will be okay to route on cable trays, however patch leads and single sheath cable should still be routed in a ducting raceway.

Additionally, some network operators may prefer to have all fibre cabling routed in a fibre duct raceway for easier troubleshooting, identification and segregation of cable types.

If considering a fibre ducting raceway, WBT fibre duct complies with the following standards

- Fire retardant plastic, Halogen Free, for 100, 220 and 300mm ducting the rating is UL94V-0, for 30 and 50mm ducting the rating is UL94V-1
- UL2024A standard
- EEU - ROHS requirements
- GR-63 Core Earthquake test compliance

WB's ducting range is made using a special fire retardant Low Smoke Zero Halogen (LSZH) material certified to UL94V-0 specifications, while some other brands on the market are still using PVC. In case of a fire, LSZH materials significantly reduce the amount of toxic and corrosive gas emissions, minimising harm to personnel, buildings and transmission equipment.



DUCT SIZE	MILLIMETRES	30 X 30	50 X 50	100 X 50	100 X 100	220 X 100	300 X 100	600 X 100
	INCHES	1.25 x 1.25	2 x 2	4 x 2	4 x 4	8 x 4	12 x 4	24 x 4
OPTICAL CABLE SIZE/MM		2	2	2	2	2	2	2

Capacities

STRAIGHT DUCTING RACEWAY	100	280	560	1110	2450	3340	6680
DUCTING RACEWAY WITH RAMP-OFF				670	1470		
VERTICAL TEE-STRAIGHT THROUGH				1110	980		
VERTICAL TEE DOWNPOUT-DROP				1110	1100		
OVER THE TOP OUTLET				670			

CONVOLUTED TUBING	SPLIT 20MM DIA.	38MM DIA.	50MM DIA.	75MM DIA.	50X50 SQUARE
OPTICAL CABLE SIZE/MM	2	2	2	2	2
TUBING CAPACITY	22	125	220	360	280

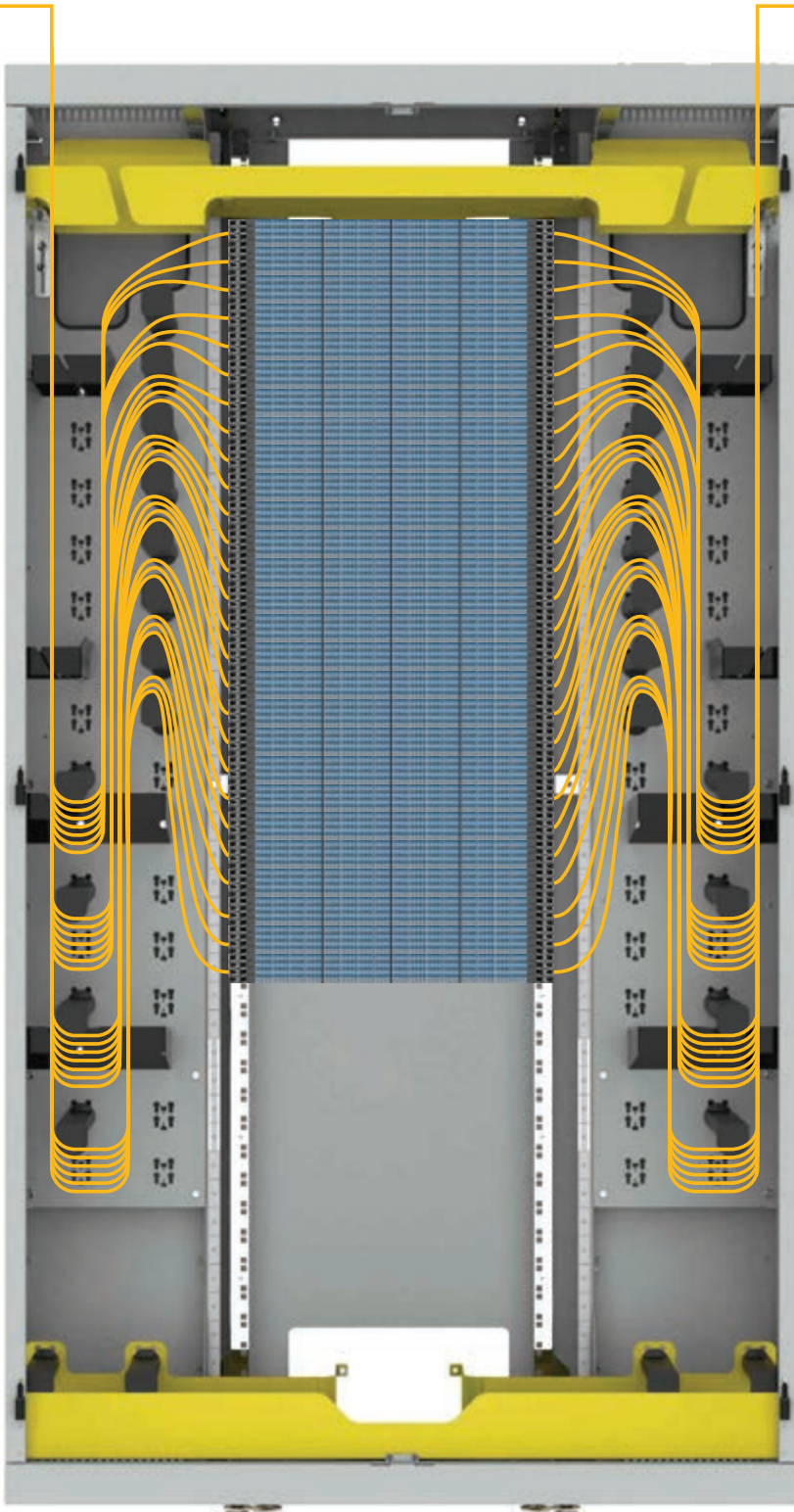
Note: Calculations are based on half full duct capacity - 50%

* To see other options for Fibre ducting raceway, please view our website or other product catalogues



Deployment Examples

Cross Connect/Patching ODF TC405011EDC ODF, IntelliFOX Blade chassis & cassettes



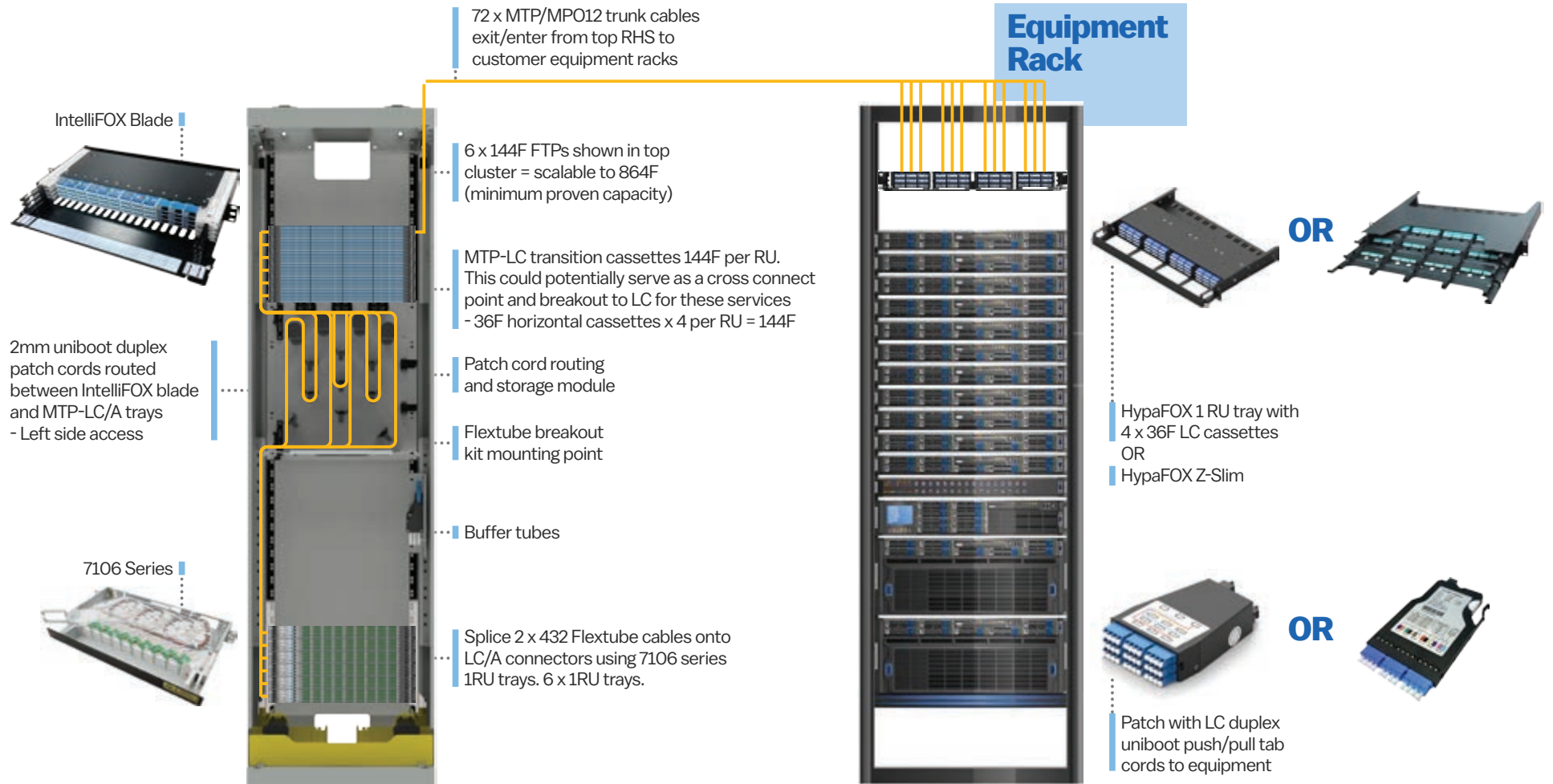
- 192F per RU
- 27 x 1RU chassis
- Density of 5,184LC ports
- Capacity of 1,296 x 2mm uniboot duplex per side = 2,596 cords (5,184F)
- Left and right LC or LC/A patchcord entry and exit
- Slack management and storage
- Also suitable for MTP trunk cables



IntelliFox Blade

IntelliFOX Optical distribution Frame – TC4050200 series

Central cross connect (Splicing/Patching)





IntelliFOX Optical distribution Frame – TC4050200 series Central cross connect (Patch only/Pre-terminated cabling)

e.g. 6x 144F MTP/MPO trunk cables to bottom cluster of FTPs

72 x MTP/MPO12 trunk cables exit/enter from top RHS to customer equipment racks

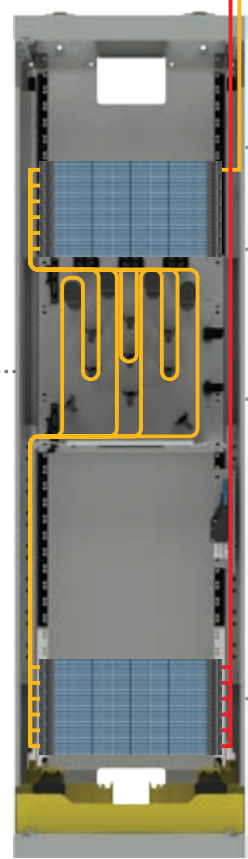


IntelliFOX Blade

2mm uniboot duplex patch cords routed between IntelliFOX blade and MTP-LC/A trays - Left side access



IntelliFOX Blade



6 x 144F FTPs shown in top cluster = scalable to 864F (minimum proven capacity)

MTP-LC transition cassettes 144F per RU. This could potentially serve as a cross connect point and breakout to LC for these services - 36F horizontal cassettes x 4 per RU = 144F

Patch cord routing and storage module

Preterminated MTP/MPO-LC cabling

Equipment Rack



OR



HypaFOX 1 RU tray with 4 x 36F LC cassettes OR HypaFOX Z-Slim



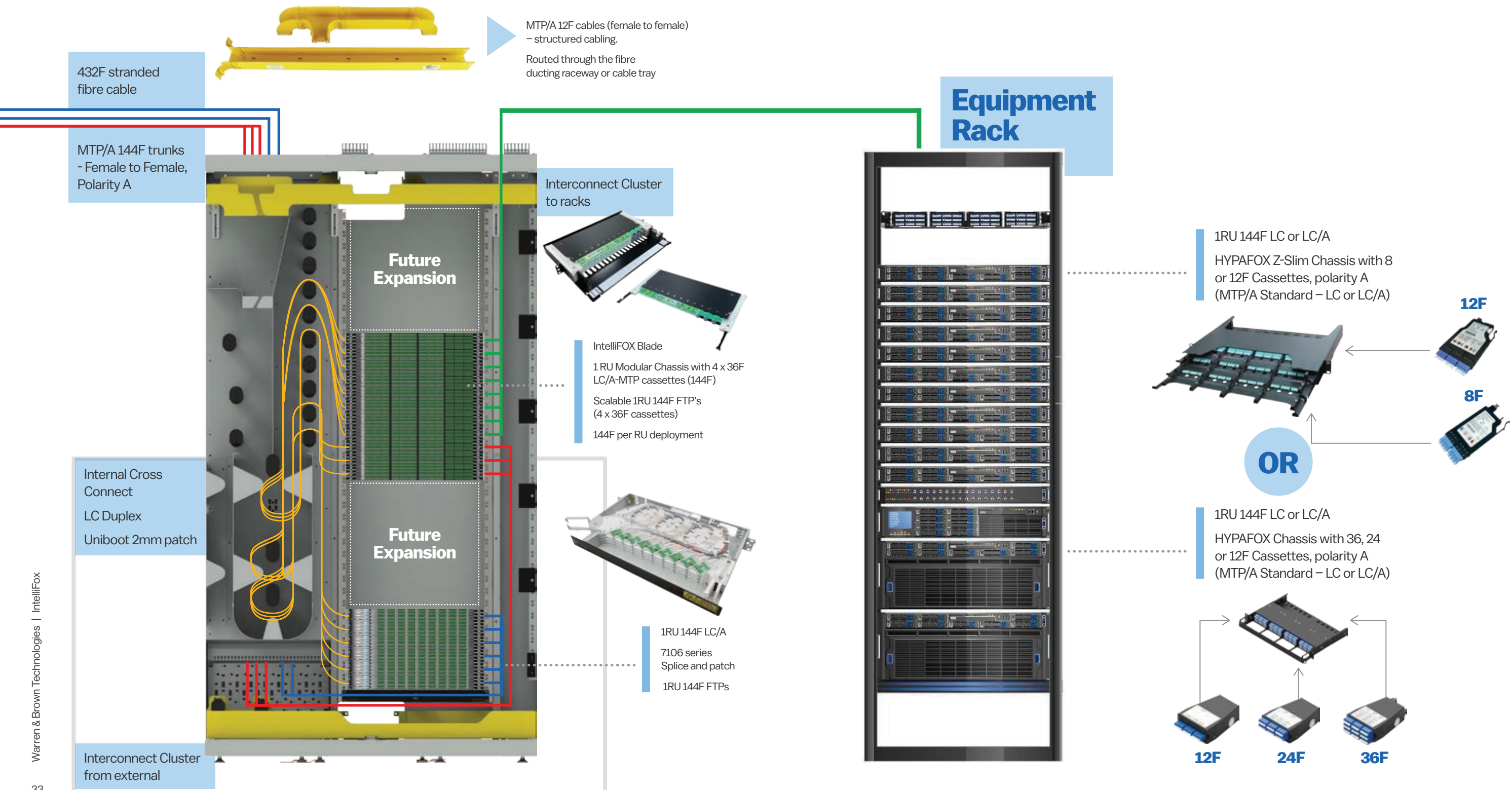
OR



Patch with LC duplex uniboot push/pull tab cords to equipment

Single ODF cross connect

(top & bottom clusters) – IntelliFox Blade



Full capacity single deployment

Scalable and flexible (TC7010 series)

Examples:

36 x 144F cables into ODF and spliced directly into 1 RU(144F) 7106 tray

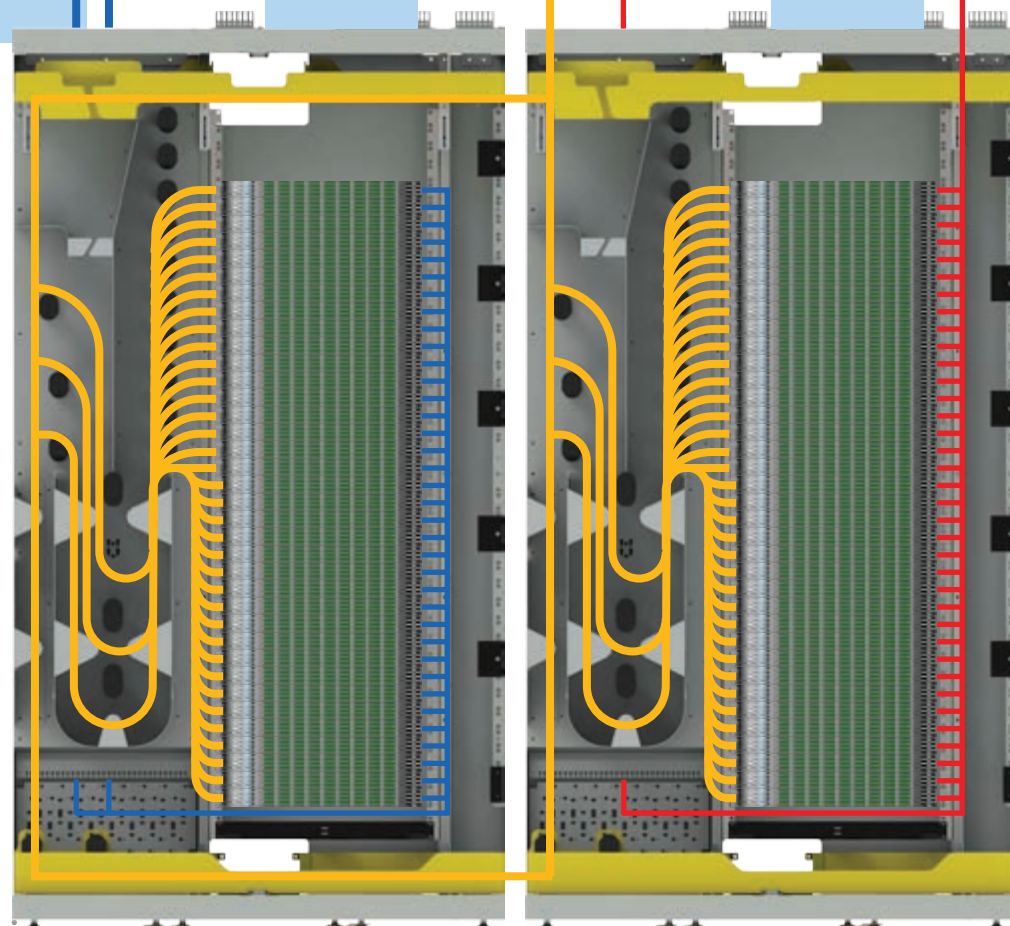


Fibre patchleads between ODF 1 & 2 and also other carrier racks

MTP/A 144F trunks Female – Female Polarity A. Haul sock one end

ODF 1

ODF 2



Top LHS or RHS exit/entry optional. Default will be top left, behind spools

1RU 144F LC/A
7106 series
Splice and patch

36 x 1RU 144F FTPs
Total port density of 5184 LC/A fibres



1RU 144F LC/A
TC7010 MTP/MPO-LC
(Chassis and cassettes)

36 x 1RU 144F FTPs
Total port density of 5184 LC/A fibres
144F per RU deployment

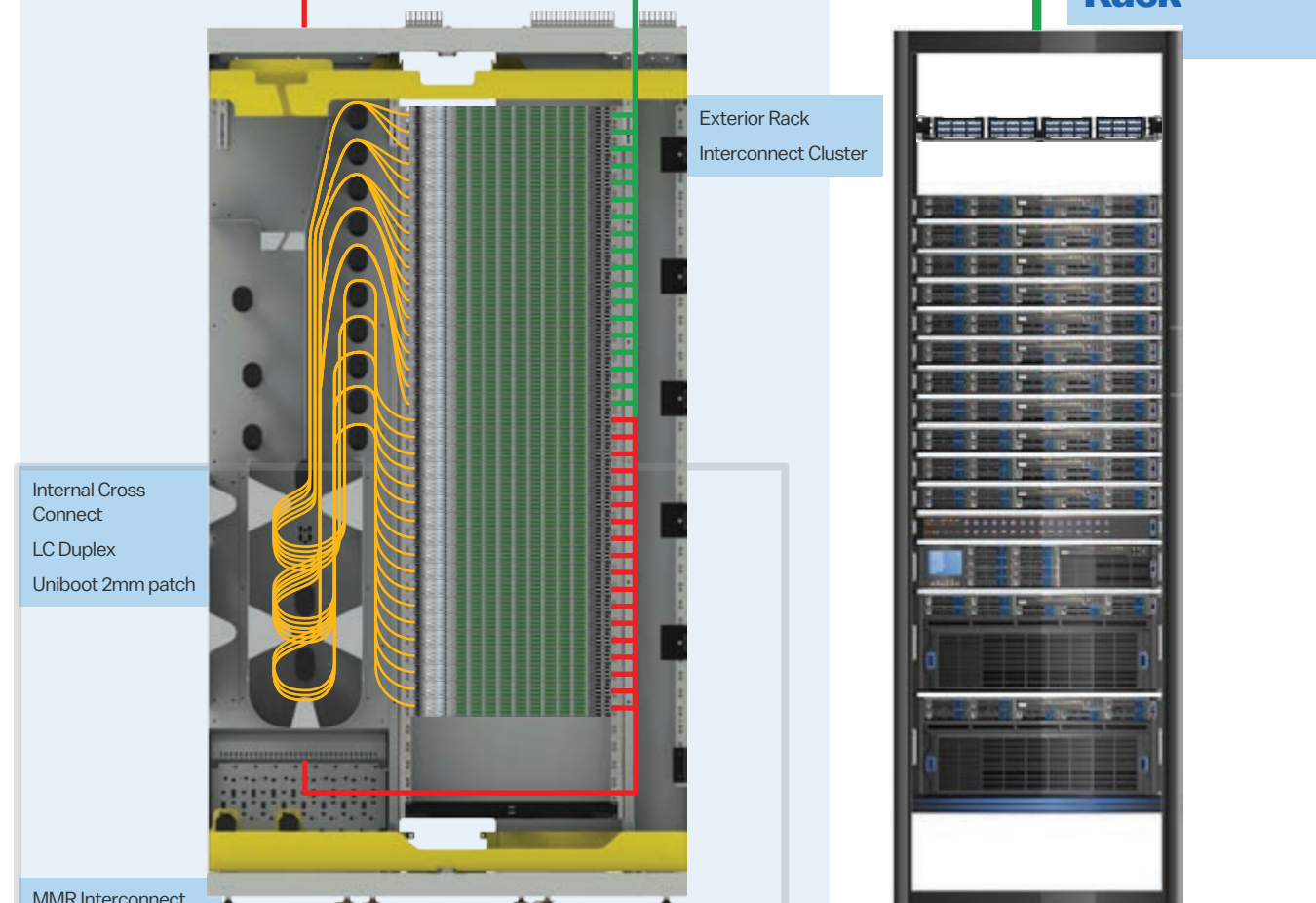


Data Hall Zone frame configuration



MTP/A 12F cables (female to female) – structured cabling.
Routed through the fibre ducting raceway or cable tray

Equipment Rack



Exterior Rack Interconnect Cluster

Internal Cross Connect
LC Duplex
Uniboot 2mm patch

MMR Interconnect Cluster

1RU 144F LC/A
TC7010 MTP/MPO-LC
(Chassis and cassettes)

36 x 1RU 144F FTPs
Total port density of 5184 LC/A fibres
144F per RU deployment



HYPAFox Z-Slim 1RU, 12 slot sliding chassis (up to 144F LC) and Z-Slim cassette, 12 fibre MTP-LC



Full capacity single deployment

Scalable and flexible (IntelliFOX Blade)

Examples:

36 x 144F cables into ODF and spliced directly into 1 RU(144F) 7106 tray

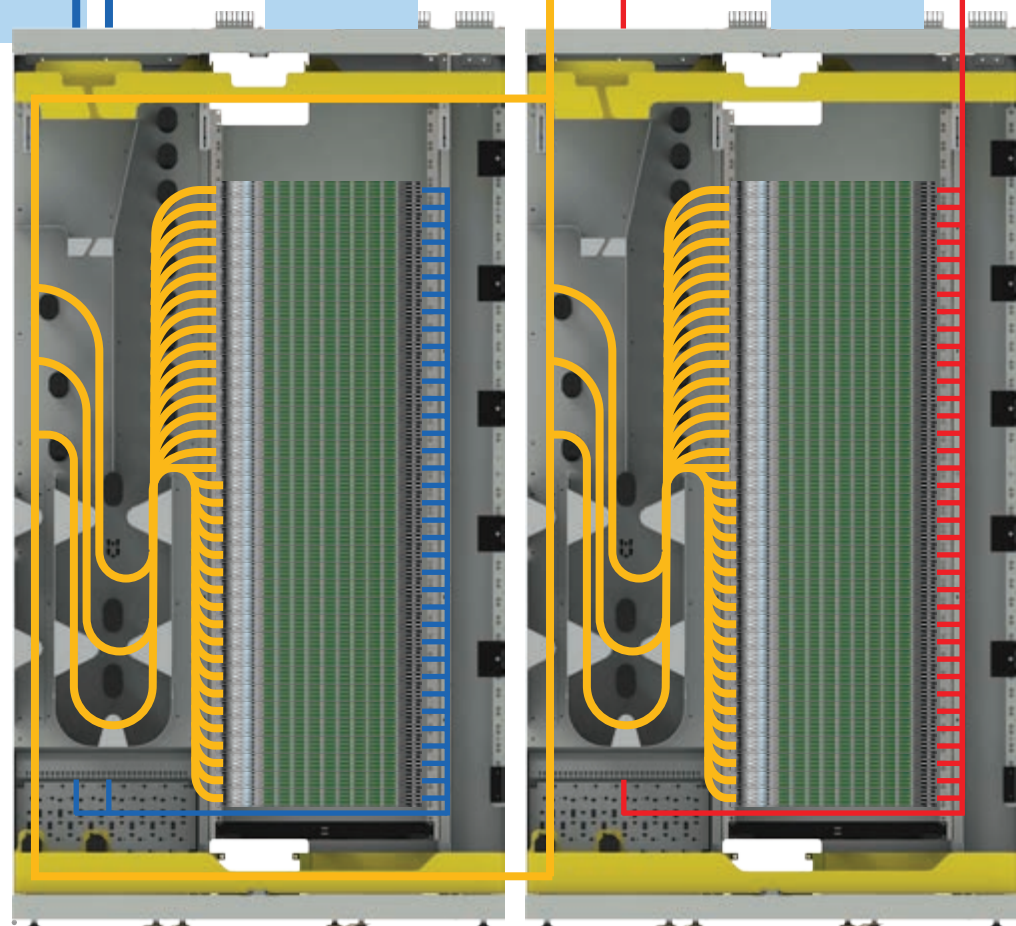


Fibre patchleads between ODF 1 & 2 and also other carrier racks

MTP/A 144F trunks Female – Female Polarity A. Haul sock one end

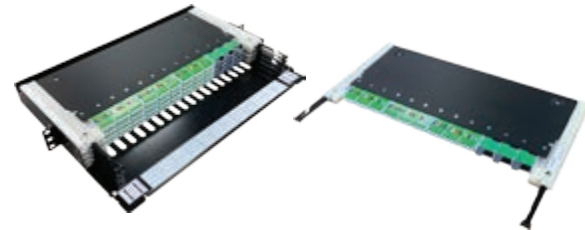
ODF 1

ODF 2



- 1RU 144F LC/A 7106 series Splice and patch
- 36 x 1RU 144F FTPs Total port density of 5184 LC/A fibres

- IntelliFOX Blade 1 RU Modular Chassis with 4 x 36F LC/A-MTP cassettes (144F)
- 36 x Scalable 1RU 144F FTP's (4 x 36F cassettes) Total port density of 5,184 LC/A fibres 144F per RU deployment

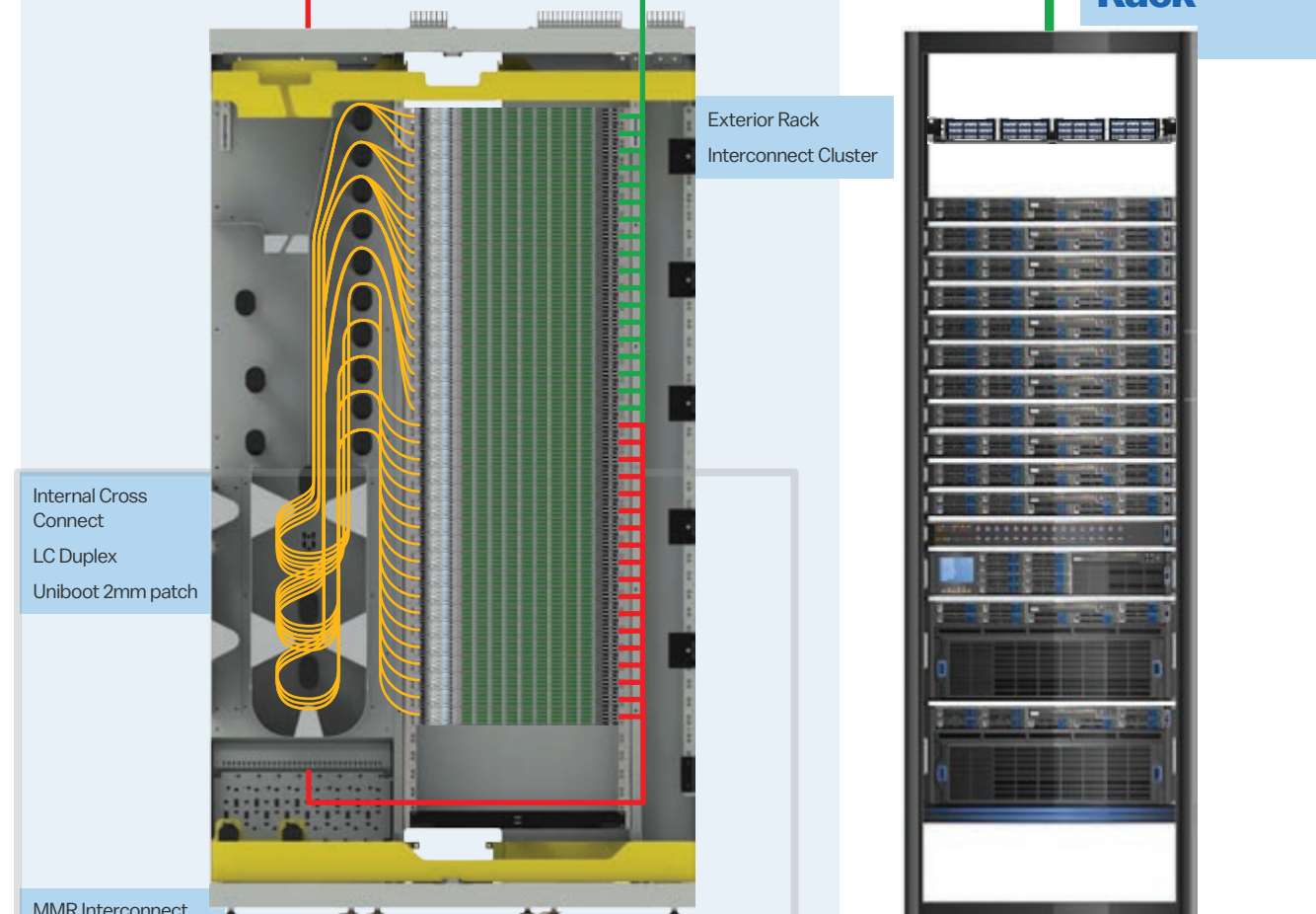


Data Hall Zone frame configuration



MTP/A 12F cables (female to female) – structured cabling. Routed through the fibre ducting raceway or cable tray

Equipment Rack

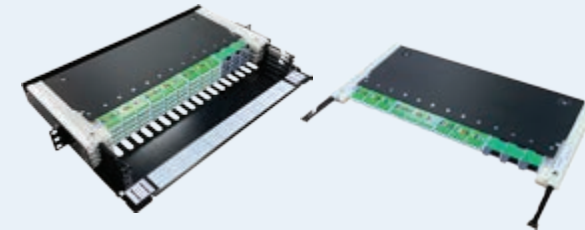


Internal Cross Connect LC Duplex Uniboot 2mm patch

MMR Interconnect Cluster

Exterior Rack Interconnect Cluster

- IntelliFOX Blade 1 RU Modular Chassis with 4 x 36F LC/A-MTP cassettes (144F)
- 36 x Scalable 1RU 144F FTP's (4 x 36F cassettes) Total port density of 5,184 LC/A fibres 144F per RU deployment



HYPAFox Z-Slim 1RU, 12 slot sliding chassis (up to 144F LC) and Z-Slim cassette, 12 fibre MTP-LC



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