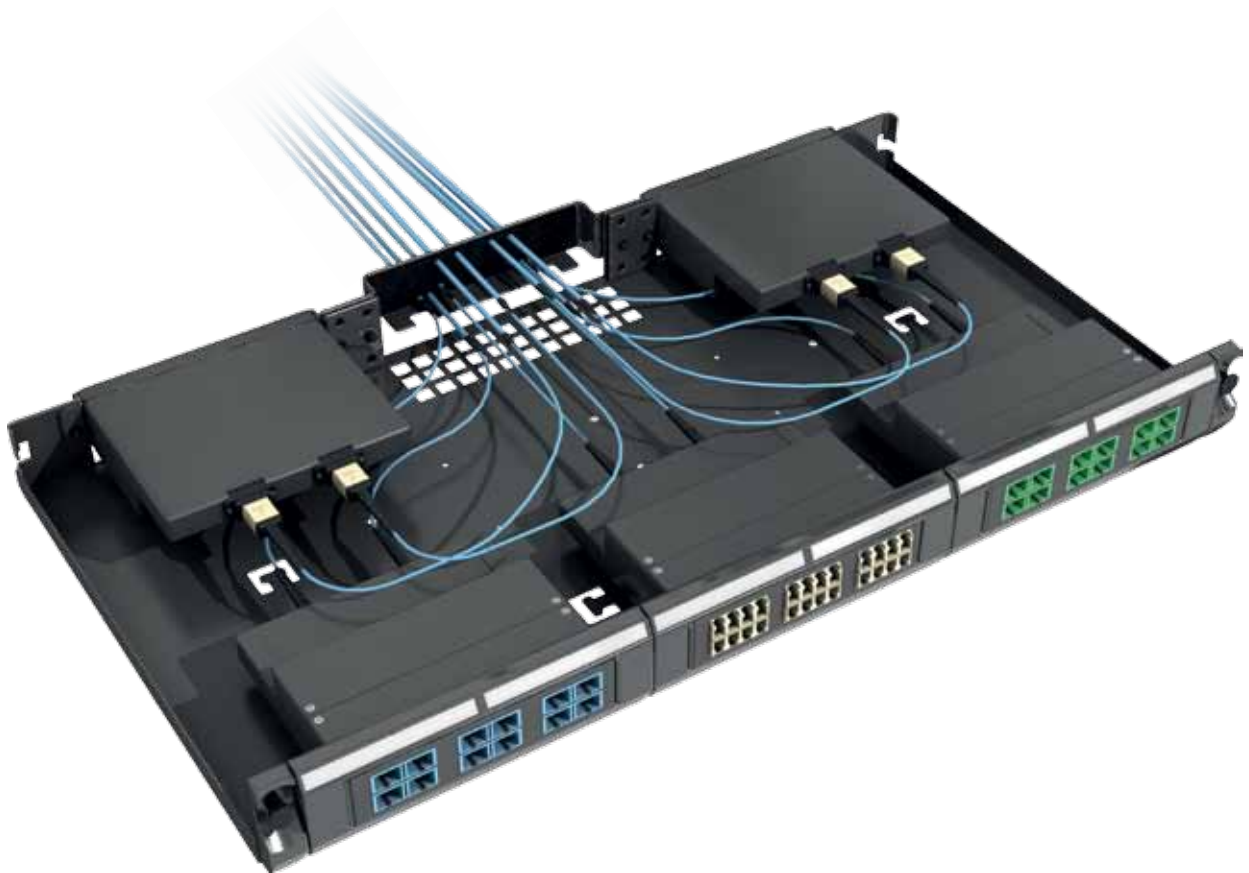




Smart and simple cabling solutions

TRANSFORMER FIBER PANEL

Modularity - Density - Clear ID



MMC, INNOVATION BACKGROUND FOR MANY YEARS

Since 1993, Multimedia Connect has been a structured cabling system manufacturer designing and producing communication solutions for intelligent buildings, that enhances IP convergence.

Quality & innovation are the directions chosen by Multimedia Connect to offer accurate cabling from Enterprise to Datacenter.



Headquarter



Bare fiber factory

- **Innovation**

Since its creation, Multimedia Connect has always been at the forefront of product innovation. We were among the first manufacturers to certify a Category 6 connector (in 2002) and a Category 6a (ISO) connector (in 2010). «In addition to the performance of our systems, our R&D efforts are focused on designing solutions which facilitate installers and end-users work».

- **Keep it simple**

With Multimedia Connect, technology means simplicity. «We are pioneer in the development of tool less termination and our objective is to invent products and systems which are easy to install and easy to manage».



- **The opportunities of IP convergence**

The development of IP (Internet Protocol) in applications such as CCTV, Access Control, Public Address, Video, Audio ... means that structured cabling systems are now used in a large variety of new environments.

At Multimedia Connect, we have identified this fundamental trend of our industry and we are developing specific products and systems which facilitate the convergence between cabling infrastructures and these new IP applications.



TRANSFORMER FIBER PANEL: CONCEPT

Tomorrow's fiber patch panel should offer Plug & Play modularity and should also be part of the vendor's warranty. Space cost inside cabinets requires a very high density capacity. This leads to another issue: the need for a clear labelling solution.

MAXIMUM MODULARITY

- Removable front plates for all types of connectors including copper / fiber, or 3 LGX modules / MTP® cassettes
- Exclusive design to enable front and back cassette insertion
- LGX modules for :
 - 12 SCS, LCD flangeless, MTP® simplex flangeless
 - 6 SCD, LCQ or MTP® duplex flangeless
 - Brush, 6 RJ45 keystones jacks



VERY HIGH DENSITY

Multimedia Connect fiber panel is offering one of the highest possible and manageable densities on the market. This is a sustainable investment for "high class" fiber optic networks.

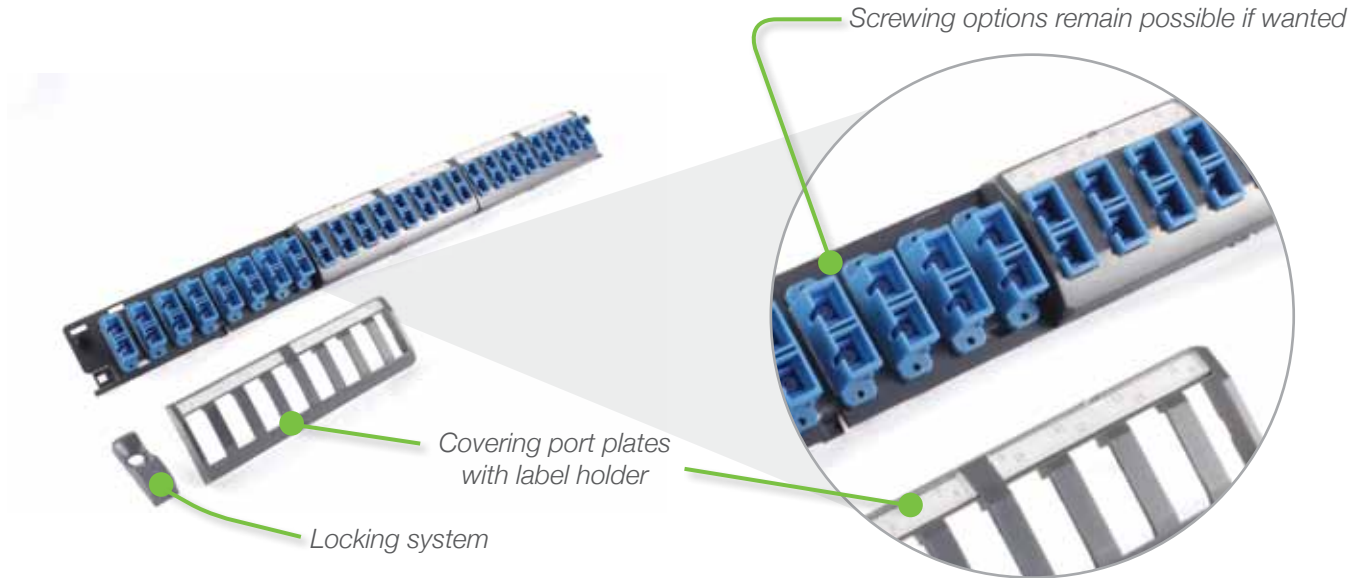


TYPE OF CONNECTORS	NUMBER OF ADAPTERS	FIBER COUNTS	NUMBER OF ADAPTERS	FIBER COUNTS	NUMBER OF ADAPTERS	FIBER COUNTS
ST SIMPLEX	24	24 FO	-	-	-	-
ST DUPLEX	24	48 FO	-	-	-	-
SC SIMPLEX	48	48 FO	36	36 FO	60	60 FO
SC DUPLEX	24	48 FO	18	36 FO	30	60 FO
LC DUPLEX	48	96 FO	36	72 FO	60	120 FO
LC QUAD	24	96 FO	18	72 FO	30	120 FO
MTP® SIMPLEX 12 FO	48	576 FO	36	432 FO	60	720 FO
MTP® DUPLEX 12 FO	24	576 FO	18	432 FO	30	720 FO

TRANSFORMER FIBER PANEL: CONCEPT

LABELLING & SCREWLESS

Label holders integrated into the front face plates



PLUG & PLAY SOLUTION AND 25 YEARS WARRANTY

Installers and users face a dilemma : less time and an increasing demand for numerous ports. This is why pre-assembled today is a time saving solution.

Multimedia Connect's challenge was to answer this need in the most accurate, secure and affordable way. Multimedia Connect's expertise and top quality service allows any customer to install fiber networks with short lead time and no risk. All our fiber panels, links and patchcords are customized on demand as well as controlled & warranted. Our customers can rely on our advice, quality and service.



25 years warranty on factory preassembled items*

- MTP® cassettes and MTP® trunks
- Other types of preterms
- Loaded panels (splice tray, pigtailed, adapters, labels...)

*If installed by a MMC certified company



TRANSFORMER FIBER PANEL: OVERVIEW

CHASSIS CH1U

Empty chassis without front plate

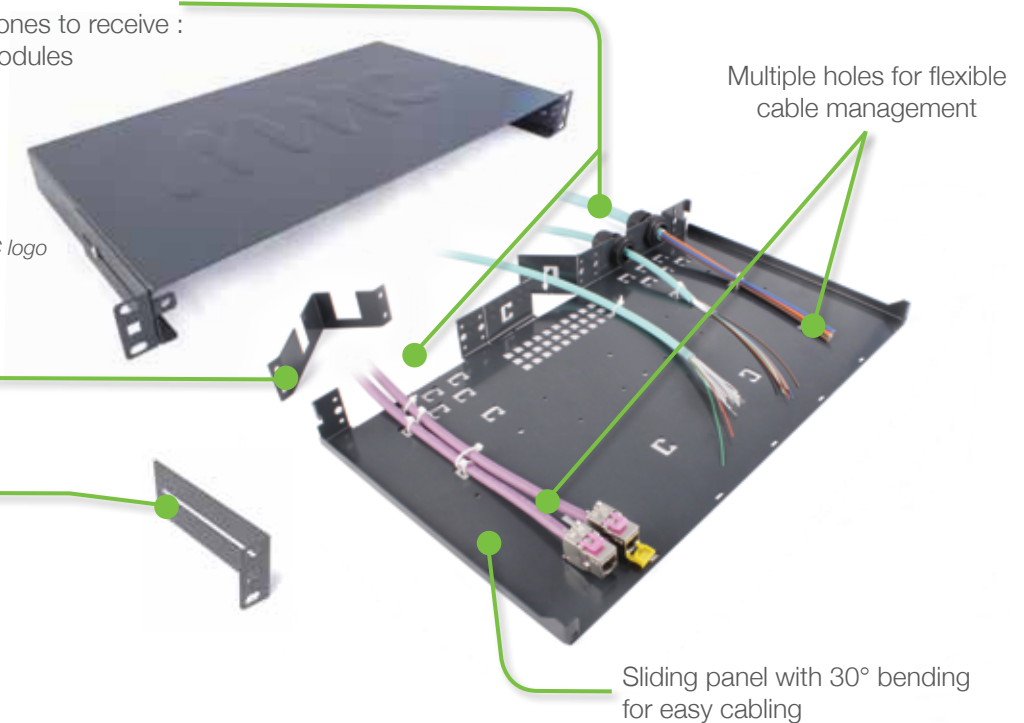
Rear entries: 3 modular pre-cut zones to receive :

- Several types of LGX plate modules
- MTP® cassettes
- 4 sizes of cable glands
- Brush module

Top cover with stamped MMC logo

Rear access angled 45° optional modules

Adjustable front 19" brackets
Rear bracket optional
ETSI bracket optional



UNLOADED 19" FRONT PLATES

Removable front plates with 3 ports covering plate.



FU1U24SCSLCD for 24 SCS, LCD or STS flange adapters
NB : Dust cap for unused port : 48OBLCD



FU1U24SCDLCQ for 24 SCD, LCQ or STD flange adapters
NB : Dust cap for unused port : 48OBSCD



FU1U3MOD for 3 MTP™ cassettes or 3 LGX adapter s' modules
NB : Dust cap for unused port : LXOB



FU1U48SCSLCD for 48 SCS or LCD flangeless adapters
NB : no dust cap available

Labeling ID windows with no space wasted. Numbered printed labels are included



Each unloaded front plate comes with 2 plates for M6 screws, 2 plates for snap latches and 3 ports covering plates.

TRANSFORMER FIBER PANEL: OVERVIEW

LOADED 19" FRONT PLATES



FE1U24ASTSMONO



FE1U24ASCSMUL



FE1U24ALCDMUL

FU1U24SCSLCD - Unloaded front plate for 24 adapters
Compatible with STS, SCS, LCD or MTP® simplex adapters or FCS



FE1U24ASTDMONO



FE1U24ASCDMONO



FE1U24ALCQMUL

FU1U24SCDLCQ - Unloaded front plate for 24 adapters
Compatible with STD, SCD, LC Quad or MTP® duplex adapters or FCD



FE1U48ASCSMONO



FE1U48ALCDMUL

FU1U48SCSLCD - Unloaded front plate for 48 flangeless adapters
Compatible with SCS, LCD flangeless adapters or MTP® simplex

ORDERING INFORMATION

ITEMS	DESCRIPTION	PACKAGING
CH1U	Empty sliding chassis 1U	Unit
EQCH1U19	19" rear additional bracket	Pack of 2
EQCH1U23	ETSI 23" front or rear alternative bracket	Pack of 2
FU1U24SCSLCD	Unloaded front plate 1U for 24 STS/SCS/LCD/MTPS/FCS	Unit
FU1U24SCDLCQ	Unloaded front plate 1U for 24 STD/SCD/LCQ/MTPD/FCD	Unit
FU1U48SCSLCD	Unloaded front plate 1U for 48 SCS/LCD/MTPS flangeless	Unit
FU1U3MOD	Unloaded front plate 1U for 3 LGX modules or MTP® cassettes	Unit

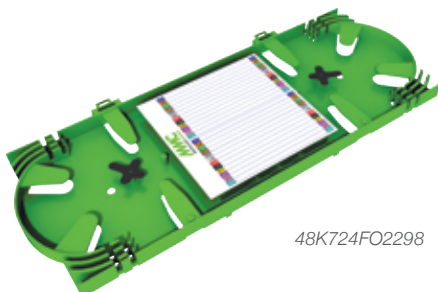


*Always with screws

TRANSFORMER FIBER PANEL: ON DEMAND

SPLICE TRAY FOR HEATSHRINKS

Multimedia Connect splice tray can manage up to 24 heatshrink splices. 4 splice trays can be stacked up to 1U height. It is swivelling for easy access to the bottom tray of the stack. It is delivered with all cable routing accessories cable ties, snake tube, color coded stickers, 2 screws with nuts & 2 reusable self adhesive tapes for flexible installation method inside the panel.



48K724FO2298

ITEM	DESCRIPTION	PACKAGING
48K724FO2298	Splice tray for 24 heat shrinks dimension 22 x 9.7 x 8 cm	Unit

ADAPTERS & CONNECTORS

Those connectors & adapters are suitable for all networks : LAN (Local), WAN (Wide), MAN (metropolitan) & SAN (storage). The Multimedia Connect fiber panel has been designed for a fast screwless adapter mounting operation. Screwing remains possible thanks to optional screws (ref: 48MMTVIS - 48 units pack). The SC connectors can be assembled with 3 mm, 2mm or 900 µm O.D. cables thanks to included crimp rings & boots.

ORDERING INFORMATION FOR ADAPTERS & CONNECTORS

ITEM	PERFORMANCE	TYPE OF ITEM	TYPE OF :		W/ OR W/O SCREWS
			ADAPTERS	CONNECTORS	
48	XX MM (multimode) SM (singlemode)	X T (adapter) C (connector)	X X X X	X X X	XX FL (sans vis)
			STS* STSAS* STD* STAD* SCS SCAS SCSISS* SCASISS* SCD SCAD LCD LCAD LCQ LCAQ MTPS MTPD	STS* STSAS* STD* SCS SCAS SCD SCAD LCD LCAD MTPS	

Ex : 48 SMC SCS, singlemode SC simplex connector, packaging of 6 units

*Screws only

Connectors :

Adapters :



48MMCSCS



48MMTSTSBE*



48MMTSTDBE*



48SMTSCS



48SMTSCASISS*



48SMCLCS



48SMTFCAD*



48MMTSCD



48MMTLCD



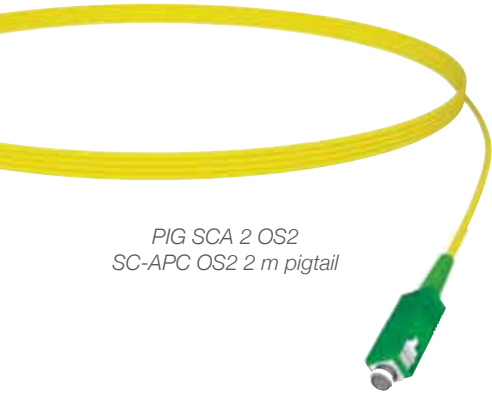
48SMTLCAQFL

TRANSFORMER FIBER PANEL: ON DEMAND

PIGTAILS

Multimedia Connect optical pigtails use loose tube Easy Strippable, cable. They need to be protected with heatshrinks as shown below.

ORDERING INFORMATION FOR PIGTAILS *INDIVIDUAL PACKAGING*



PIG SCA 2 OS2
SC-APC OS2 2 m pigtail

PIGTAIL	TYPE OF PIGTAILS	LENGTH (M)	PERFORMANCE
PIG	XXX	2	XXXXXXXXX
	ST	2	OM1
	SC		OM2
	LC		OM3
	SCA		OM4
	LCA		OS2 (G652D)
			7A1 (G657 A1)
			7A2 (G657A2)
			7B3 (G657B3)

ORDERING INFORMATION FOR PIGTAILS *PACK OF 12*



PIG LC 2 OM3 B12
LC OM3 2 m pack of 12 pigtails

PIGTAIL	TYPE OF PIGTAILS	LENGTH (M)	PERFORMANCE	PACKAGING
PIG	XXX	2	XXX	B12
	ST	2	OM1	
	SC		OM2	
	LC		OM3	
	SCA		OM4	
	LCA		OS2 (G652D)	
			7A1 (G657 A1)	
			7A2 (G657A2)	
			7B3 (G657B3)	

HEATSHRINKS



ITEMS	DESCRIPTION	PACKAGING
MANCHONEPISSURE	Heatshrink splice protection tube ID 1.5/2.4 mm x length 40 mm	Pack of 50
MANCHONEPISSUR60	Heatshrink splice protection tube ID 1.5/2.4 mm x length 60 mm	Pack of 50

TAYLORED TRANSFORMER FIBER PANEL

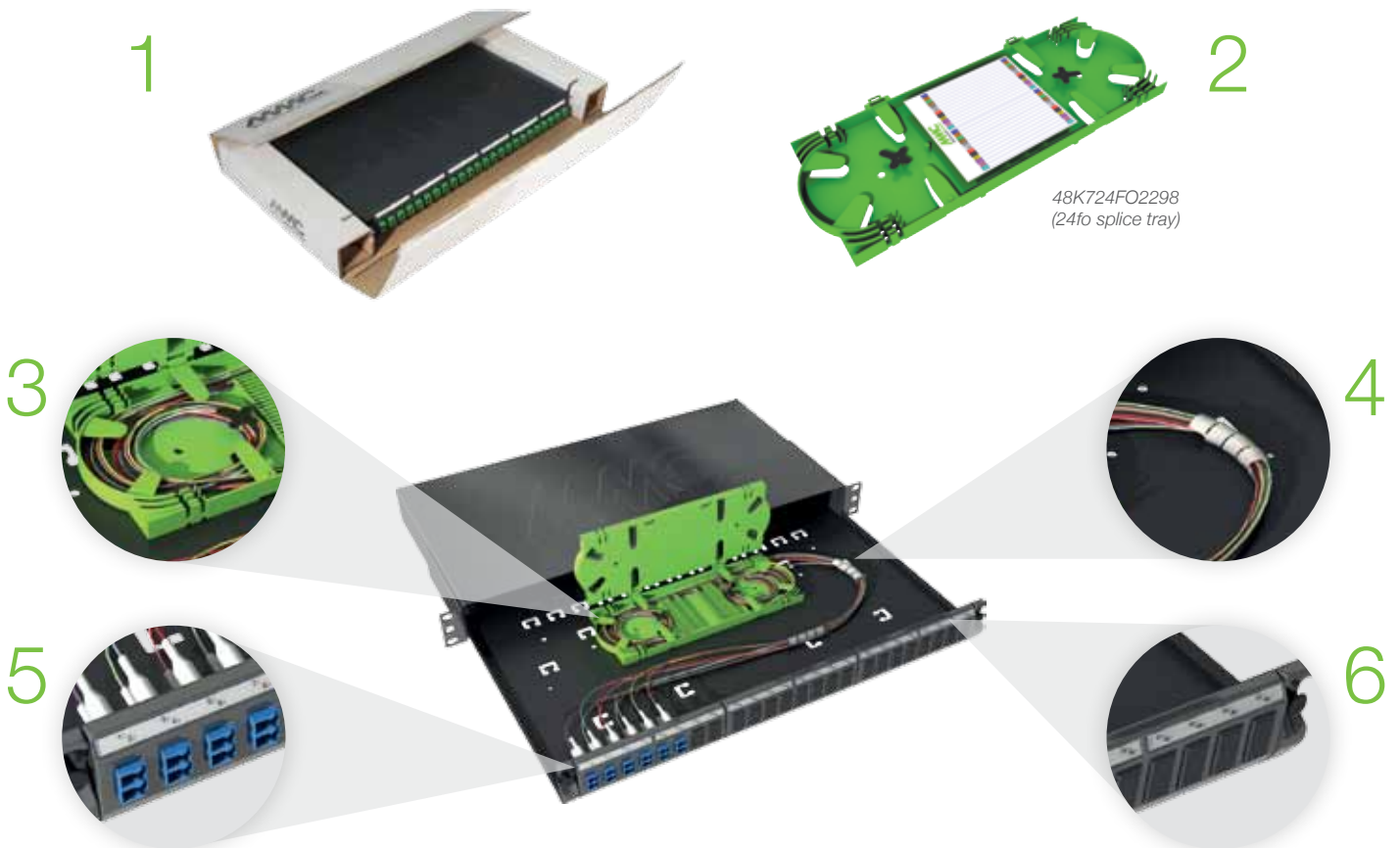
READY TO SPLICE FULLY LOADED PANEL

The ready to splice panel is an alternative to field connections. It may save up to 2 hours of a qualified technician. The panel comes with the front plate loaded with adapters, the splice trays positioned inside the sliding plate and all the pigtails, properly routed and connected to the adapters. The pigtails are compliant with IEC 60304 standard, thanks to their 12 colors and can be customized according to the telecom standard previously requested by the end-user. The packaging is highly reliable and protects all the adapters at the front of the panel.

READY TO SPLICE PANEL	NUMBER OF PIGTAILS	TYPE OF ADAPTERS	PERFORMANCE	W/ or W/O SCREWS
TO 1U	XX P	XXXXXXXX	XXX	X
	6	STS*	OM1	- (screwless / flangeless)
	12	STD*	OM2	1 (with screws 48MMTVIS)
	24	SCS SCAS	OM3	
	36	SCSISS SCASISS*	OM4	
	48	SCD*	OS2	
	72	LCD LCAD	7A2 (G657 A2)	
	96	LCQ LCAQ		

*Screws only

AN IMPACCABLE FINISH



1. The carton is designed to protect the adapters at the front of the panel when loaded.
2. 24 fibres slim & stackable splice tray. 4 splice trays can be stacked up to over 1U height.
3. The pigtails are properly routed into the splice trays
4. Bending radius of the pigtails is respected and optimised.
5. ABS face plates to allow screwless mounting of the adapters
6. Easy ID label ports on the ABS face plates.

MODULAR SOLUTION: THE LGX SYSTEM

LGX : A UNIVERSAL SOLUTION

LGX adapter plate modules are also compatible with our fiber wall box.
 LGX is an ideal standardized format as it is the most common footprint for MTP®



CH1U



FU1U3MOD



LX12ASCSMUL



LX6ALCAQMONO

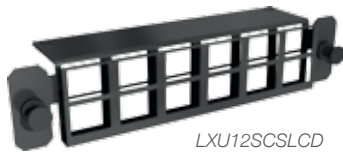


48BMOP4LGX
Wall box for 4 LGX modules

Maximum load capacity per LGX module and MTP® cassettes :

- 12 SCS LCD and MTP® simplex screwless / flangeless adapters.
- 6 SCD LCQ and MTP® duplex screwless / flangeless adapters.

OPTIONAL MODULES & ACCESSORIES



LXU12SCSLCD



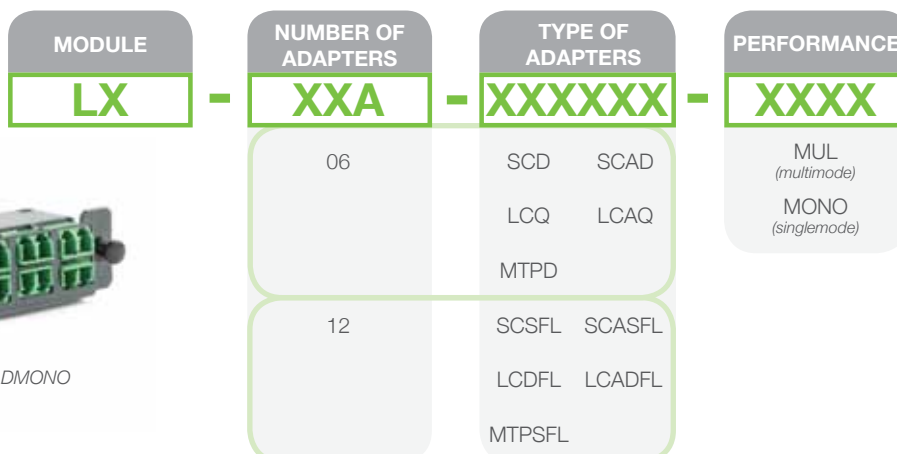
ECA451U



ECAMP1U

MODULE	LOCATION IN THE FIBER PANEL	ITEMS	DESCRIPTION	PACKAGING
FIBER	Front and /or back	LXU06SCDLQ	LGX Unloaded adapter plate module for 6 SCD/LCQ/MTPD	Unit
	Front and /or back	LXU12SCSLCD	LGX Unloaded adapter plate module for 12 SCS/LCD/MTPS	Unit
COPPER	Front and /or back	LX06KJ6AFSTL	LGX Module for 6 BC6AFSTL shielded toolless keystone jacks	Unit
CABLE ENTRY	Back only	ECAMP1U	Rear cable entry for Micro and Premium preterms	Unit
	Back only	ECA451U	Rear angled cable entry 45° for 1 x PG13.5 or 1 x PG16	Unit
	Front and /or back	LXPFB	LGX Brush plate module	Unit

ORDERING INFORMATION FOR LGX MODULE



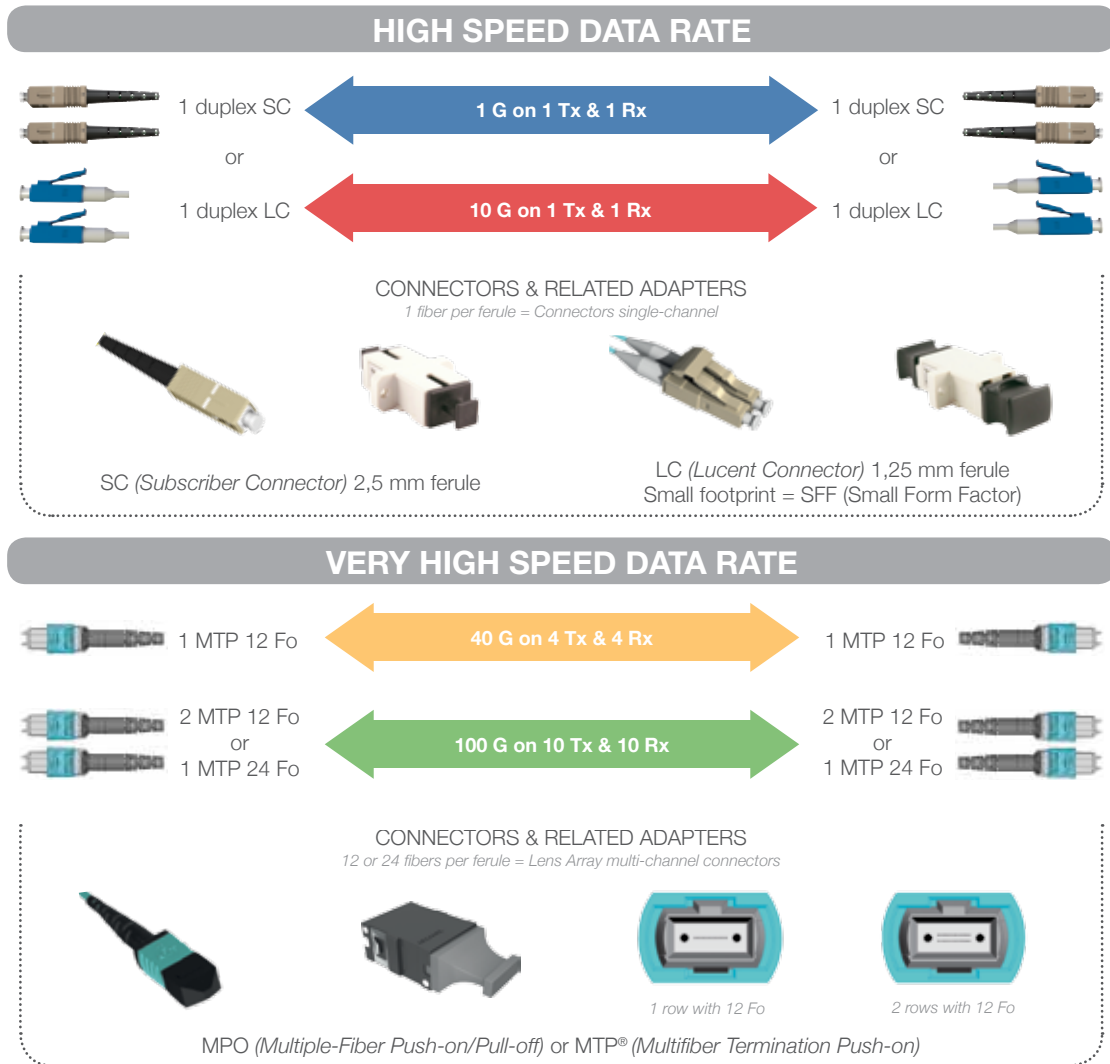
LX12ALCADMONO

PLUG & PLAY SOLUTION: THE MTP® SYSTEM

CORRELATION BETWEEN DATA RATE & THE NUMBER OF REQUIRED FIBERS

The Data Center capacity has now become a real key issue due to a worldwide growth scheduled to reach 1.6 billions dollars within the next ten years.

This roadmap leads us to a high storage capacity, very high speed transmission data rate thanks to a powerfull infrastructure.



MPO OR MTP® ?

What is an MTP® connector?

- An MTP® connector is an MPO with improved mechanical performances & a longer life cycle
- Adapted to the ISO/IEC 24764 standard relative to the Data Centers & compatible with other brands

KEY FEATURES OF THE MTP® TECHNOLOGY

Physical property :

- Small sized connectivity & câbles
- High density fiber panel for a maximum space saving in the data racks & cabinet

Performances, price/service ratio :

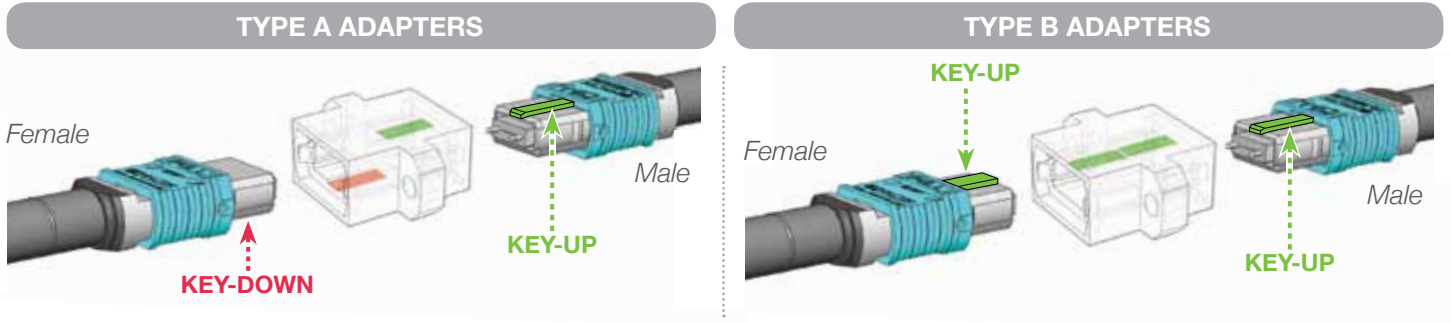
- Defined by the IEC-61754-7 & TIA-604-5 (FOCIS 5) standards, with easy handling & maintainance
- Great performances with an excellent skew & high bandwidth on short distances (< 300m)
- The gain of HU space into the data racks & cabinets is a real cost saving criteria

PLUG & PLAY SOLUTION: THE MTP® SYSTEM

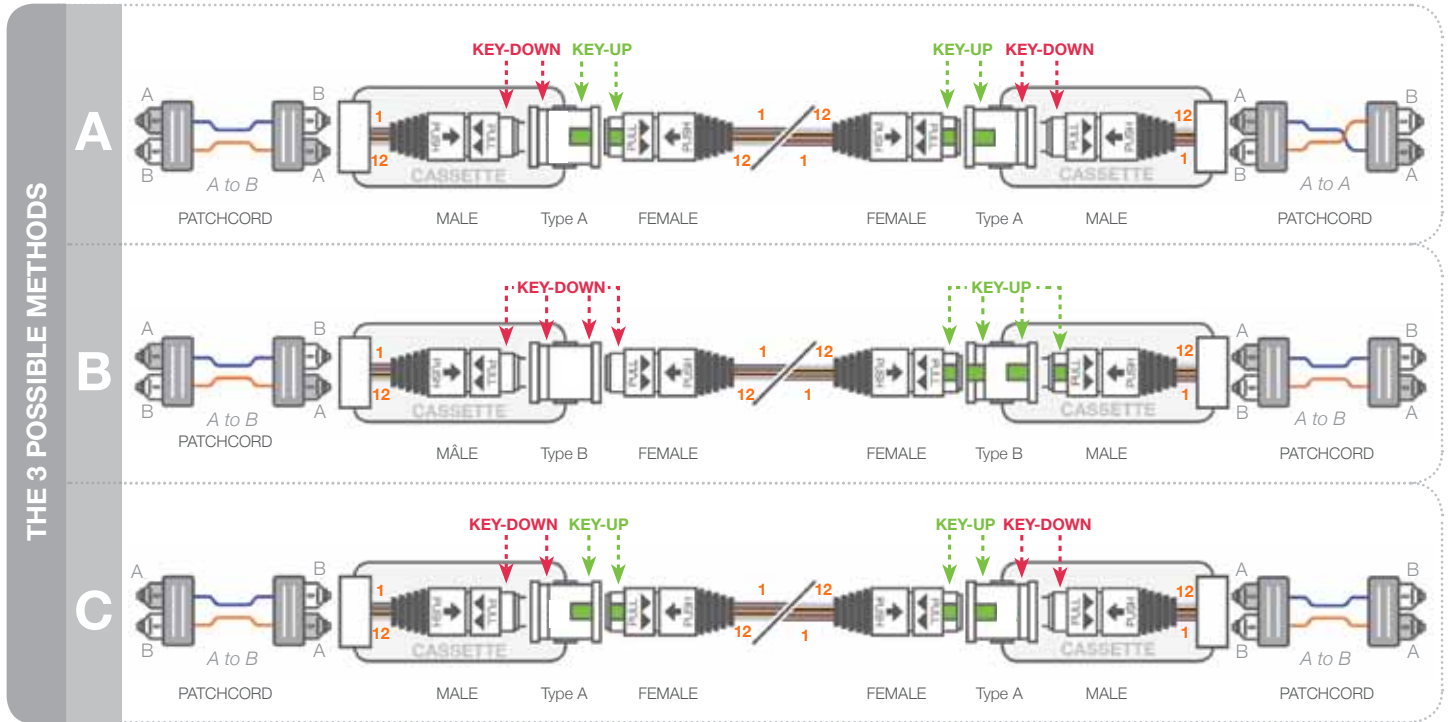
HOW TO RESPECT POLARITY & PERFORMANCES OVER 12 OR 24 FIBRES

Principle :

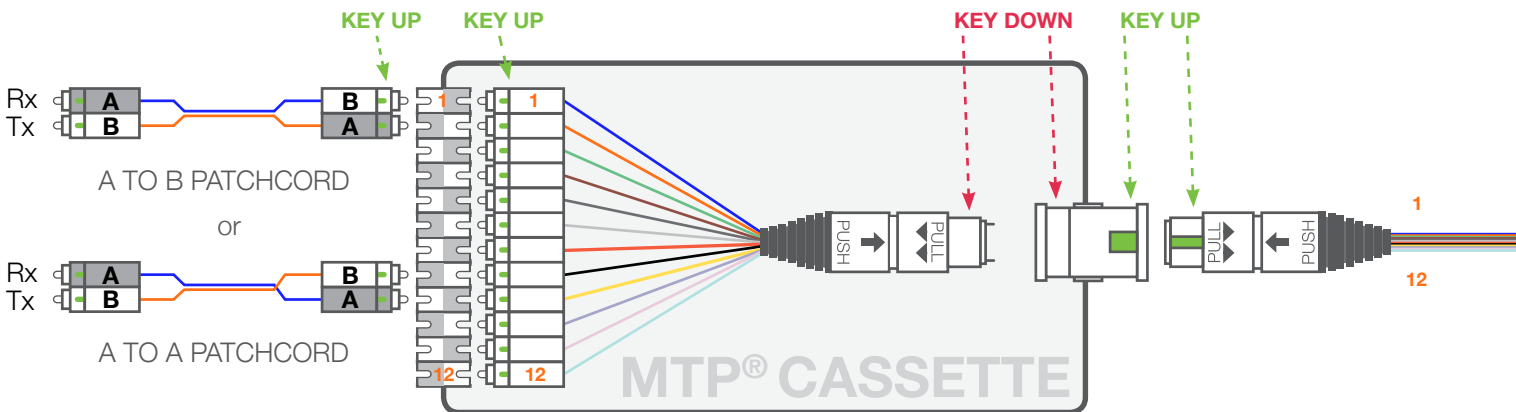
- Type A adapters with **opposite** key (**UP/DOWN**)
- Type B adapters with **aligned** key (**UP/UP**)
- Male & female connectors



As per the ANSI/TIA-568C.0, three cabling methods can assure the polarity on the optical link.



PRINCIPLE OF POLARITY OVER 12 FIBERS



HIGH DENSITY SOLUTION: THE MTP® SYSTEM

1 PANEL, 3 LEVELS OF DENSITY

The internal fan out solution included into the MTP® cassettes is usually limited to 3 cassettes loaded on the front only. The design of the MMC fiber panel allows 10 MTP® linked to 5 cassettes, (including 2 cassettes at the back of the panel). It offers a total of **120 fibers** via LC connections on 1U height, through the very popular LGX sized cassette.

CASSETTES
120 FO
 60 duplex LC or
 30 quad LC

6 LC quad = 24 fibers
or 12 LC duplex = 24 fibers


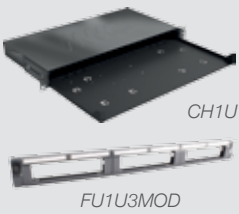

5 x  +  = 

Assembled on demand

The internal fan out solution using MTP® fan out links authorises several topologies. The main one uses LGX modules. Thanks to the LGX modules & the MTP® adapters with simplex or duplex SC footprint, it is now possible to interconnect **432 fibers together**, via 36 MTP® links of 12 strings at 40Gbps or **864 fibers** via MTP® 24 strings, at 100Gbps on 1U height.

LGX MODULES
432 / 864 FO
 36 simplex MTP® or
 18 duplex MTP®
 of 12 or 24 FO


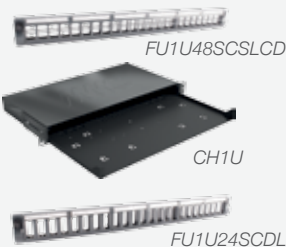

12 MTP® simplex = 144 fibers
or 6 MTP® duplex = 144 fibers


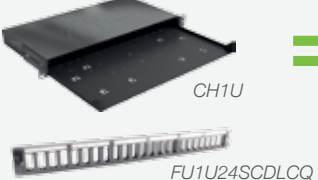

3 x  +  = 

Assembled on demand

Using the classical front plates, it is possible to concentrate **576 fibers** through 48 MTP® links of 12 strings at 40Gbps, or **1152 fibers** via MTP® 24 strings at 100Gbps, using 48 MTP® simplex adapters or 24 MTP® duplex adapters, on 1U height.

FRONT PLATE
576 / 1152 FO
 48 simplex MTP® or
 24 duplex MTP®
 of 12 or 24 FO

48 x  +  = 

24 x  +  = 

Assembled on demand

25 years Warranty

Multimedia Connect's MTP® system.
Easy to install, Plug & Play.
Warranted over 25 years.

THE MTP® SYSTEM: THE RANGE

PRETERMINATED MTP® / MTP® LINKS

Used between 2 MTP® fiber panels or between 1MTP® fiber panel and a Q/SFP port of a switch.

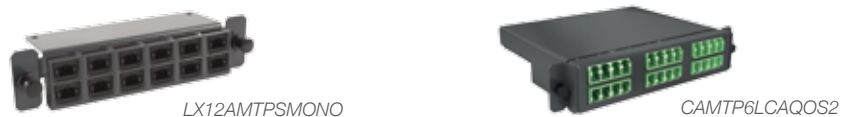


ITEMS	DESCRIPTION	PACKAGING
MTP TRUNK xx zzz yyy	MTP® female / MTP® female preterminated micro-break out link simple jacket indoor LSZH < 10 m	Unit
MTP RUG xx zzz yyy	MTP® female / MTP® female preterminated micro- break out link double jacket indoor LSZH > 10 m	Unit
MTP C xx zzz yyy	MTP® female / MTP® female preterminated micro- break out link double jacket corrugated steel indoor LSZH > 10 m	Unit

Replace xx by the number of fibers : 12/24 fibers
 Replace zzz by the length in meters : From 1 to 10 meters (TRUNK), from 10 m to the limit of the norm (RUG, C)
 Replace yyy by the type of fibers : OM1, OM2, OM3, OM4, OS2 (G652D) 7A2 (G657 A2), 7B3 (G657 B3)

2 FIBERS MTP® / 24 FIBERS LC OR SC CASSETTES WITH LGX SIZE

Adapts a preterminated MTP® link to the front plate of a fiber panel or a switch via a SC, FC or LC connection



ITEMS	DESCRIPTION	PACKAGING
LX xxA yyyy wwww	Loaded LGX adapter plate module	Unit
CAMTP xxA yyyy wwww	Loaded MTP® Plug & Play cassette	Unit

Replace xx by number of adapters : from 1 to 24 or 48 (only SCS, SCAS, LCD, LCAD & MTPS)
 Replace yyy by type of adapters : STS, STD, SCS, SCAS, SCD, LCD, LCAD, LCQ, LCAQ, FCS, FCD, E2, E2A, MTPS, MTPD
 Replace wwww by type of adapters : MUL (beige for multimode) or MONO (blue for UPC and green for APC, singlmode)
 NOTE : type of fibers inside the cassette : OM1, OM2, OM3, OM4, OS2, 7A2 (G657 A2)

THE MTP® ADAPTERS

Connect a preterminated MTP® link with the front plate FU1U24SCS or FU1U24SCD in a Multimedia Connect fiber panel.

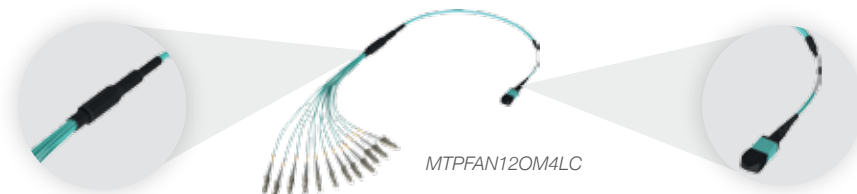


ITEMS	DESCRIPTION	PACKAGING
48SMTMTP x yy	MTP® simplex or duplex black SM/MM adapter (SC simplex footprint) with 1 dust cap, opposite key	Pack of 25

Replace x by S for simplex or D for duplex
 Replace yy by FL for screwless (for a LGX module)
 NOTE : for keyed colored versions please add the following letters after the MTP part numbers.(BE) beige, (G) green, (A) aqua, (B)blue, (GY) grey, (R) red, (MA) magenta.

PRETERMINATED MTP® / 12 FIBERS LC OR SC FAN OUT

Adaptation between an MTP® Preterminated link to a fiber panel or a switch with SC, FC or LC.



ITEMS	DESCRIPTION	PACKAGING
MTP FAN xx zzz yyy aaa	MTP® male / 12 fibers LC or SC preterminated micro-break out link simple jacket indoor LSZH < 10 m	Unit
MTP FAN C xx zzz yyy	MTP® male / 12 fibers LC or SC preterminated micro- break out link double jacket corrugated steel indoor LSZH > 10 m	Unit

Replace xx by the number of fibers : 12/24 fibers
 Replace zzz par by the length in meters : from 1 to 10 m (MTP FAN), from 10 m to the limit of the norm (MTP FAN C)
 Replace yyy by the type of fiber : OM1, OM2, OM3, OM4, OS2 (G652D) 7A2 (G657 A2), 7B3 (G657 B3)
 Replace aaa by the type of connector : UPC : SC, LC - APC : SCA & LCA



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