

Smart an simple cabling solutions

New release 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. MMC was 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 the global 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



6 x LCQ module



6 x RJ45 module





 $6 \times SCD$ cassette MTP°

6 x STD module

Very high density

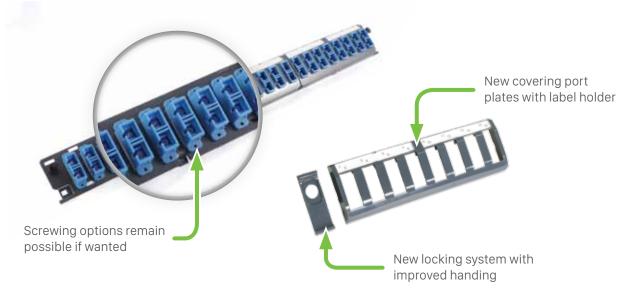
Multimedia Connect fiber panel is offering one of the highest possible and manageable densities on the market. This is a sustainable investment for "high class" fiber optic networks.

	Chassis with	n front plate	Chassis with	3 cassettes	Chassis with	5 cassettes
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 including 25 years warranty



Installers and users face a dilemna: Less time and an increasing demand for several ports. This is why pre-assembled today is a time saving solution.

Multimedia Connect's challenge was to meet this need to 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 factory controlled & warranted.

Our customers can rely on our advice, quality and service.

25 years warranty on factory preassembled items*

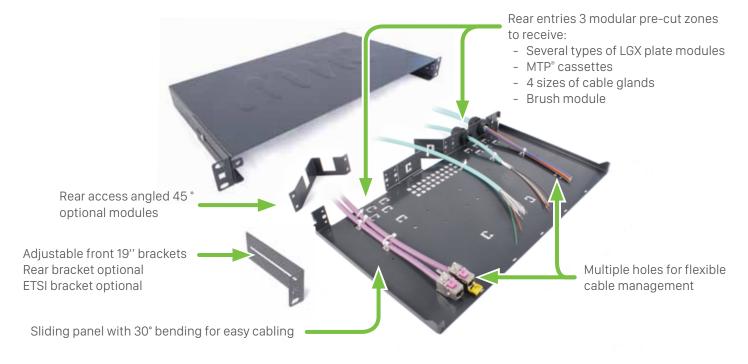
- MTP[®] cassettes and MTP[®] trunks
- Other types of preterms
- Loaded panels (splice tray, pigtails, adapters, labels...)

*If installed by a MMC certified company

TRANSFORMER FIBER PANEL OVERVIEW

Chassis

Empty chassis without front plate



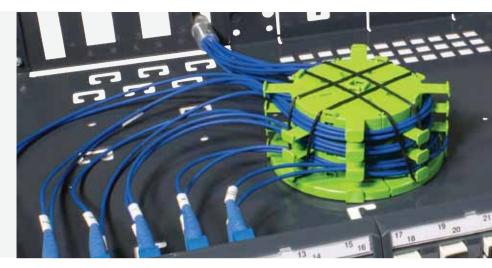
Included accessories

Management kit spooler 48MKS (included in CH1U)



For additional managing layer order 45SPOOLERTRAY with 2 trays

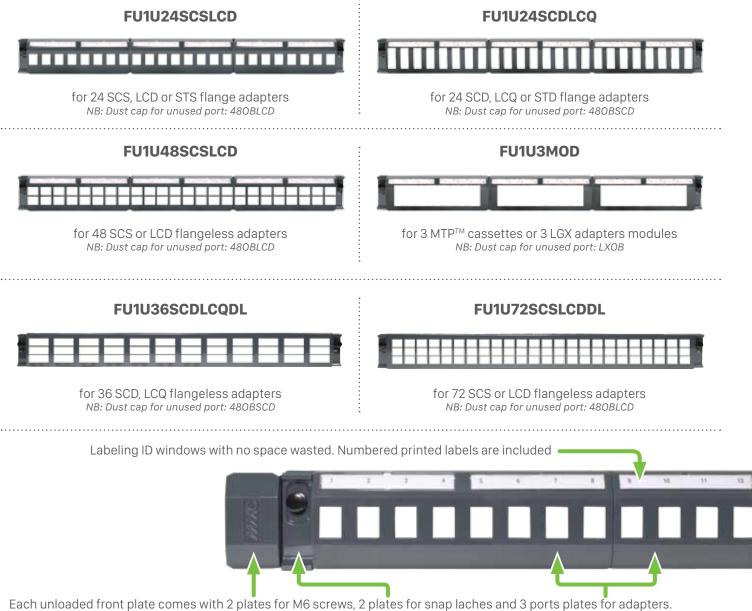




TRANSFORMER FIBER PANEL OVERVIEW

Unloaded 19'' front plates

Removable front plates with 3 ports covering plate. 24 screws for adapters included



Each unioaded from plate comes with <u>2 plates</u> for M6 screws, <u>2 plates</u> for shap facties and 3 ports <u>plates</u> for a

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
FU1U36SCDLCQDL	Unloaded front plate 1U for 36 SCD/LCQ double metal layer	Unit
FU1U72SCSLCDDL	Unloaded front plate 1U for 72 SCS/LCD double metal layer	Unit

TRANSFORMER FIBER PANEL ON DEMAND

Splice tray 48K724F02298

Multimedia Connect's splice tray can manage up to 24 heatshtrinks splices. 4 splice trays can be stacked up to 1U height. It is swivelling for easy access to the bottom tray of the stack.



Splice tray for 24 heat shrinks dimension 22 x 9.7 x 8 cm: - 1x splice tray with:

- 2x black modules for heatshinks assembled
- 1x transparent cover
- 1x white module for 4 splitters
- 2x grey modules for mechanical splices
- 1x snake tube
- 3x cable ties
- 3x ID stickers
- 2x removable self-adhesive tapes



Adapters & connectors

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).



48MMTSTDBE*



48MMTSCD



48SMTSCASISSFL



48MMTLCD

Ordering information for adapters & connectors

ITEM	ITEM PERFORMANCE TYPE OF ITE			ERFORMANCE TYPE OF ITEM ADAP			1 APTERS	YPE O	OF: CONNECTORS				W/ OR W/O SCREWS	
48	- C	XX	-	X	-	X	ХХ	X	Χ	X	Χ	-[ХХ	
		MM (multimode)		T (adapter)		STS*	STSAS	*	STS*		STSAS*			
	(SM (singlemode)		C (connector)		STD*	STAD*		STD*					
						SCS	SCAS	•	SCS		SCAS			
						SCSISS*	SCASISS	S*						
						SCD	SCAD	• • •	SCD		SCAD			
						LCD	LCAD	0 0 0	LCD		LCAD			
						LCQ	LCAQ	0 0 0 0						
x. : 48 SMC SCS, singlemode SC simplex connector, packaging of 6 units					MTPS			MTPS						
					MTPD		•							

*Always with screws

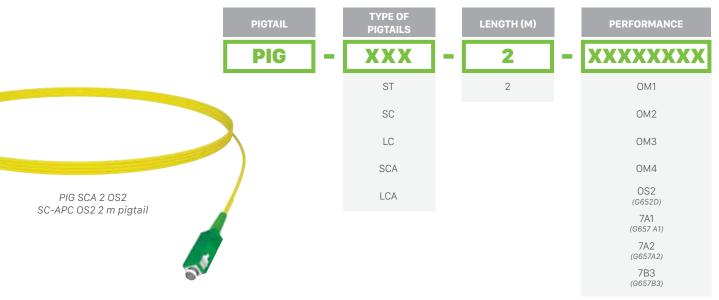
TRANSFORMER FIBER PANEL ON DEMAND

Pigtails

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

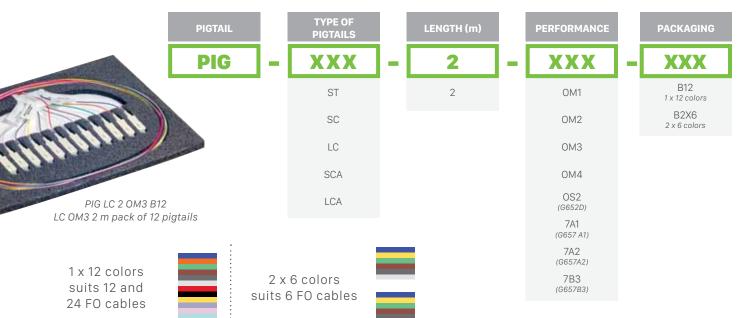
Ordering information for pigtails

Individual packaging



Ordering information for pigtails

Pack of 12



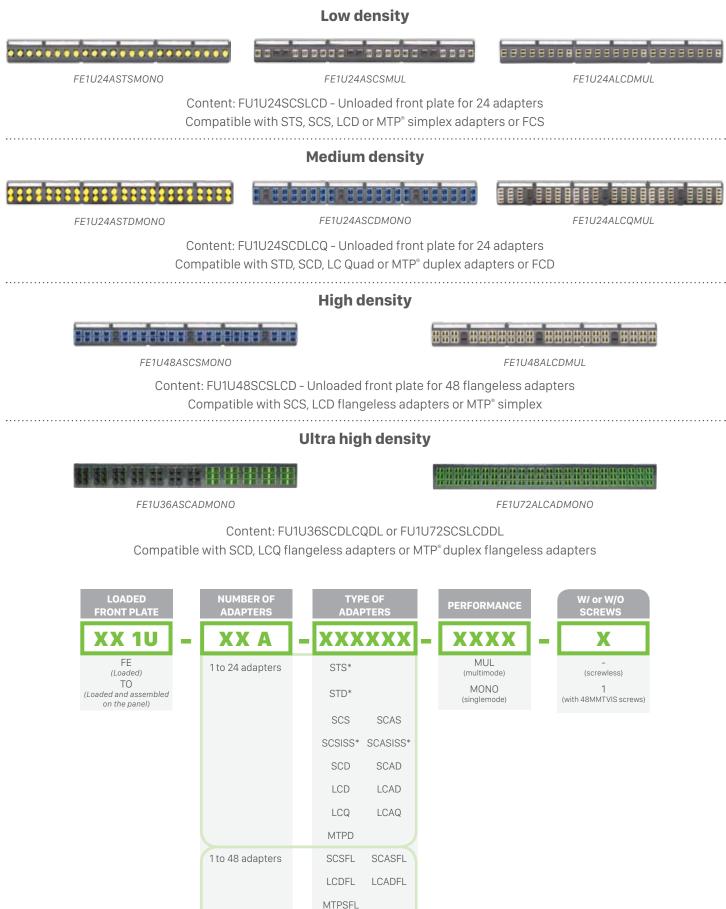
Heatshrinks



ITEMS	DESCRIPTION	PACKAGING
MANCHONEPI451	Heatshrink splice protection tube length 45 mm	Pack of 50
MANCHONEPI601	Heatshrink splice protection tube length 60 mm	Pack of 50

TRANSFORMER FIBER PANEL OVERVIEW

Loaded 19" front plates



TRANSFORMER FIBER PANEL SELECTION GUIDE WITH ST ADAPTERS

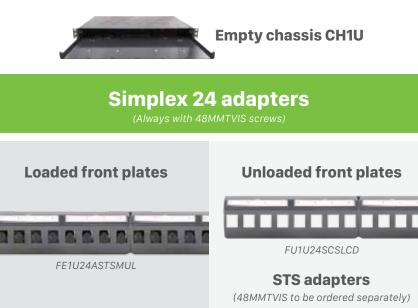
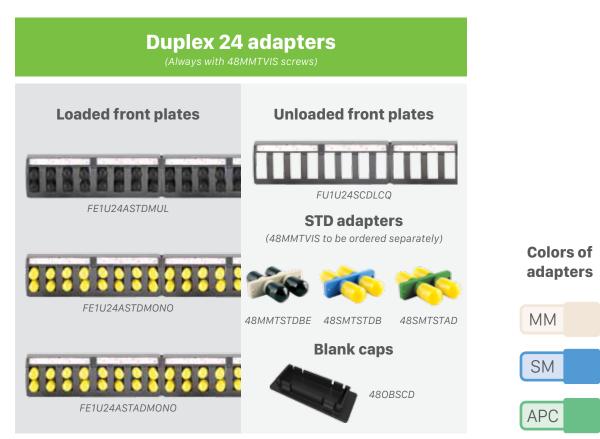
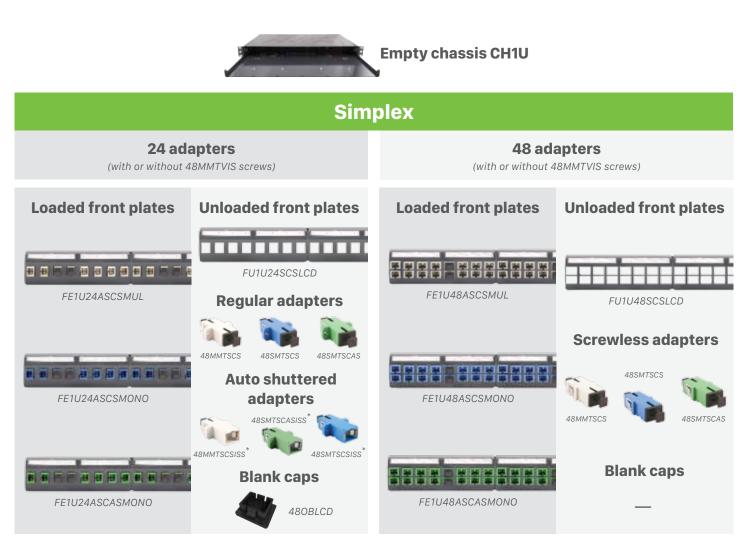
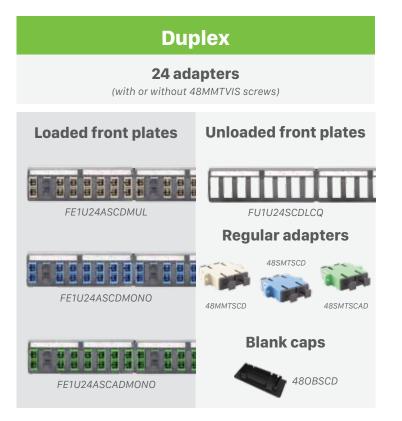


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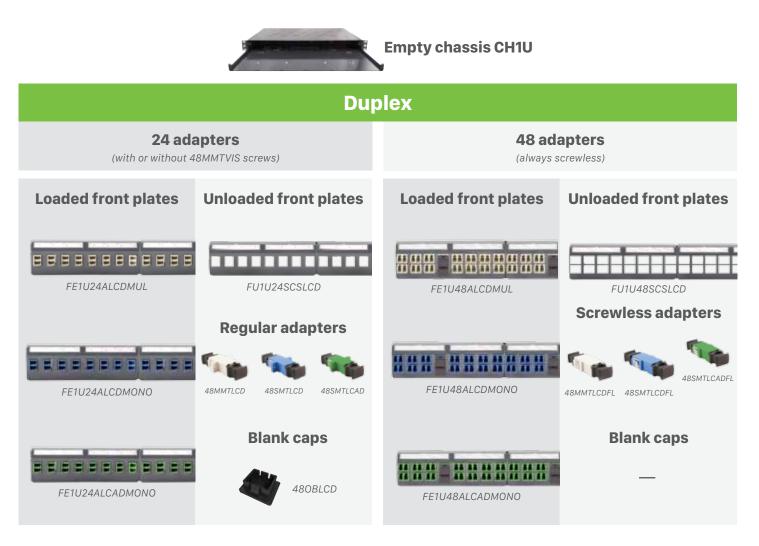


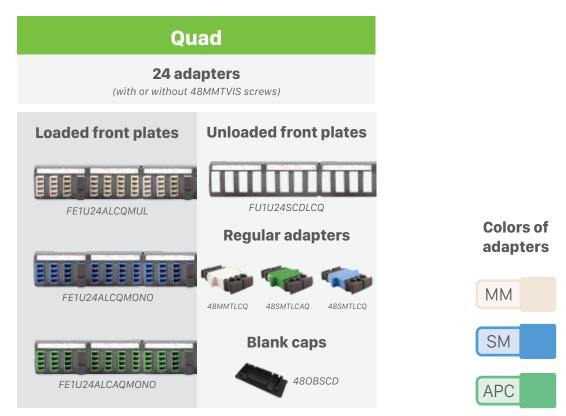
TRANSFORMER FIBER PANEL SELECTION GUIDE WITH SC ADAPTERS



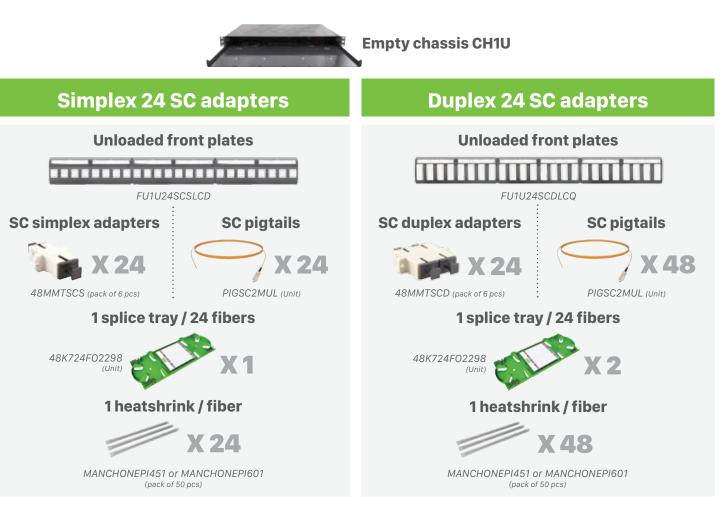


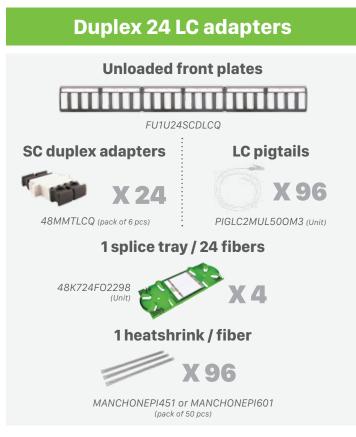
TRANSFORMER FIBER PANEL SELECTION GUIDE WITH LC ADAPTERS





TRANSFORMER FIBER PANEL SELECTION GUIDE WITH PIGTAILS





TAYLORED TRANSFORMER FIBER PANEL

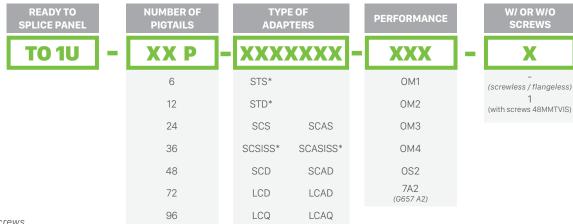
Ready to splice fully loaded panel

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.

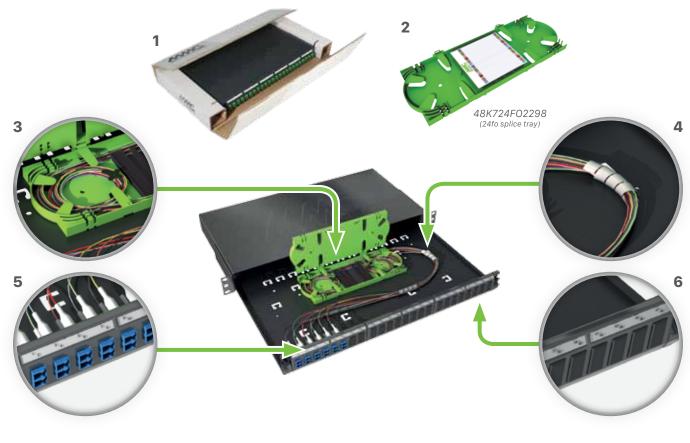
The pigtails are compliant with IEC 60304 standard, thanks to their 12 colors and can be customized according to the telecom standard previously requested by the end-user.

The packaging is highly reliable and protects all the adapters at the front of the panel.



*Always with screws

An impeccable 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°





FTTBOX2U Wall box for 6 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



MODULE	LOCATION IN THE FIBER PANEL	ITEMS	DESCRIPTION	PACKAGING
	Front and /or back	LXU06STDFCD	LGX unloaded adapter plate module for 6 STD/SCD/FCD*	Unit
FIBER	Front and /or back	LXU06SCDLCQ	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	LXU06KJ6FSTL	LGX Module for 6 BC6xFSTL shielded toolless keystone jacks	Unit
	Back only	ECAMP1U	Rear cable entry for Micro and Premium preterms	Unit
CABLE	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

* for flangeless adapters only

Ordering information for LGX module

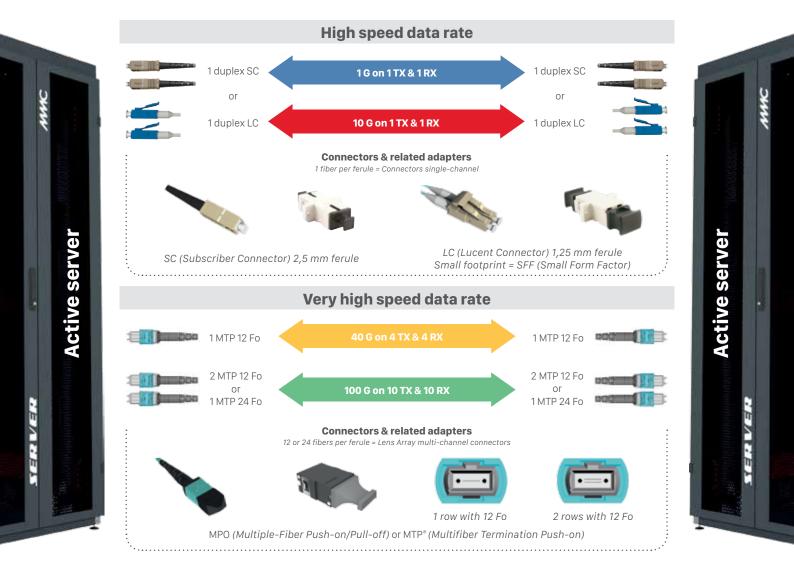
	MODULE		NUMBER OF ADAPTERS			PE OF PTERS		PERFORMANCE
	LX	-	XXA	-	XXX	XXX	-	XXXX
			06		SCD	SCAD		MUL (multimode)
				LCQ	LCAQ		MONO (singlemode)	
	민분				MTPD			
· Hann	I. day		12		SCSFL	SCASFL		
LX12ALCADA	моло				LCDFL	LCADFL		
					MTPSFL			

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 transmision 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 proprerty:

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

Performances, price/service ratio:

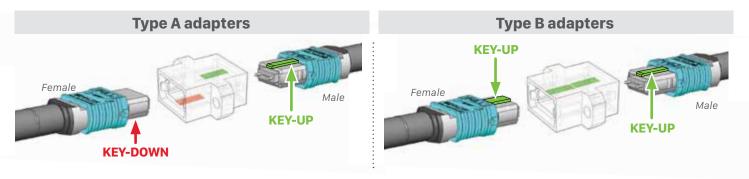
- Defined by the IEC-61754-7 & TIA-604-5 (FOCIS 5) standards, with easy handling & maintainance
- Great performances with an excellent skew & high bandwith on short distances (< 300m)
- The gain of HU space into the data racks & cabinets is a real cost saving criteria

PLUG & PLAY SOLUTION THE MTP[®] SYSTEM

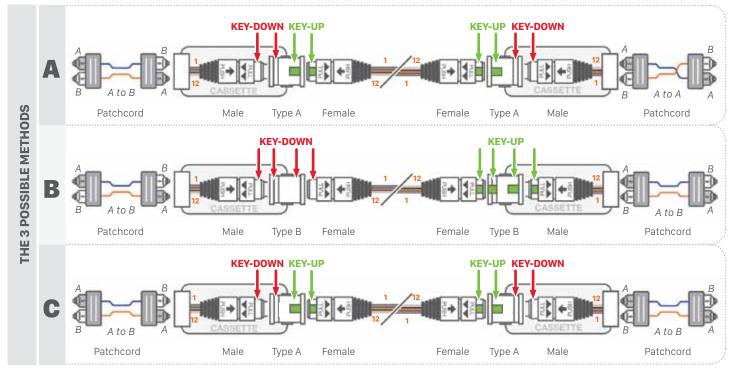
How to respect polarity & performances over 12 or 24 fibres

Principle:

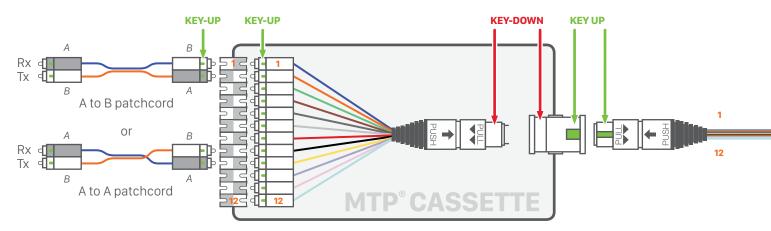
- Type A adapters with **opposite** key (UP/DOWN)
- Type B adapters with **aligned** key (**UP/UP**)
- Male & female connectors



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



Principle of polarity over 12 fibers



MTP[®] is a brand name of US CONEC Ltd.

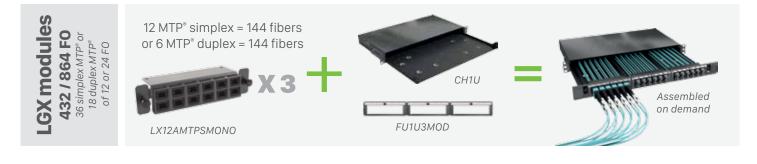
ULTRA HIGH DENSITY SOLUTION THE MTP[®] SYSTEM

1 panel, 3 levels of density

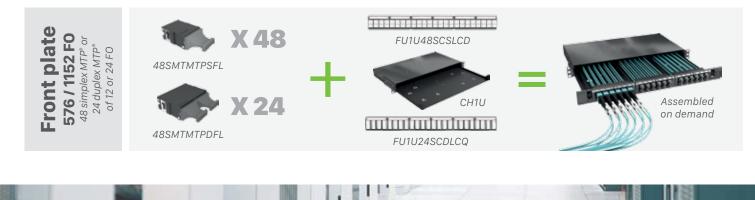
The internal fan out solution included into the MTP[®] cassettes is usually limited to 3 cassettes loaded on the front only. The design of the MMC fiber panel allows 10 MTP[®] linked to 5 cassettes, (including 2 cassettes at the back of the panel). It offers a total of **120 fibers** via LC connections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



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.



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 stgrings at 100Gbps, using 48 MTP[®] simplex adapters or 24 MTP[®] duplex adapters, on 1U height.





THE MTP[®] SYSTEM THE RANGE

Preterminated MTP[°]/MTP[°]links

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



MTP° female / MTP° female preterminated micro- break out link double jacket corruguated steel indoor LSZH > 10 m MTP C XX ZZZ YYY Unit

Replace xx by the number of fibers : 12/24 fibers

Replace zzz by the lenght in meters : From 1 ot 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)

MTP[®] adapters 24 LC or SC MTP[®] cassettes

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

LX12AMT	TPSMONO ABSMTMTPSFL	CAMTPGALCDMONO	Самтрі2LCDOM3
ITEMS		DESCRIPTION	PACKAGING
LX XXA YYYY WWWW	Loaded Lo	GX adapter plate module	Unit
CAMTP XXA YYYY WWW	Loaded M	ITP° Plug & Play cassette	Unit
48SMTMTP Y BB	MTP° simplex or duplex black SM/MM ada	apter (SC simplex footprint) with 1 dust cap, oppos	site key Pack of 25

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 YWWW by type of adapters : MUL (beige for multimode) or MONO (blue for UPC and green for APC, singlemode) Replace Y by S for simplex or D for duplex

Replace BB by FL for screwless (for a LGX module)

MTP FAN

MTP FA

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.

type of fibers inside the cassette : OM1, OM2, OM3, OM4, OS2, 7A2 (G657 A2)

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.

	MTPFAN1210M4LC	
ITEMS	DESCRIPTION	PACKAGING
N XX ZZZ YYY AAA	MTP [®] male / 12 fibers LC or SC preterminated micro-break out link simple jacket indoor LSZH < 10 m	Unit
AN 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 lenght 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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