WHITE SPACE

STRUCTURED CABLING

DATA CENTER STRUCTURED CABLING SOLUTIONS

RELIABLE, EFFICIENT, SCALABLE **DATA CENTER SOLUTIONS** POWERED BY SPECIALIST BRANDS





With the complexities of today's data centers, as well as the promise of higher speeds and technological breakthroughs in the not-too-distant future, it's no wonder that the importance of structured cabling is also increasing.

In contrast to the many limitations inherent in point-to-point connections, structured cabling — or the use of smaller standardized subsystems — allows easier individual connections to be found, moved, and generally managed. Clearly, for forward-thinking data centers, structured cabling infrastructure is the way to go when it comes to data cabling solutions.

UPTIME

With newer data centers, access to critical information is the business's lifeblood, which means that uptime requirements — often with a rating as high as 99 percent — must be supported by the cabling system you install.

SCALABILITY

Whatever cabling solution you choose today will undoubtedly be required to make room for more bandwidth and higher speeds in the future. Scalability is as essential in your cabling infrastructure as it is to the equipment it connects.

FUTURE-PROOF

Along with scalability, your cabling system must be easy to adapt for future equipment changes, such as the push for more modular device usage and migrations to the cloud and virtual services.

LEGRAND'S RESPONSE

The LCS³ cabling system is a modular and flexible connection and distribution system for:

- copper and fiber optic technology
- 19" installation
- pre-assembled copper and fiber trunking technology
- splicing technology and on-site assembly of copper connection modules

The overall system is designed in such a way that the various basic housings and basic support systems for accommodating the module housings can be configured for the most diverse areas of use and application conditions via standardised components and individual parts.

This very high degree of flexibility means that customer-specific requirements can be configured individually.



LCS³ system: Performance

Legrand's LCS³ system offers you a complete range of copper solutions as well as fiber optic solutions designed to deliver advanced network performance:

- ▶ 25 Gbps and 40 Gbps Ethernet applications (Copper system)
- 40 Gbps, 100 Gbps and 400 Gbps Ethernet applications (Fiber optic system)
- MTP/MPO high density and up to Cat. 8 solutions (Copper and Fiber optic systems)

50 | LCS³ system: Efficiency

54 LCS³ system: Scalability & Maintenance

INSTALLATION KITS

Zero-U kit for universal fixing

The Zero-U kit Cat.No 0 321 03 enables you to mount cassettes on 19" uprights, raised access floors, wire and sheet metal cable trays, structural uprights of the enclosure, etc.

The kit can take up to 2 slim High Density cassettes Cat.Nos 0 321 68/69/70 or 1 universal High Density cassette Cat.No 0 321 59 or 0 321 60.

- Efficient solution to optimize space without the need to add an enclosure.
- Compatible with 1U, 2U and 4U High Density modular panels.
- Easy mounting on cable trays (such as Cablofil) thanks to quick-fixing solutions.



1U to 4U kit for overhead fixing

No space available in your LCS³ enclosure? The innovative kit Cat.No 0 321 89 enables you to fix the High Density modular panels on wire cable trays, above the enclosure.

- Perfect toolless fitting on cable trays. It can also be installed on roofs of racks.
- Maintains duplex multimode fiber architecture.
- Scalable (move, add, change) and efficient (space optimization) system.
- Easy installation and maintenance.
- Can be equipped with fiber optic and copper solutions.
- Compatible with automatically removable cassettes.
- Accommodates the same solutions as 19" patch panels.



HIGH DENSITY MODULAR PANELS

From 1U to 4U

Optimize space and connectivity with our three HD modular panels! These quick-fixing solutions (automatic mounting and automatic grounding on 19" uprights) offer you optimum capacities per U: 96 in LC version, 48 in SC version, and 24 in ST version! Keeping link connections accessible and manageable, they offer slim and mix-media cassettes.

4U HIGH DENSITY PANEL

Can hold up to 32 slim cassettes (into 16 supports)



Fiber optic is a transmission medium that enables a larger bandwidth to be used than copper cables. With fiber optic cables, transmission is based on the propagation of light pulses, generated by an LED or a laser source in the infrared band, along a glass fiber. Inside an optical fiber, the signal can either be propagated in a straight line, or be reflected many times. Straight line propagation mode is said to be zero order. Singlemode fibers only use one mode to propagate light. The diameter of their cores is between 8 and 10 μ m. Multimode fibers allow several propagation modes, and the diameter of their cores is 50 μ m or 62.5 μ m (the latter is hardly ever used now).

The diameter of the cladding is usually 125 µm. Multimode fibers are used in indoor installations and enable more economical devices to be used. They are subject to modal distortion when the different modes propagate at slightly different speeds, limiting the maximum distance at which the signal can be received correctly.

Singlemode fibers are used in outdoor installations as they can cover much longer distances and reach much higher speeds.

FIBER OPTIC SYSTEM MTP SOLUTIONS

High-speed solution

With data centers, increased data rates have become a priority requirement. The IEEE has introduced parallel optics as an alternative to higher bandwidth fiber, starting with 40Gbps and now reaching 800Gbps Ethernet.

To answer this need, Legrand has introduced the MTP (Multiple-Fiber Push-On/Pull-Off compatible MPO) fiber solution to the catalogue. It guarantees speed, resistance, high performance, and high density.



40/100/400 Gigabit ethernet connectivity and cable

Identified by IEEE, TIA and ISO/IEC as the solution for non-duplex applications. The term MPO is the generic name, while the term MTP is a specific higher performance version with lower insertion loss.

MTP connector features:

- a high-speed connection with 12 fibers (2x12 for 24 fibers and with cassettes 8 fibers compatible).
- precise and safe connection.
- optimized cable management.
- high-density fibers.
- scalable system for future upgrades.
- simple maintenance operations.
- ease of extraction. No complex installation on site plug and play.
- the MTP is a multi-core connector. 1 cable = 1 connector.



With standard active equipment, we need to convert the MTP to LC or SC



Optical performance

MTP° connectors	Multimode Ultra Performance*	Single-mode Ultra Performance*
IL/Master	0.1 dB typical (all fibers) 0.35 dB maximum (single fiber) ^{(2) (3)}	0.1 dB typical (all fibers) 0.35 dB maximum (single fiber) ^{(1) (4)}
IL Max/Random*	0.35 dB (single fiber)	0.35 dB (single fiber)
Optical return loss ⁽⁵⁾	> 20 dB	> 60 dB (8° angle-polished)

* Performance is guaranteed only with other components of the same Legrand range (Core, Ultra, and Quantum). Mixing ranges or using other brands' components may lead to a different system performance. The uncertainty value for field measurement with LSPM testing using a reference cord defined in ISO/IEC 14763-3 applies to field testing with proposed Legrand testing cords. Refer to the Fiber Optic Testing Guide for Legrand Solutions.

⁽¹⁾ As tested in accordance with ANSI/TIA-455-171 Method D3 / IEC 61300-3-4

⁽²⁾ As tested in accordance with ANSI/TIA-455-171 Method D1 / IEC 61300-3-4

 $^{\scriptscriptstyle (3)}$ As tested on 50µm fibers at a wavelength of 850 nm in accordance with IEC 61280-4-1

(4) Complies with IEC 61755-3-31/GRADE B

 $^{\scriptscriptstyle{(5)}}\mbox{As tested in accordance with IEC 61300-3-6 and ANSI/TIA-455-107A}$

LC, SC, LC APC, SC APC connectors	Multimode Ultra Performance*	Single-mode Ultra Performance*
IL Max/Master*	0.15 dB	0.15 dB
IL Max/Random** ***	0.2 dB	0.25 dB
Typ. IL/Master*	0.08 dB	0.12 dB
Typ. IL/Random** ***	0.10 dB	0.12 dB
Return loss (UPC/APC)	> 25 dB	> 55/65 dB

* IEC 61300-3-4

** IEC 61300-3-34

*** Performance is guaranteed only with other components of the same Legrand range (Core, Ultra and Quantum). Mixing ranges or use of components of other brand may lead to a different performance of the system. The uncertainty value for field measurement with LSPM testing using a reference cord defined in ISO/IEC 14763-3 applies to field testing with proposed Legrand testing cords. Refer to the Fiber Optic Testing Guide for Legrand Solutions.

COMMON DATA CENTER APPROACHES

Multimode fiber systems have been the most cost-effective fiber solution to use in the data center because the transceivers are much less costly than single-mode transceivers. Multimode transceivers use a vertical cavity surface emitting laser (VCSEL) light source, which is easy to manufacture and package. Multimode fiber systems have a shorter reach than single-mode systems; however, surveys have shown that more than 80% of data centers links extend to 100m or less. Although single-mode cable is less expensive, after factoring in the total system cost of multimode versus single-mode, multimode is still far more cost-efficient.

Maximum data rate according to fiber type and number of cores used

	ОМЗ	OM4	OM5	OS1a	OS2
2-core	1Gbps: 550m 10Gbps: 300m 25Gbps: 70m 50Gbps: 70m	1Gbps: 550m 10Gbps: 400m 25Gbps: 100m 50Gbps: 100m 100Gbps: 100m	1Gbps: 550m 10Gbps: 400m 25Gbps: 100m 50Gbps: 100m 100Gbps: 100m	1Gbps to 400Gbps: 2km	1Gbps: 5km 10Gbps to 400Gbps: 10km
4-core	100Gbps: 70m	100Gbps: 100m 200Gbps: 100m	100Gbps: 100m 200Gbps: 100m	100Gbps: 500m	100Gbps: 500m
8-core	40Gbps: 100m 100Gbps: 70m 200Gbps: 70m 400Gbps: 100m	40Gbps: 150m 100Gbps: 100m 200Gbps: 100m 400Gbps: 100m	40Gbps: 150m 100Gbps: 100m 200Gbps: 100m 400Gbps: 150m	200Gbps: 500m 400Gbps: 500m 800Gbps: 500m	200Gbps: 500m 400Gbps: 500m 800Gbps: 2km
16-core	400Gbps: 100m 800Gbps: 70m	400Gbps: 100m 800Gbps: 100m	400Gbps: 100m 800Gbps: 100m	800Gbps: 100m 1.6Tbps: 500m	800Gbps: 2km 1.6Tbps: 2km

Data in orange: draft applications (distances may vary at time of publication)

FIBER OPTIC SYSTEM **CASSETTES**

Slim solutions for greater connectivity

Optimize space and increase the connectivity capacity of your infrastructure with slim cassettes! They are easy to install and maintain from the rear and front, and they are agile and flexible under all circumstances.

- Mounting either on High Density modular panels or in a Zero-U kit.
- Single-mode and multimode MTP solutions that can be mixed on the same support.
- Sliding cassettes individually removable from front and rear: accessible and easily manageable.
- Equipped with extraction button for easy maintenance: reduced time, cost and risk of MAC.
- High-performance with low insertion loss.
- Universal polarity offers flexibility in case of changes.

ТҮРЕ	CAT. NO
12 LC OM5 multimode	On demand
12 LC OM4 multimode	0 321 69
12 LC OM3 multimode	0 321 68
12 LC OS2 single-mode	0 321 70
Blanking module	0 321 39



OM4 multimode slim cassette - Cat.No 0 321 69



OS2 single-mode slim cassette - Cat.No 0 321 70



Slim cassettes are to be mounted on HD modular panels with support Cat.No 0 321 38. The support can take up to two slim cassettes.

Slim cassettes Cat.Nos 0 321 69/70 mounted on modular panel Cat.No 0 321 76 with support Cat.No 0 321 38

Ready for FUTURE APPLICATIONS!

Our on-demand OM5 offer meets all your requirements in terms of connectivity! The infrastructure can easily evolve from 25 G or 50 G to 100 G and to 400 G thanks to parallel and multiplexing applications.

OM5 multimode MTP adaptor



PERFORMANCE AND WAVELENGTH

OM3 and OM4 fibers are optimized according to the wavelength traditionally used: 850nm. To accept the four signals used in multimode WDM, OM5 has been redesigned to accept wavelengths from 850nm to 950nm. The diagrams below provide a graphical representation.

OM5 12 LC multimode block







SPLICING CASSETTE

PRETERMINATED CASSETTE

353

PUSH-BUTTON CASSETTE

Fast push-button system to facilitate upgrade and maintenance operations

COPPER CASSETTE

FIBER OPTIC SYSTEM **PANELS**

Modular panels

- Innovative quick-fixing solution.
- Modular blocks to adapt to modular panel or drawer: LC, SC, ST, LC, APC, SC APC.
- Possible to add modular blocks, blank panel, MTP adaptor.



HD Modular panels

- Cassettes slide in from front & rear.
- Fast push-button on cassette.
- Splicing cassette which takes all modular blocks.
- Mixture of fiber/copper on cassette panel.
- Trunk & cord management system.



LCS³ system: Efficiency

Legrand's LCS³ system offers you copper and fiber optic solutions designed to enhance your infrastructure's efficiency:

- ▶ 48 ports per unit for high density (Copper system)
- ▶ 90 LC per unit for high density (Fiber optic system)
- 144 LC per Unit for ultra-high density (Copper and Fiber optic systems)

54 LCS³ system: Scalability & Maintenance

COPPER SYSTEM PATCH PANEL HD SOLUTION UP TO 48 PORTS PER UNIT

High-density patch panel. It has changed from 24 to 48 ports, guaranteeing a reduced space occupied and making future upgrades easier. Designed to house four blocks of 12 connectors each.





QUICK-FIX system

Innovative quick-fixing solution:

- Push and connect system.
- Automatic earth connection.
- In-rack cabling optimized.
- Accessory for patch cords with rotating system for angle adjustment and label holder.

Compatible with all panels (flat, angled, HD)



COPPER SYSTEM PATCH PANELS

The patch panels have been designed and produced to optimize space, with up to 48 ports per unit, and make maintenance and future upgrades easier. They are available in both flat and angled versions.

They have a quick system for pulling out the unit and an innovative cable guiding system for tidy and easy cable management.



Block of 12 connectors for patch panel

Innovative cassettes

- Sliding cassettes: easier maintenance.
- Fast push-button extraction.
- Innovative modular cassette system.
- Easy maintenance: hands-free solution, cassette maintained after extraction.
- Easy to mix with Legrand fiber optic solutions.



Data center structured cabling solution > LCS³ system: Efficiency



Angled patch panel solution from 24 to 48 ports per unit

Patch panels with an angled design allow the cable to run into each side of the rack, creating a correct cable radius of curvature.

This avoids the need to manage the cables horizontally, and allows the patch cords to be carried directly in the vertical cavities.

Also available in the 24-port version



LCS³ system: Scalability & Maintenance

Legrand's LCS³ range offers you innovative systems to facilitate wiring and installation, while offering increased data rates with both the copper solution and the fiber optic solution.

COPPER SYSTEM RJ 45 CONNECTORS

The **TOOLLESS CONNECTORS** with toolless fast connection are available in all categories for installation on patch panels and in the workstation. A perfect connection can be obtained in a few seconds, guaranteeing the optimum performance of the link from the patch panel to the workstation.



COPPER SYSTEM OPTIMUM PERFORMANCE WITH CAT. 8

Cat.8 connectors

The toolless Cat. 8 STP connectors with transmission speed (bit rate) from 25 Gbps to 40 Gbps, are integral to the performance of the LCS³ system.

- In accordance with ISO/IEC 11801 series standards.
- Tested up to 2500 connection/disconnection cycles.
- A perfect connection in just a few seconds.



Connection & cabling

To maximize performance, combine the Legrand Cat. 8 connector with the Legrand Cat. 8 cable supporting up to 40 Gbps over a single cable.

The Cat. 8 cable is terminated with an improved dedicated RJ45 connector, which can support future performance.

The performance is 4 times better than that of a Cat.6a cable with up to 2000 MHz bandwidth.

- Double screening to avoid interference and loss of data.
- Dedicated to higher capacity in data centers and equipment rooms.
- Compliant with ISO/IEC 11801 series standards.

Data center structured cabling solution > LCS³ system: Scalability & Maintenance

Legrand guarantees the following performance on end-to-end links of Cat. 6a/Class Ea: 3dB margin on Channels, on Return Loss (RL) and Near End Cross Talk (NEXT) performance, for the complete frequency range, based on ISO/IEC limits.

- No marginal results (shown with Asterisk on test results) on Permanent Links.
- Valid on standard compliant 2 connectors channels.



Applications distances according to category of Cabling

	LCS ³ Cat.5e	LCS ³ Cat.6	LCS ³ Cat.6A	LCS ³ Cat.8
Frequency ⁽¹⁾	100MHz	250MHz	500Mhz	2000MHz
Application				
1000Base-T	100m	100m	100m	100m
2.5Gbase-T	Possible ⁽²⁾	Possible ⁽²⁾	100m	100m
5Gbase-T	Possible ⁽²⁾	Possible ⁽²⁾	100m	100m
10Gbase-T	N/A ⁽⁴⁾	Possible ⁽³⁾	100m	100m
25Gbase-T	N/A ⁽⁴⁾	N/A ⁽⁴⁾	Possible ⁽⁵⁾	30m
40Gbase-T	N/A(⁴⁾	N/A ⁽⁴⁾	Possible ⁽⁵⁾	30m

- ⁽¹⁾ Maximum frequency defined in the standards
- ⁽²⁾ Follow ISO/IEC TR 11801-9904 or TIA TSB 5021 to evaluate the possibility on installed links. Distance will depend on many factors.
- ⁽³⁾ Follow ISO/IEC TR 24750 or TIA TSB 155-A to evaluate the possibility on installed links. Distance will depend on many factors.
- (4) Not Available.
- ⁽⁵⁾ Follow ISO/IEC TR 11801-9905 to evaluate possibility on installed links. Distance will depend on many factors.

TOOLLESS CONNECTOR CONNECTION PHASES





Take the wire housing



Pass the cable through the back of the wire housing



Cut the pairs



Install the wire housing without pushing



Push down the lever and lock the connector

COPPER SYSTEM PRE-TERMINATED COPPER TRUNK CABLE SOLUTION

In a data center, copper cables are an ideal solution as they can offer significant advantages in terms of capital expenditures, operating expenditures, and reliability. Pre-terminated copper trunk cables as a structured cabling option for quick and easy deployment in permanent link trunks and equipment port harnesses of data center architectures can be used for interconnect and cross-connect applications.



Different trunk solutions are possible for different applications

Jack-to-jack copper trunk

The use of pre-assembled copper Ethernet trunk cables from Jack to Jack requires the use of empty patch panels at both ends.

• Plug-to-plug copper trunk

Plug-to-Plug copper cables are used to establish a direct connection between active devices (e.g. between server and switch). They can also be used in an open workspace as a bundled patch cable group.

Jack-to-plug copper trunk

Jack-to-plug copper cables are used to extend switch ports and for cross-connect connections. They are plugged directly into the active components on one side and require the use of empty patch panels on the other side.

Examples of use

Interconnect

In general data center cabling, copper Ethernet trunk cables provide a permanent connection between patch panels at both ends - one end is in a switch/network cabinet, and the other is in a server cabinet.



Cross-connect

Cross-connect cabling usually uses a defined patch area (often with two or more adjacent patch panels) between the control/network cabinet and the server cabinets. Copper patch cables are used to connect the active devices and patch panels at the control/network cabinet, the cross-connect cabinet, and the server cabinet.



Data center structured cabling solution > LCS³ system: Scalability & Maintenance

Details

• Use

- Preterminated trunks made of 6x4 twisted pairs cables and 6 x RJ 45 connectors at each end. Designed for ease of installation and space saving in data center environment.
- Delivered with an individual test report.

Nota:

- this solution is not intended for the use of PoE. In the case of PoE, to be installed according to ISO/IEC 14763-2 and EN 50174-2. Contact Legrand for any temperature derating calculations linked to the environment or PoE.
- maximum patch cord length associated with these pre-terminated trunks: 5m

Description

Preconnectorised solution composed of:

- 1 surgain cable 6 x 4 pairs
- 6 RJ 45 LCS³ connectors at each extremity (protected in bubble bags)
- factory recipe
- cable tracking 1 to 6

Installation



To be installed in LCS³ copper cassette To be ordered separately

• Technical, mechanical and electrical features Refer to components technical data sheets.

• Environmental features

Refer to components technical data sheets.

COPPER SYSTEM CABLES

The cable is one of the most critical components in horizontal wiring for the performance of the whole link, in terms of both the product's quality and the installation's conformity. Any cable installation error will seriously compromise the performance of the installation. For structured cabling systems, the standard requires the use of category 5e, 6 and 6a (100 MHz, 250 MHz and 500 MHz respectively) twisted, symmetrical 4-pair cables with an impedance of 100 Ω 1).

The cable can be of the following type:

- Unshielded U/UTP (Unshielded Twisted Pairs).
- Shielded F/UTP (Foiled Twisted Pairs).
- Double shielding SF/UTP or S/FTP.



NOTE 1): To date, category 7 is not very widely used, even though it is standardised and can offer high performance levels. It is used for reasons of form factor, cost, and where there are installation difficulties.

EXAMPLES OF LEGRAND CABLES

	Sheath	Storage/installation temperature	Operating temperature
Cat. 6A F/UTP 100 Ω	LSZH (zero halogen cables) conforming to standard NFC 32062, flame retardant conforming to standards IEC 332-1 and NFC 32070	0 to +50°C	-20 to +60°C
Cat. 6 U/UTP 100 Ω	PVC or LSZH cables conforming to standard NFC 32062, flame retardant conforming to standards IEC 332-1 and NFC 32070	0 to +50°C	-20 to +60°C
Cat. 6 F/UTP 100 Ω	PVC or LSZH cables conforming to standard NFC 32062, flame retardant conforming to standards IEC 332-1 and NFC 32070	0 to +50°C	-20 to +60°C
Cat. 5e U/UTP 100 Ω	PVC or LSZH cables conforming to standard NFC 32062, flame retardant conforming to standards IEC 332-1 and NFC 32070	0 to +50°C	-20 to +60°C

NOTE: For all other types of cable, please contact the Legrand sales network

CPR CONSTRUCTION PRODUCTS REGULATION

The CPR regulation aims to guarantee the free circulation of products made in the European Union, adopting a harmonised technical language which can define the performance and essential features of all construction products.

Electrical cables are rarely the cause of a fire, but when they are involved, they may form a seriously hazardous component because of their large quantities and because they are found in all rooms of the building. With careful prevention and making state-of-the-art systems with safe and high-quality components in accordance with the CPR regulation, fire propagation, the lack of visibility in smokefilled rooms, and the diffusion of corrosive and toxic gases can be reduced or almost eliminated.

The CPR regulation (EU 305/2011) concerns all the products made to be permanently incorporated (installed/used) in buildings and other civil engineering works (e.g. homes, industrial and commercial buildings, offices, hospitals, schools, undergrounds, etc.). As part of the features considered important for the safety of constructions included in the CPR, the European Commission has decided to consider cables' Reaction to Fire and Resistance to Fire, recognising the importance of their behaviour and role in fire. The release of harmful substances is one of the performances considered important for cables; however, no minimum performance levels have been established at present because when typically used, the cables do not release harmful substances.

All the cables installed permanently in constructions, to transport power or for telecommunications, of any voltage level and with copper or fiber optic conductors, must be classified based on the classes of premises where they will be installed. The cables are classified in seven classes of Reaction to Fire: Aca, B1ca, B2ca, Cca, Dca, Eca and Fca identified by the subscript "ca" (cable) as a function of their decreasing performance. As well as this main classification, the European authorities have also regulated the use of the following additional parameters:

• \mathbf{a} = acidity which defines the hazard of the fumes for people and the corrosiveness for things. Varies from a1 to a3

• **s** = opaqueness of the smoke. Varies from s1 to s3

 d = dropping of incandescent particles which could propagate fire. Varies from d0 to d2.

A more severe check (System 1+) is required for the classes from Aca to Cca. It lays down the initial check and continuous monitoring of the product and checks of the manufacturing control system, while for the classes from Dca to Eca the check only lays down the initial product check (System 3). Class F, however, is based on the manufacturer's selfdeclaration (System 4).

Legrand cabling system, LCS³ cat. 8 flat patch panels - equipped and to be equipped

Automatic cassette removal

0 337 82

Equipped with new-generation Quick-Fix for automatic (screwless) mounting on enclosure and cabinet uprights Universal mounting on all cabinets or enclosures Panels ensure automatic earthing of each connector Equipped with four bundles guides fixed at the rear

Pack	Cat.Nos	Cat. 8 patch panel equipped with
		19" panel - 1U Equipped with 4 cassettes of 6 pre-fitted Cat. 8 LCS ³ RJ 45 connectors Automatic cassette removal by simple pressure Each connector can be removed individually T568A and B marking with colour codes Equipped with rear cable guide to hold cable during maintenance Supplied with coloured labels Compliant with ISO/IEC 11 801, EN 50173 and ANSI/ TIA 568 standards
1	0 337 82	Flat panel STP panel - Metal shielding - PoE++
		Patch panels 24 connectors - to be equipped 19" panels - 1U Equipped with rear cable guide to hold cables during maintenance
1	0 337 90	Flat panel with empty cassettes to be equipped with connectors With 4 automatically removable cassettes to be equipped with Cat. 5e to Cat. 8 RJ 45 connectors
1	0 337 91	Flat panel without connectors to be equipped with cassettes Can take a maximum of 4 automatically removable cassettes: - copper to be equipped with Cat. 5e to Cat. 8 RJ 45 connectors - fiber optic

Legrand cabling system, LCS³ cat. 8 angled patch panel to be equipped with connectors



0 337 92

Pack	Cat.Nos	Angled patch panel with 24 connectors
		19" panel - 1U Equipped with new-generation Quick-Fix for automatic mounting (screwless) on cabinet and enclosure uprights Universal mounting on all cabinets or enclosures Panels ensure automatic earthing of each connector Equipped with rear cable guide to hold cables during maintenance
		Angled patch panel to be equipped with
1	0 337 92	Can take up to 24 Cat. 5e to Cat. 8 RJ 45 connectors

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Legrand cabling system, LCS³ cat. 8 connector, cords and cables

Legrand cabling system, LCS³ cat. 8 accessories

0 337 85	0 337 88	0 337 03
Pack	Cat.Nos	Cat. 8 RJ 45 connector for flat or
6	0 337 85	Angled STP panel Set of 6 STP RJ 45 Quick-connect connectors (no tools required) T568A and B marking with colour codes Compliant with ISO/IEC 11 801, EN 50173 and ANSI/TIA 568 standards To be installed in cassettes for flat panels or directly in an angled panel or a zone distribution box to be equipped
		Cat. 8 cable for local networks
500 ¹	0 337 88	Performance 2000 MHz Cable with 4 twisted pairs 100Ω LSZH sheath: zero halogen EIA/TIA colour code Compliant with ISO/IEC 11 801, EN 50173 and ANSI/TIA 568 standards Product conforming to the CPR regulations S/FTP - 4 pairs Length 500 m, supplied on a drum Weight 45 kg
		Cat. 8 RJ 45 patch cords
	LSZH	RJ 45/RJ 45 - straight Compliant with ISO/CEI 11801 and EIA/TIA 568 standards
1 1	0 337 03 0 337 04	Shielded S/FTP, impedance 100 Ω Length 2 m Length 3 m
		Marking kit
200	0 518 90	Kit of 200 coloured rings for marking RJ 45 cords 4 colors (green/red/yellow/blue). 50 pieces of each color Rings to be clipped onto the patch cords

1: in metre(s)

0 337 56		0 337 59 0 337 55 0 337 66
0 337 57	7	0 337 58
Pack	Cat.Nos	Common accessories for flat and angled
10	0 337 56	Port blanking modules Separable blanking plate For covering 1 to 6 ports or 1 to 12 ports individually (High Density solutions)
1	0 337 59	Cord management 2 cable guides to be clipped onto new-generation Quick-Fix Provide side cord management Label-holder for identification
		Specific accessories for flat panels
1	0 337 55	Cassette for flat panels to be equipped Removable empty cassette to be equipped with connectors, takes 6 Cat. 5e to Cat. 8 connectors Can be removed by simple pressing on the cassette, for ease of installation and maintenance For equipping flat panels
		Cassette with shutters for flat panels to be
1	0 337 66	Removable empty cassette to be equipped with connectors, takes 6 Cat. 5e to Cat. 8 connectors Can be removed by simple pressing on the cassette, for ease of installation and maintenance Equipped with 6 individual shutters to protect RJ 45 connectors contacts For equipping flat panels

0 337 57 Blanking cassette To be used to fill gaps in the panel Specific accessory for angled panels 0 337 58 Optimises air flow management in the enclosure

Legrand cabling system, LCS³ cat. 6A flat patch panels - equipped

Legrand cabling system, LCS³ cat. 6A flat patch panels, to be equipped



Equipped with new-generation Quick-Fix for automatic (screwless) mounting on enclosure and cabinet uprights Universal mounting on all cabinets or enclosures Panels ensure automatic earthing of each connector Equipped with four bundles guides fixed at the rear

Pack	Cat.Nos	Cat. 6A patch panels equipped with 24 RJ 45 connectors
		19" panel - 1U Equipped with 4 cassettes of 6 pre-fitted Cat. 6A LCS ³ RJ 45 connectors Automatic cassette removal by simple pressure Each connector can be removed individually T568A and B marking with colour codes Equipped with rear cable guide to hold cables during maintenance Supplied with coloured labels Compliant with ISO/IEC 11 801, EN 50173 and ANSI/ TIA 568 standards
		Flat panels 24 RJ 45 connectors - 1U - PoE++
1	0 337 70	UTP
1	0 337 72	SIP



Equipped with new-generation Quick-Fix for automatic (screwless) mounting on enclosure and cabinet uprights Universal mounting on all cabinets or enclosures Panels ensure automatic earthing of each connector Equipped with four bundles guides fixed at the rear

Pack	Cat.Nos	19" flat patch panels - to be equipped
		19" panels - 1U Equipped with rear cable guide to hold cables during maintenance Automatic cassette removal by simple pressure Each connector can be removed individually
		Flat panel with empty cassettes to be equipped
1	0 337 90	with connectors Equipped with 4 automatically removable cassettes, takes up to 24 Cat. 5e to Cat. 8 RJ 45 connectors
1	0 337 91	Empty flat panel to be equipped with cassettes Takes a maximum of 4 automatically removable cassettes: - copper to be equipped with Cat. 5e to Cat. 8 RJ 45 connectors - fiber optic
1	0 337 93	High Density flat panel with empty cassettes to be equipped with connectors Equipped with 4 High Density cassettes, takes up to 48 Cat. 5e to Cat. 6A RJ 45 connectors
		10" flat patch panels - to be equipped
1	0 337 98	10" panels - 1U Takes up to 6 Cat. 5e to Cat. 8 RJ 45 connectors Takes up to 12 Cat. 5e to Cat. 6A R L 45 connectors

Legrand cabling system, LCS³ cat. 6A

angled patch panels to be equipped, connectors



0 337 75

Equipped with new-generation Quick-Fix for automatic (screwless) mounting on enclosure and cabinet uprights. Universal mounting on all cabinets or enclosures Panels ensure automatic earthing of each connector Equipped with four concentric strand guides fixed at the rear

Pack	Cat.Nos	Angled patch panels - to be equipped
		19" panels - 1U
1	0 337 92	Angled patch panel to be equipped with connectors Takes up to 24 Cat. 5e to Cat. 8 RJ 45 connectors
1	0 337 94	High Density angled panel to be equipped with connectors Takes up to 48 Cat. 5e to Cat. 6A RJ 45 connectors
		Cat. 6A High Density RJ 45 connectors
		T568A and B marking with colour codes Compliant with ISO/IEC 11 801, EN 50173 and ANSI/ TIA 568 standards
		To be installed in cassettes for flat panels or directly in an angled panel or a zone distribution box to be equipped
e	0 227 72	Set of 6 RJ 45 connectors
6	0 337 75	STP

Legrand cabling system, LCS³ cat. 6A accessories

0 337 56		0 337 59 0 337 55 0 337 66					
0 337 57		0 337 58					
Pack	Cat.Nos	Common accessories for flat and angled					
10	0 337 56	Parters Port blanking modules Separable blanking plate For covering 1 to 6 ports or 1 to 12 ports individually (High Density solutions)					
1	0 337 59	Cord management 2 cable guides to be clipped onto new-generation Quick-Fix Provide side cord management Label-bolder for identification					
		Specific accessories for flat panels					
1	0 337 55	Cassette for flat panels to be equipped Removable empty cassette to be equipped with connectors, takes 6 Cat. 5e to Cat. 8 connectors Can be removed by simple pressing on the cassette for ease of installation and maintenance For equipping flat panels					
1	0 337 66	Cassette with shutters for flat panels to be equipped Removable empty cassette to be equipped with connectors, takes 6 Cat. 5e to Cat. 8 connectors Can be removed by simple pressing on the cassette for ease of installation and maintenance Equipped with 6 individual shutters to protect RJ 45 connectors contacts For equipping flat panels					
1		High Density cassette for flat panels to be equipped					
	0 337 95	connectors, takes 12 Cat. 5e to Cat. 6A connectors Can be removed by simple pressing on the cassette for ease of installation and maintenance For equipping flat panels					
1	0 337 95	Connectors, takes 12 Cat. 5e to Cat. 6A connectors Can be removed by simple pressing on the cassette for ease of installation and maintenance For equipping flat panels Blanking cassette To be used to fill gaps in the panel					
1	0 337 95	Connectors, takes 12 Cat. 5e to Cat. 6a connectors Can be removed by simple pressing on the cassette for ease of installation and maintenance For equipping flat panels Blanking cassette To be used to fill gaps in the panel Specific accessory for angled panels					

Legrand cabling system, LCS³ cat. 6A and cat. 7

cables and cords



Legrand cabling system, LCS³ fiber optic 19" fiber optic drawers

0 321 62	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	۲ ۲ ۲ ۲	0 321 34		0 321 10 0 321 11
Pack	Cat.Nos	Equipped 19" fiber optic drawers	Pack	Cat.Nos	Fiber optic blocks
1 1 1 1 1 1 1 1 1 1 1 1	0 321 61 0 321 62 0 321 63 0 321 64 0 321 65 0 321 66 0 321 67 0 321 71 0 321 72 0 321 73 0 321 74	Metal 19" pre-equipped fiber optic drawers, 4 cable entries, supplied with screw fixing kit, 2 cable glands (Ø 13.5 and 16 mm), coiling system and splice cassette Panel and optical ports marked on dedicated marking area Sliding End stop at a 30° angle Maximum capacity: 48 fibers in LC version, 24 fibers in ST and SC versions Depth 220 mm, height 1 U SC duplex for 24 multimode fibers LC duplex for 24 multimode fibers SC duplex for 24 multimode fibers SC duplex for 24 single-mode fibers SC duplex for 24 single-mode fibers LC duplex for 48 single-mode fibers SC APC duplex for 24 single-mode fibers SC APC duplex for 74 single-mode fibers SC duplex for 72 multimode fibers SC duplex for 72 single-mode fibers SC duplex for 73 single-mode fibers SC duplex for 74 single-mode fibers SC duplex for 73 single-mode fibers SC duplex for 74 single-mode fibers SC duplex for 73 single-mode fibers SC duplex for 74 single-mode fibers SC duplex for 75 single-mode fibers SC duplex for 76 multimode fibers		0 321 17 0 321 10 0 321 11 0 321 12 0 321 13 0 321 14 0 321 15 0 321 15 0 321 16 0 321 33 0 321 19 0 321 27 0 321 21 0 321 21 0 321 23 0 321 24 0 321 25 0 321 34 0 321 18	To be clipped directly onto modular fiber optic drawers to be equipped Cat.Nos 0 321 00/01 or onto fiber optic splice cassette Cat.No 0 321 41 Single-mode fiber blocks (9/125 µm) ST block for 6 single-mode fibers SC duplex block for 6 single-mode fibers SC duplex High Density block for 12 single-mode fibers SC APC duplex block for 6 single-mode fibers LC duplex block for 6 single-mode fibers LC duplex block for 12 single-mode fibers Single-mode 4 MTP ¹ feedthrough adaptor, key up/ key down Multimode fiber blocks (62.5 and 50/125 µm) ST block for 6 multimode fibers SC duplex block for 12 multimode fibers LC duplex block for 6 multimode fibers SC duplex block for 6 multimode fibers SC duplex block for 12 multimode fibers SC duplex block for 6 multimode fibers LC duplex block for 6 multimode fibers SC duplex block for 6 multimode fibers SC duplex block for 6 multimode fibers LC duplex block for 6 multimode fibers Multimode 4 MTP ¹ feedthrough adaptor, key up/ key down
1 1 1 1	0 321 02 0 321 04 0 321 06 0 321 00 0 321 00	drawers Metal 19" modular fiber optic drawers, 8 cable entries, supplied with 2 cable glands (Ø 13.5 and 9 mm), coiling system Equipped with the new-generation Quick-Fix system for automatic (screwless) mounting on enclosure or cabinet uprights Supplied with numbered labels Maximum capacity: 96 fibers in LC version, 48 in SC version or 24 in ST version Depth 290 mm, height 1U Sliding, equipped End stop at a 20° angle SC duplex for 24 multimode fibers SC duplex for 24 single-mode fibers SC duplex for 24 single-mode fibers Sliding, to be equipped with fiber optic blocks Takes any fiber optic block, up to 4 blocks maximum. End stop at a 20° angle Empty drawer Sliding, to be equipped with fiber optic blocks - angled Takes any fiber optic block, up to 4 blocks maximum. End stop at a 20° angle Empty drawer	1 1 1 1 1 1 1	0 321 18 0 321 36 0 321 37 0 321 32 0 321 28 0 321 29 0 321 29 0 321 30 0 321 31	 Multimode 8 Mil P⁺ feedthrough adaptor, key up/ key down LC duplex block for 6 multimode fibers - aqua RJ 45 copper block for fiber optic drawer To be clipped directly onto modular fiber optic drawers to be equipped Cat.Nos 0 321 00/01 Allows the mixing of fiber optic and copper Takes up to 5 RJ 45 connectors Accessories for fiber optic drawer to be equipped Accessory for receipt of a fan-out To be clipped onto the back of the drawer Enables the entry of preterminated links Blanking plate Blanking plate Cassette for pigtails Capacity: 24 fibers Coiling kit 1 accessory MTP is a registered trademark of US Conec Ltd

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Legrand cabling system, LCS³ fiber optic

19" High Density fiber optic panels (1/2/4 U) and patching kits



Legrand cabling system, LCS³ fiber optic

19" UHD¹ fiber optic drawers

0 321	0 321 50 55		121 90 121 90 0 321	94	
Pack	Cat.Nos	UHD ¹ modular fiber optic drawers, to be	Pack	Cat.Nos	UHD ¹ modular fiber optic drawers, to be
1 1 1 1	0 321 51 0 321 50 0 321 52 0 321 53	equipped with 12-fiber cassettes Fixed modular chassis for holding cassettes 4 U maximum capacity (holds up to 48 cassettes): 576 LC fibers 2 U maximum capacity (holds up to 24 cassettes): 288 LC fibers 1 U maximum capacity (holds up to 12 cassettes): 144 LC fibers Fiber optic drawer with cord management at the front for 12-fiber cassettes 1 U Fiber optic drawers with cord management at the front and back for 12-fiber cassettes Depth: 595 mm 1 U 2 U 4 U UHD' 12-fiber cassettes Clin directly into fiber optic drawers	1 1 1	0 321 90 0 321 91 0 321 92	equipped with 8-fiber cassettes Fixed modular chassis for holding cassettes 4 U maximum capacity (holds up to 72 cassettes): - 576 LC fibers 2 U maximum capacity (holds up to 36 cassettes): - 288 LC fibers 1 U maximum capacity (holds up to 18 cassettes) - 144 LC fibers Fiber optic drawers with cord management at the front and back for 8-fiber cassettes Depth: 595 mm 1 U 2 U 4 U UHD' 8-fiber cassettes Clip directly into fiber optic drawers Catsettes slide into above chassis Cassettes can be removed from the front and back
1	0 321 54	Cat.Nos. 0 321 50/51/52/53 Cassettes slide into above chassis Cassettes can be removed from the front and back MPO high-performance cassettes Low insertion loss < 0.35 dB A/C polarity Multimode OM4 cassettes (50/125 μm) For 50/125 μm multimode installation, OM4 type MPO cassette (MTP ² compatible)	1	0 321 93	MPO high-performance cassettes Low insertion loss < 0.35 dB Universal polarity Multimode OM4 cassettes (50/125 μm) For 50/125 μm multimode installation, OM4 type MPO cassette (MTP ² compatible) 8 OM4 LC fibers, universal polarity Single-mode OS2 cassette (9/125 μm) For 9/125 μm single-mode installation, OS2 type
1	0 321 55	12 OM4 LC fibers, polarity A/C Single-mode OS2 cassette (9/125 μm) For 9/125 μm single-mode installation, OS2 type MPO cassette (MTP ² compatible) 12 OS2 LC fibers, polarity A/C Adaptors for 12-fiber UHD ¹ installation	1	0 321 94	MPO cassette (MTP ² compatible) 8 OS2 LC fibers, universal polarity Adaptors for 8-fiber UHD¹ installation Clip into UHD ¹ fiber optic drawers for 8-fiber cassettes Cat.Nos 0 321 90/91/92
		Clip into UHD ¹ fiber optic drawers for 12-fiber cassettes Cat.Nos 0 321 50/51/52/53	1 1	0 321 95 0 321 96	MPO adaptors (MTP² compatible) Multimode 4 MTP ² adaptor - key up/key down Single-mode 4 MTP ² adaptor - key up/key down
1	0 321 56	MPO adaptors (MTP ² compatible) Multimode 4 MTP ² adaptor - key up/key down	1	0 321 97	LC adaptors 8 LC multimode adaptor
1	0 321 57	LC adaptor 12 LC multimode adaptor	1	0 321 99	8 LC-APC single-mode adaptor 1: Ultra High Density 2: MTP is a registered trademark of US Conec Ltd

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Legrand cabling system, LCS³ fiber optic

cables





Colour code: FOTAG Compliant with EN 50173-2 and ISO IEC 11801 standards Packed on a 2000 m reel except for tight-buffer OM4 Tight-buffer: "easy strip" Other configurations on request

0 325 46 0 325 47 0 325 48

2000¹ 2000¹

2000¹

Outdoor Black PE sheath

Glass strands for rodent-proofing, reinforced with corrugated steel 4 fibers 8 fibers 12 fibers

Pack	Cat.Nos	Single-mode OS2 fiber optic cables	Pack	Cat.Nos	Multimode OM3 fiber optic cables
20001 20001 20001 20001 20001 20001 10001 20001 20001 20001 20001	Loose tube 0 325 02 0 325 12 0 325 12 0 325 14 0 325 51 0 325 51 0 325 18 0 325 18 0 325 18 0 325 13 0 325 23 0 325 24 0 325 25	(9/125 μm) - (OS1 compatible) For 9/125 μm single-mode installations, OS2 type Indoor/Outdoor Yellow LSZH sheath Glass strands 4 fibers - Euroclass Dca 6 fibers - Euroclass Dca 12 fibers - Euroclass Dca 12 fibers - Euroclass Dca 12 fibers - Euroclass Dca 24 fibers - Euroclass Dca 24 fibers - Euroclass Cca Outdoor Black PE sheath Glass strands for rodent-proofing, reinforced with corrugated steel 4 fibers 6 fibers 8 fibers 12 fibers 12 fibers	20001 20001 20001 20001 20001 20001 20001 20001	Loose tube 0 325 37 0 325 38 0 325 39 0 325 10 0 325 10 0 325 10 0 325 11 0 325 53 0 325 52 0 325 41 0 325 42	(50/125 µm) For 50/125 µm multimode installations, OM3 type Suitable for 10 Gb Ethernet networks Bend insensitive Indoor/Outdoor Aqua LSZH sheath Glass strands Euroclass Dca 4 fibers 6 fibers 8 fibers 12 fibers 24 fibers Black PE sheath Glass strands for rodent-proofing, reinforced with corrugated steel 8 fibers 12 fibers 24 fibers 12 fibers 24 fibers
2000 ¹ 500 ¹ 2000 ¹ 2000 ¹ 2000 ¹ 1000 ¹ 1000 ¹	Loose Tight- buffer 900 µm 0 325 43 0 325 43 0 325 44 0 325 45 0 325 45 0 325 49 0 326 67 0 326 67 0 326 68	Multimode OM4 fiber optic cables (50/125 µm) For 50/125 µm multimode installations, OM4 type Suitable for 10 Gb Ethernet networks Bend insensitive Indoor/Outdoor Aqua LSZH sheath Glass strands 4 fibers - Euroclass Dca 6 fibers - Euroclass Dca - 500 m drum 6 fibers - Euroclass Dca - 1000 m drum 8 fibers - Euroclass Dca 12 fibers - Euroclass Dca - 1000 m drum 24 fibers - Euroclass Dca - 1000 m drum 24 fibers - Euroclass Cca - 1000 m drum			

Legrand cabling system, LCS³ fiber optic Legrand cabling system, LCS³ fiber optic preterminated links

OM4 and OM5 on request

1 320 41

Supplied with pulling element. In coil up to 50 m, on a small drum between 51 m and 150 m, on a large drum over 151 m and up to 200 m Connection in fiber optic drawers. OM3 aqua LSZH sheaths. Supplied

with test reports Possible to obtain customised preterminated links: cable type, structure, length, connector type, etc

Pack	Cat.Nos	Core™ SC/SC tight-buffer OM3 links	Pack	Cat.Nos
1 1 1 1 1	1 320 01 1 320 02 1 320 03 1 320 04 1 320 05 1 320 06	6 SC simplex - 6 SC simplex Length 10 m Length 20 m Length 30 m Length 40 m Length 50 m Length 60 m		
1 1 1 1 1 1 1	1 320 07 1 320 08 1 320 09 1 320 10 1 320 12 1 320 12 1 320 14 1 320 16 1 320 18 1 320 20	Length 70 m Length 80 m Length 90 m Length 100 m Length 120 m Length 140 m Length 160 m Length 180 m Length 200 m	1 1 1 1 1 1 1	$\begin{array}{c} 0 & 324 & 01 \\ 0 & 324 & 02 \\ 0 & 324 & 03 \\ 0 & 324 & 04 \\ 0 & 324 & 05 \\ 0 & 324 & 11 \\ 0 & 324 & 12 \\ 0 & 324 & 13 \\ 0 & 324 & 14 \\ \end{array}$
1	1 320 21	12 SC simplex - 12 SC simplex Length 10 m	1	0 324 15
1 1 1 1 1 1 1 1	1 320 22 1 320 24 1 320 25 1 320 26 1 320 26 1 320 28 1 320 28 1 320 29 1 320 30 1 320 32 1 320 34	Length 20 m Length 40 m Length 50 m Length 50 m Length 70 m Length 80 m Length 90 m Length 100 m Length 120 m Length 120 m	1 1 1 1 1 1 1 1	$\begin{array}{c} 0 & 324 & 21 \\ 0 & 324 & 22 \\ 0 & 324 & 23 \\ 0 & 324 & 24 \\ 0 & 324 & 25 \\ 0 & 324 & 31 \\ 0 & 324 & 32 \\ 0 & 324 & 33 \\ 0 & 324 & 34 \\ 0 & 324 & 35 \\ \end{array}$
1 1 1	1 320 36 1 320 38 1 320 40	Length 160 m Length 180 m Length 200 m		
		Core™ LC/LC tight-buffer OM3 links		
1 1 1	1 320 41 1 320 42 1 320 43 1 320 44	6 LC simplex - 6 LC simplex Length 10 m Length 20 m Length 30 m Length 40 m		
1 1 1 1 1 1	1 320 45 1 320 46 1 320 47 1 320 47 1 320 48 1 320 49 1 320 50 1 320 52	Length 50 m Length 60 m Length 70 m Length 80 m Length 90 m Length 100 m Length 120 m	1 1 1 1	0 324 41 0 324 42 0 324 43 0 324 44 0 324 45
1 1 1	1 320 54 1 320 56 1 320 58 1 320 60	Length 140 m Length 160 m Length 180 m Length 200 m	1 1 1	0 324 51 0 324 52 0 324 53
1 1 1 1 1 1 1 1 1 1 1 1 1	$\begin{array}{c} 1 \ 320 \ 61\\ 1 \ 320 \ 62\\ 1 \ 320 \ 63\\ 1 \ 320 \ 64\\ 1 \ 320 \ 65\\ 1 \ 320 \ 66\\ 1 \ 320 \ 66\\ 1 \ 320 \ 67\\ 1 \ 320 \ 67\\ 1 \ 320 \ 67\\ 1 \ 320 \ 72\\ 1 \ 320 \ 72\\ 1 \ 320 \ 74\\ 1 \ 320 \ 76\ 1 \ 76\$	12 LC simplex - 12 LC simplex Length 10 m Length 20 m Length 30 m Length 40 m Length 50 m Length 60 m Length 70 m Length 80 m Length 90 m Length 120 m Length 140 m Length 140 m Length 160 m Length 180 m Length 180 m	1	0 324 54 0 324 55

High Density preterminated links



Supplied on a drum Micro cables for high density cassettes Aqua (OM3) and yellow (OS2) LSZH sheaths Supplied with test reports (photometry) Other configurations on request

S	Pack	Cat.Nos	Ultra™ Fan-out/Fan-out pre	eterminated High
			Density fiber optic links	
			With fan-out (2 mm output) for se	ecure transition
			between the cable and the ends	
			Low insertion loss for LC connec	ctor < 0.15 dB/
			connector	
			Fan-out/Fan-out OM3 micro ca	ables
			Description	Length (m)
	1	0 324 01	6 LC duplex - 6 LC duplex	10
	1	0 324 02	6 LC duplex - 6 LC duplex	20
	1	0 324 03	6 LC duplex - 6 LC duplex	30
	1	0 324 04	6 LC duplex - 6 LC duplex	40
	1	0 324 00	12 L C duplex - 12 L C duplex	10
	1	0 324 12	12 LC duplex - 12 LC duplex	20
	1	0 324 13	12 LC duplex - 12 LC duplex	30
	1	0 324 14	12 LC duplex - 12 LC duplex	40
	1	0 324 15	12 LC duplex - 12 LC duplex	50
			Fan-out/Fan-out OS2 micro ca	bles
			Description	Length (m)
	1	0 324 21	6 LC duplex - 6 LC duplex	10
	1	0 324 22	6 LC duplex - 6 LC duplex	20
	1	0 324 23	6 LC duplex - 6 LC duplex	30
	1	0 324 24	6 LC duplex - 6 LC duplex	40
	1	0 324 31	12 C duplex - 12 C duplex	10
	1	0 324 32	12 LC duplex - 12 LC duplex	20
	1	0 324 33	12 LC duplex - 12 LC duplex	30
	1	0 324 34	12 LC duplex - 12 LC duplex	40
	1	0 324 35	12 LC duplex - 12 LC duplex	50
			Ultra™ MTP¹/MTP¹ High De	nsitv
			preterminated fiber optic li	nks
e .			For connecting cassettes in High	n Density fiber optic
•			panels and Ultra High Density d	rawers
			Female MTP ¹ , A polarity	
			Low insertion loss for MTP ¹ conr	ector < 0.35 dB/
			connector	
			MTP ¹ OM3 micro cables	
	1	0 224 44	Description	Length (m)
	1	0 324 41	12 MTP1 MTP1 fiber optics	10
	1	0 324 42	12 MTP ¹ -MTP ¹ fiber optics	30
	1	0 324 44	12 MTP ¹ -MTP ¹ fiber optics	40
	1	0 324 45	12 MTP ¹ -MTP ¹ fiber optics	50
			MTP ¹ OS2 micro cables	
			Description	Length (m)
	1	0 324 51	12 MTP ¹ -MTP ¹ fiber optics	10
	1	0 324 52	12 MTP ¹ -MTP ¹ fiber optics	20
	1	0 324 53	12 MTP ¹ -MTP ¹ fiber optics	30
	1	0 324 54	12 MTP1-MTP1 fiber optics	40
	I	0 324 33	12 WIF - WIF IIDE Optics	50
	I	0 324 33	1: MTP is a registered trademark of US Co	nec Ltd

Clegrand

Core[™] fiber patch cords



Fitted at each end with 2 connectors with ceramic ferrule Individually packed and tested (report supplied) Max. optical losses/Master: 0.25 dB LSZH Zipcord sheath





Fitted at each end with 2 connectors with ceramic ferrule Individually packed and tested (report supplied) Max. optical losses/Master: 0.15 dB LSZH Zipcord sheath

Pack	Cat.Nos	OS2 single-mode fiber optic cords (9/125 μm)	Pack	Cat.Nos	OS2 single-mode fiber optic cords (9/125 $\mu m)$
		For 9/125 μm single-mode installations, OS2 type Yellow sheaths			For 9/125 µm single-mode installations, OS2 type Yellow sheaths
3 3 3	0 326 00 0 326 01 0 326 02	SC/SC duplex cords Length: 1 m Length: 2 m Length: 3 m	5 5 5	0 325 27 0 325 28 0 325 29	SC/SC duplex cords Length: 1 m Length: 2 m Length: 3 m
3 3 3	0 326 03 0 326 04 0 326 05	SC/LC duplex cords Length: 1 m Length: 2 m Length: 3 m	5 5 5	0 325 30 0 325 31 0 325 32	SC/LC duplex cords Length: 1 m Length: 2 m Length: 3 m
3 3 3 3 3 3 3 3	0 326 28 0 326 06 0 326 07 0 326 08 0 326 29	LC/LC duplex cords Length: 0.5 m Length: 1 m Length: 2 m Length: 5 m	5 5 5 5	0 325 33 0 325 34 0 325 35 0 325 36	LC/LC duplex cords Length: 1 m Length: 2 m Length: 3 m Length: 5 m
3	0 326 09	OM3 multimode fiber optic cords (50/125 μm) For 50/125 μm multimode installations, OM3 type Aqua sheaths SC/SC duplex cords	3 3 3 3 3	0 326 86 0 326 87 0 326 88 0 326 89 0 326 92	LC/LC Uniboot duplex cords Reversible polarity Length: 1 m Length: 2 m Length: 3 m Length: 5 m Length: 10 m
3	0 326 09 0 326 10 0 326 11	Length: 2 m Length: 3 m			OM4 multimode fiber optic cords (50/125 μ m)
3 3 3	0 326 12 0 326 13 0 326 14	SC/LC duplex cords Length: 1 m Length: 2 m Length: 3 m LC/LC duplex cords	3 3 3	0 326 30 0 326 31 0 326 32	For 50/125 µm multimode installations, OM4 type Aqua sheaths SC/SC duplex cords Length: 1 m Length: 2 m Length: 3 m
3 3 3	0 326 15 0 326 16 0 326 17	Length: 1 m Length: 2 m Length: 3 m	3 3	0 326 33 0 326 34	LC/LC duplex cords Length: 0.5 m Length: 1 m
		OM4 multimode fiber optic cords (50/125 μm)	3 3	0 326 35 0 326 36	Length: 2 m Length: 3 m
		For 50/125 µm multimode installations, OM4 type Aqua sheaths	3	0 326 37	Length: 5 m LC/LC Uniboot duplex cords
5 5 5	0 322 60 0 322 61 0 322 62	SC/SC duplex cords Length: 1 m Length: 2 m Length: 3 m	3 3 3	0 326 95 0 326 96 0 326 97 0 326 98	Reversible polarity Length: 0.5 m Length: 1 m Length: 2 m
5 5 5	0 322 63 0 322 64 0 322 65	SC/LC duplex cords Length: 1 m Length: 2 m Length: 3 m	3	0 326 99	Length: 5 m

- LC/LC duplex cords 0 322 66 Length: 1 m 0 322 67 Length: 2 m 0 322 68 Length: 3 m
- 5 5 5

Legrand cabling system, LCS³ fiber optic Legrand cabling system, LCS³ fiber optic pigtails, glue-on connectors and fan-out units case and quick-connect connectors



Pack	Cat.Nos	Core™ pigtails
		LSZH For making quick, reliable and high- performance fiber optic cable connectior on site: - OM2/OM3/OM4 IL Typical/Master = 0.15 dB - OS2 IL Typical/Master = 0.18 dB Compatible with all commercially-availabl splicers
1 1 1	$ \begin{smallmatrix} 1 & m \\ 0 & 322 & 20 \\ 0 & 322 & 21 \\ 0 & 322 & 22 \\ 0 & 322 & 22 \\ \end{smallmatrix} \left \begin{smallmatrix} 2 & m \\ 0 & 322 & 23 \\ 0 & 322 & 24 \\ \end{smallmatrix} \right $	50/125 μm - OM3 (PC) SC connectors LC connectors ST connectors
1 1 1	0 322 30 0 322 33 0 322 31 0 322 34 0 322 32	50/125 μm - OM4 (PC) SC connectors LC connectors ST connectors
1 1 1 1 1	0 322 40 0 322 45 0 322 41 0 322 46 0 322 42 0 322 48 0 322 43 0 322 47 0 322 44 0 322 49	9/125 µm - OS2 (APC or UPC) - OS1 compatible SC-APC connectors SC-UPC connectors LC-APC connectors LC-UPC connectors ST-UPC connectors
		Sets of 12 LC pigtails
1 1 1	0 326 24 0 326 26 0 326 71	1m length - 12 different colors 12 OS2 LC-UPC pigtails 12 OM3 LC-UPC pigtails 12 OM4 LC-UPC pigtails
		Heat-shrinkable sleeve for pigtails
1	0 327 44	40 mm - pack of 50 sleeves
		connectors
10 10	0 331 47 0 331 00	Supplied with 900 µm sleeve Connectors with ceramic ferrule Typical attenuation: 0.3 dB SC connectors LC connectors
		Fan-out units
1 1	0 330 48 0 330 49	For 900 µm sheathing of optical fibers Take 250 µm fiber diameters 6-fiber fan-out unit 12-fiber fan-out unit

0 322 70 0 322 72 0 322 75 0 322 73 ns 1 0 322 83 0 322 81 0 322 85 le Cat.Nos Tool case for preparing optical fiber for Pack quick-connect fiber optic connectors Provides the tools required for preparing optical 0 322 70 cables, for carrying out initial tests of the connection of fibers to connectors and accessories for easy connection in all situations Comprises: - Precision cleaver - Kevlar stripping and cutting tool Visual fault locator
Installation instructions and video - Accessories (cleaners, felt tip pen, bin, etc) **Quick-connect connectors** Connection can be made with case Cat.No 0 322 70 Quick-connect, reliable and reusable up to 5 times To be used to lock the fiber inside the connection An indicator light is used to test the connection No glue or polishing needed Can be installed on 900 µm fiber optics For 250 µm fiber, use the special tubes supplied with the connectors; typical L: multimode OM3/OM4 = 0.1 dB and single-mode OS2 = 0.2 dB (PC) and 0.3 dB (APC) OM3/OM4 multimode connectors Set of 12 connectors LC PC 50/125 µm, 900/250 µm SC PC 50/125 µm, 900/250 µm 12 12 0 322 71 0 322 72 **OS2 single-mode connectors** Set of 12 connectors LC UPC 9/125 µm, 900/250 µm SC UPC 9/125 µm, 900/250 µm SC APC 9/125 µm, 900/250 µm 12 12 0 322 73 0 322 74 0 322 75 12 Precision cleaver for updating case Cat.Nos 0 326 90 0 322 80 Enables precision-cutting of fiber optics and the use of quick-connect connectors Cat.Nos 0 322 71 to 1 0 322 75 with case Cat.No 0 326 90 Fiber optic cleaning accessories MPO/MTP¹ ferrule cleaner 0 322 83 LC ferrule cleaner (PC/APC) SC ferrule cleaner (PC/APC) LC replacement cartridge SC replacement cartridge 0 322 81 0 322 82 0 322 82 0 322 84 0 322 85 0 322 76 0 322 77 Fiber stripper Wipes 322 78 Cleaning spray 1: MTP is a registered trademark of US Conec Ltd

MEETING ALL YOUR DIGITAL INFRASTRUCTURE REQUIREMENTS!

CHALLENGES IN STRUCTURED CABLING

A structured cabling system that has been designed and deployed effectively will include all the necessary cables and hardware to form a complete telecommunications infrastructure.

The type of structured cabling your data center needs will be determined by various factors, including the services you offer (bandwidth needs), your existing network equipment, and its layout. The top priorities for data centers are to ensure the network infrastructure is flexible, scalable, secure, and has the shortest possible business interruptions. Planning the network structure and selecting the right products to meet current and future requirements is a considerable challenge, and good quality structured cabling components are essential.

STRUCTURED CABLING SOLUTIONS

Pre-assembled solutions have become the norm. Multifibre cables usually with 12 or 24 fibers end on 12-fiber MPO/MTP® connectors or LC or SC duplex connectors. Pre-terminated cables simplify and allow much faster installation and provisioning of necessary connections even during operation. When the new servers, switches, or other active equipment are installed or moved, the cables are already in place and ready for connection. Pre-assembled systems are not limited to fiber optic cables. Pre-assembled solutions for copper cables are also becoming increasingly popular as trunk-solutions with jacks on both ends or as multi-patch trunks for fast and easy connection.



FIND ALL OUR SOLUTIONS FOR STRUCTURED CABLING IN THE CATALOGUE





DIFFERENT SOLUTIONS FOR DIFFERENT CABLING AREAS

Within the data centers, different areas have different requirements for density, performance, and technology. The increasing demand for bandwidth and the rapid changes in active equipment technology and interfaces are also setting new standards for structured cabling inside and outside the boundaries of the data center. The requirements for the main connection points of several data centres and the connection points to the outside world are completely different in many situations than in the classic white space of a data center.

WE HAVE SOLUTIONS FOR EVERY AREA AND WE ARE HAPPY TO SUPPORT YOU

As a specialist in data center solutions and structured cabling, we offer you a comprehensive portfolio of solutions that can meet all your digital infrastructure requirements. In order to make this clearer and more intuitive, this catalogue is divided into precisely these core areas - we will be happy to advise and support you in making the right product selection if required.



A variety of needs **covered!**

		GL	OBAL ADVANTAG	PRODUCT CRITERIA		
	EASY & FAST Installation	MODULARITY & Scalability	VERY HIGH Flexibility	PRE-TERMINATED & Splice Solutions	FIBER & COPPER SOLUTIONS	
	MEET-ME Room	~	~		~	
	ADVANCED Connectivity	~	~	~		
	DATA CENTER Structured Cabling Solution	~	~		~	~
	HIGH- Performance Computing	~	~		~	

		CUSTOMER	ADVANTAGES			
PASSIVE FIBER Solutions with Highest density	PASSIVE FIBER Solutions with Highest quality	SOLUTIONS READY For New DD Transceiver	SOLUTIONS READY For Bandwidth 400G+	CONNECTION TO PROVIDERS AND/OR OTHER BUILDINGS / DATA CENTERS	SERVICE & Support	25-YEAR WARRANTY FOR APPLICATION & PERFORMANCE
~				~	~	~
~	~	~	~		~	~
					~	~
	~		~		~	~



Headquarters

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