



Multimedia Connect  
The leader in structured cabling\*



A brand of CAE GROUPE

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Since its creation, Multimedia Connect has been developing smart solutions for cabling infrastructures in innovative buildings and cities, meeting the highest environmental and energy requirements. Its copper, fiber optics and rack solutions make it the leading brand in structured cabling in the French market, and a major player worldwide. Multimedia Connect is powered by CAE GROUPE.



Since 1987, CAE GROUPE designs and supports comprehensive ranges of solutions dedicated to Smart Building, Industry & Infrastructures and Live Video Broadcast.

## A CUSTOMER CENTRICITY APPROACH TO IMPROVE PERFORMANCES ACCROSS THE BOARD

Our goal is to provide the largest range of solutions allowing our customers to benefit from best of breed technologies.

Listening to our customers and partners, answering their requirements, ensuring fast and efficient deliveries, are commitments that Multimedia Connect strives to meet thanks to the logistic strength and infrastructure of CAE GROUPE.



### Key figures

**1987**

Year of creation

**12.000**

Product references

**190**

Employees

## Research and Development

Our R&D team drives the development and control of the manufacturing process at every single step. Its technical expertise allows it to master the technologies for the development of cabling and connectivity solutions:

- Micromechanics
- HF signal processing
- Plastic injection
- 3D design



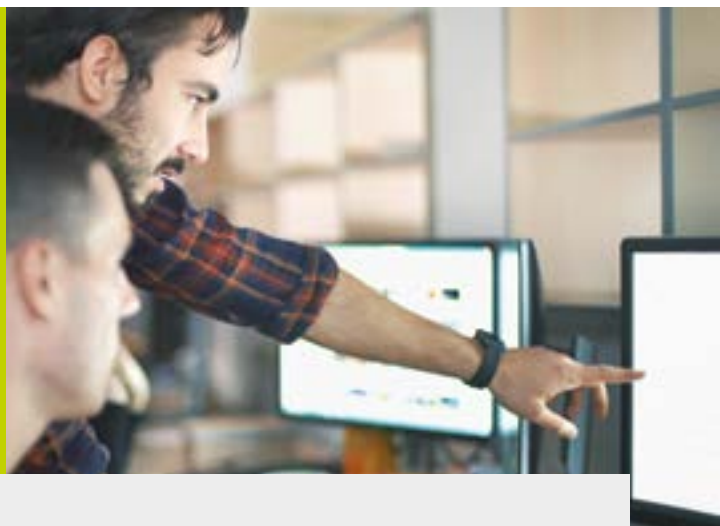
## Production unit for customised solutions

Located in our logistics center, CAE GROUPE's production unit designs and manufactures customized products to meet the specific needs of your installations. Different possibilities of services on demand:

- Customised patchcords
- Fully equipped racks with active equipment (Data and Audio/Video)
- Pre-equipment of fiber optic patch panels
- Specific copper and fiber requests on demand

### Design office

The design office analyses technical specifications and proposes tailor-made solutions at optimized costs.



### Logistics

CAE GROUPE has a strong know-how in logistics field. As part of its strategy, its logistics platform in Villabé (Parisian Region), ensures more than 80,000 deliveries per year.



**23M€**

Of stock value

**23.000**

Pallet locations

**24/48h**

Delivery time in  
85% of cases

**8**

Cutting machines  
60,000/year

**3h**

Average order  
preparation time

# HIGH DENSITY SOLUTIONS

## Specific know-how

The exponential growth of data requires best of breed technologies in Data Centers. Efficient and resilient architectures with high port densities are needed to meet ever-increasing performance requirements at optimized costs.



Performance



Modularity

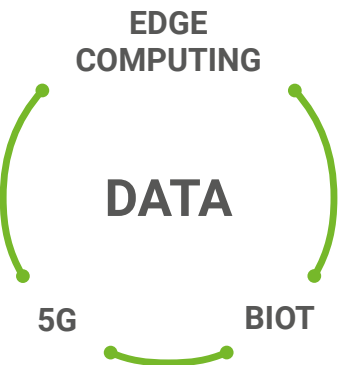


Reliability



Security

Our R&D team design the Multimedia Connect product range in order to minimize operational disruptions and, as a result, reduce financial risks and potential losses.



The emergence of 5G and Edge Computing technologies, as well as the rise of the Building Internet of Things (BIOT), exponentially increase the volume of data and especially complicate the guarantee of efficient and responsive operation for users.

These trends have led to the development of offers that effectively meet current and future needs and ensure data management through various solutions such as data centers, computer rooms, or even micro data centers.

Thanks to its know-how and dedicated teams of experts, Multimedia Connect offers personalized support: we analyse carefully your needs, and recommend tailored solutionsat optimized costs.

# DATA CENTER PERFORMANCE

## Data and energy

The goal of a data center is to ensure the highest possible availability in order to guarantee continuous service and minimize financial losses that may be caused by a disruption.

The availability levels of data centers are classified into 4 tiers, as defined by the American standard TIA-942:Energy consumption:



Multimedia Connect can assist you in defining the cabling solution for data centres from Tier 1 to 3

### Energy consumption: the real issue?

Energy consumption is frequently mentioned as the main issue for data centers, due to their high energy consumption. Indeed, while the quest for the highest availability is still a priority today, it is not without consequences.

Having a Tier 4, and therefore a level of reliability of more than 99.99%, requires a set of equipment and solutions for optimal operation: air conditioning, servers, inverters, significant redundancy, etc., all of which are particularly energy-consuming.

The ISO/IEC 30134 standards related to the data center have defined PUE levels, Power Usage Effectiveness, which classify the efficiency of data centers into 3 levels.

“

***The PUE represents the total ratio of energy consumed by IT equipment.***

***Example of PUE:***

***PUE of 2: 1 Watt used for IT = 2 Watts consumed by the data center***

”

Storage racks

DC optical solution

Smart patching





Customised links

UHD optical solution

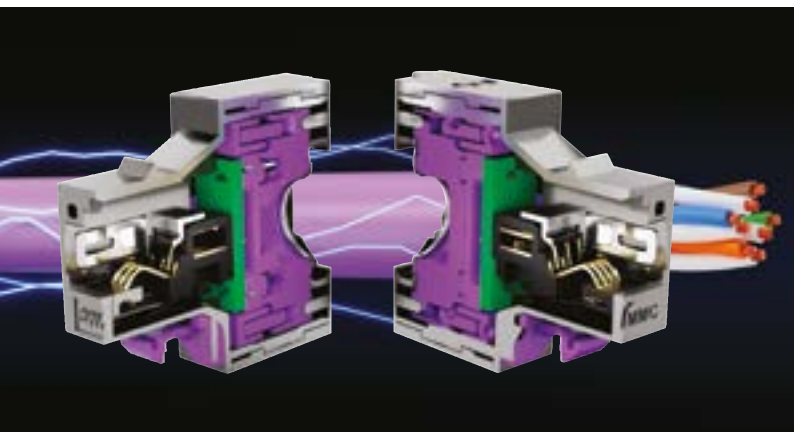
# HIGH PERFORMANCE COPPER SOLUTIONS

## The 5X range, Cat.8 - 40 Gb/s

The 5X connector offers state of the art transmission performance to ensure the transfer of data that nowadays pass through an IP network.

### 5 benefits of the 5X range

- Connectivity
- Performance
- Innovation
- Modularity
- Simplicity



### A new compensation

The new compensation technology of the 5X connectivity system enables a speed of up to 40 Gb/s. This innovative compensation technology ensures excellent performance.



The 5X new compensation technology limits the interferences caused by the electrical transmission of the signal along the entire length of the cable.

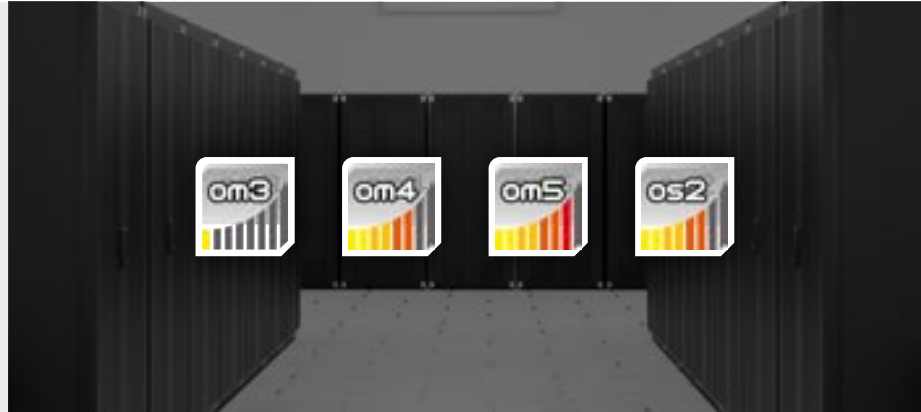
**MMC 35 YEARS**  
SYSTEM WARRANTY

# HIGH DENSITY OPTICAL SOLUTIONS

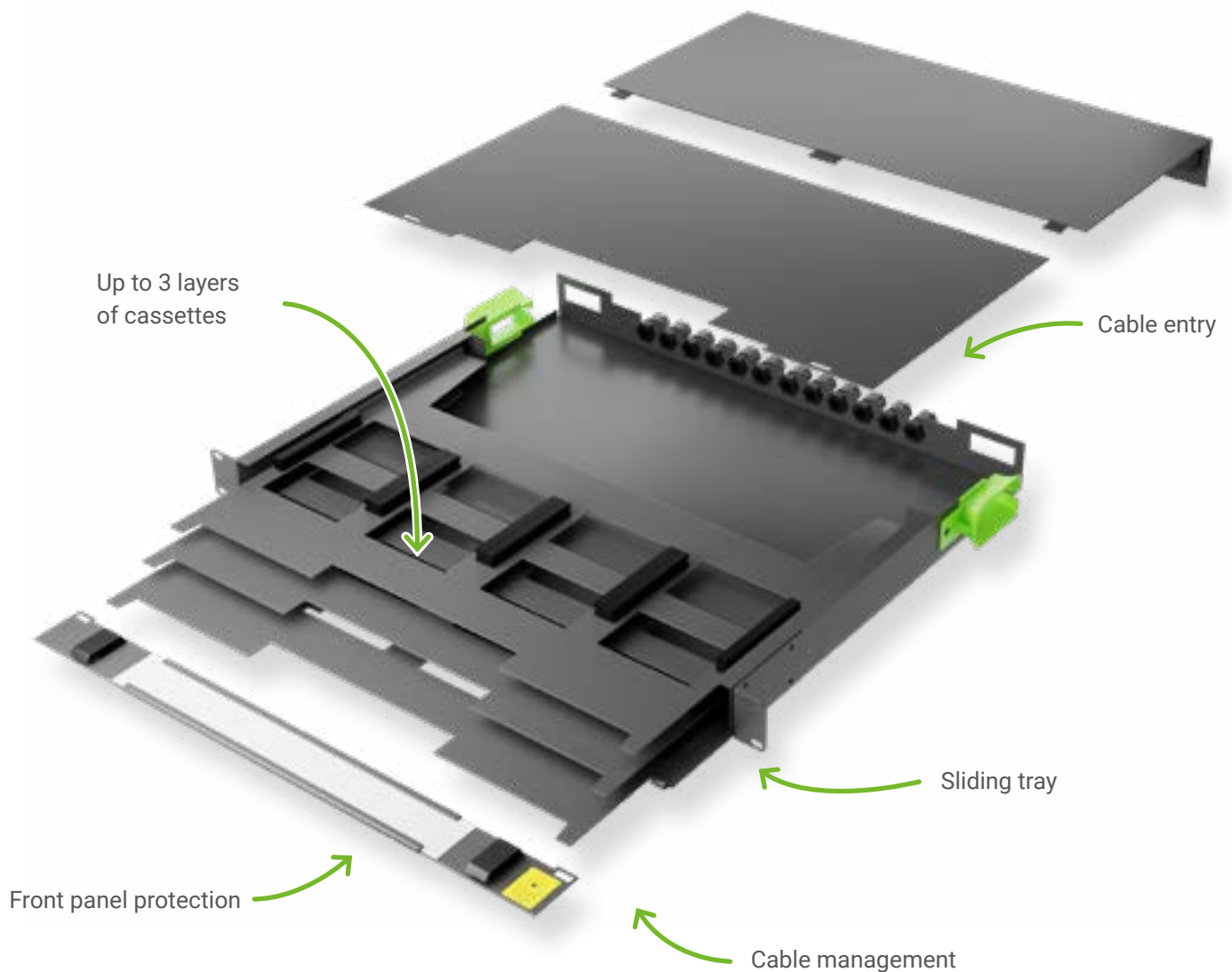
## The DC range

### Benefits of the DC range

- High density: up to 144 optical fibers
- Modularity
- Ease of use
- Cabling management
- Extra slim cassette



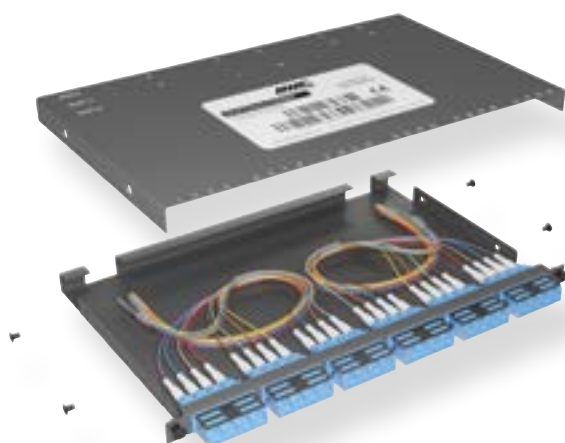
### Optical patch panel



### Ready-to-splice cassette

24 fibers

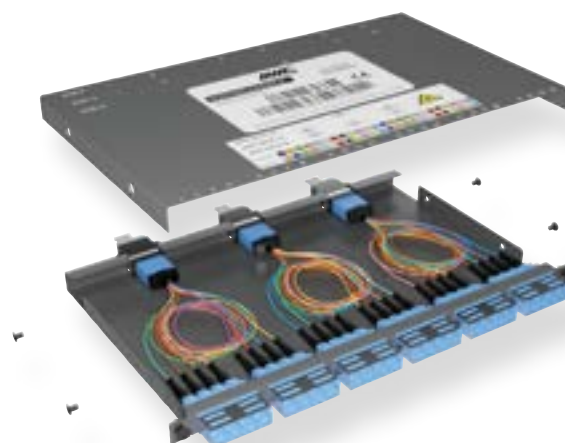
- Ready to splice
- Colored pigtails for identification
- LC Duplex/Quad connection (others on request)



### MTP cassette

24 fibers

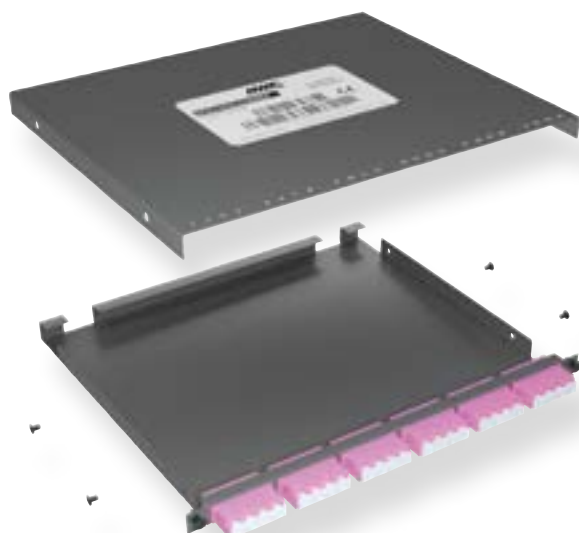
- LC Duplex/Quad connection (others on request)
- Adapters equipped with internal caps:
  - LASER and dust protection
  - Available in BASE 8, 12 or 24



### Equipped cassette

24 fibers

- Equipped with adapters
- LC Duplex/Quad connection (others on request)
- Ideal for pre-connected links



### Equipped front panel

60 fibers

- 1/2 front panel: modularity on the same U
- LC Duplex/Quad connection (others on request)
- Direct connection

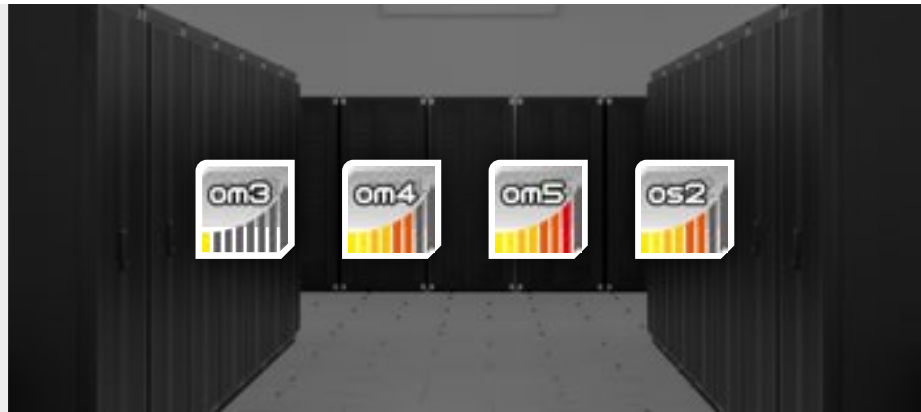


# ULTRA HIGH DENSITY OPTICAL SOLUTIONS

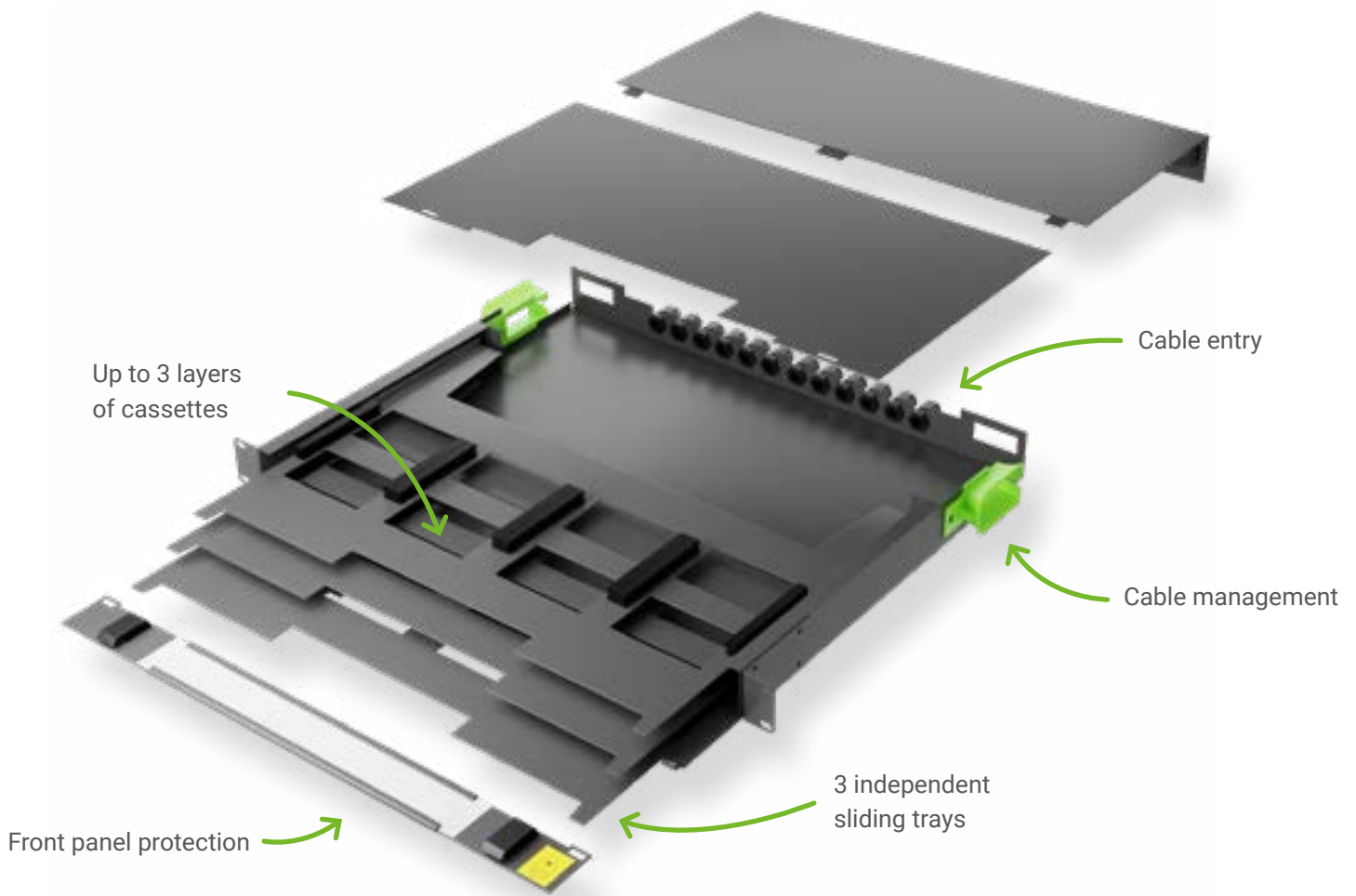
## The UHD range

### Benefits of the UHD range

- High density: up to 288 optical fibers
- Modularity
- Security
- Easy maintenance
- Vertical rack system



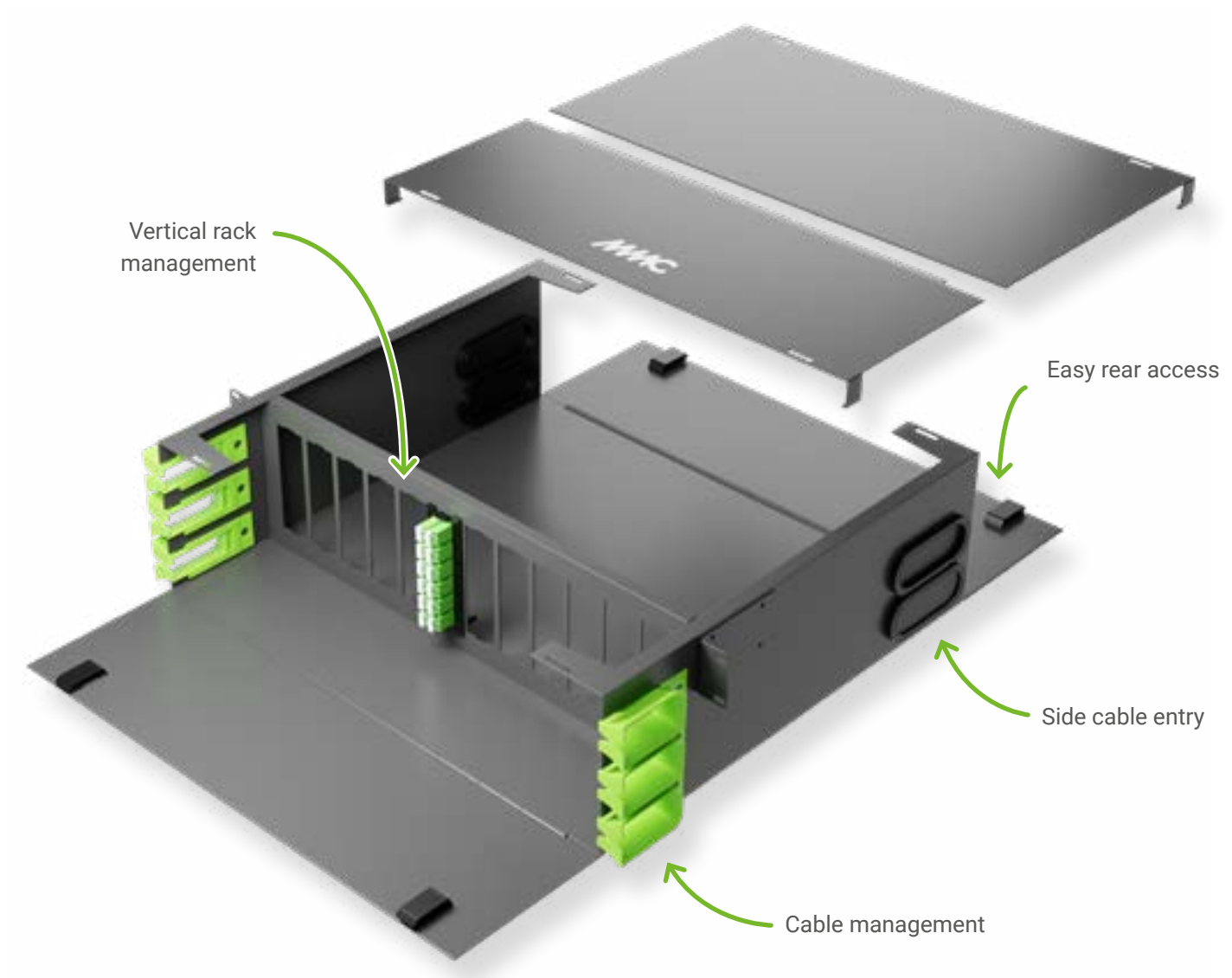
### Optical patch panel



### MTP cassette

12 fibers

- 6 LC Duplex connection: 12 fibers per cassette
- Available in BASE12
- Clear identification of the optical fiber
- Transparent cassette for visual control



### MTP cassette

24 fibers

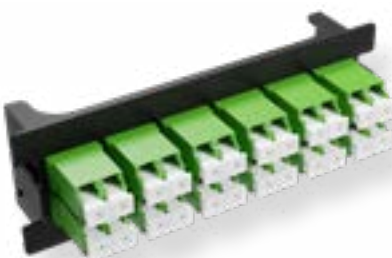
- 12 LC Duplex connection: 24 FO per cassette
- Available in BASE12
- Clear fiber identification
- Transparent cassette for visual control



### Front panel and adapters

24 fibers

- ½ front panel: modularity on a single U
- 12 half front panels per drawer
- 24 adapters per half-side
- LC Duplex adapters



### Front panel and MTP adapters

- 6 MTP adapters per ½ front panel
- 12 half front panels per drawer
- MTP Simplex adapters

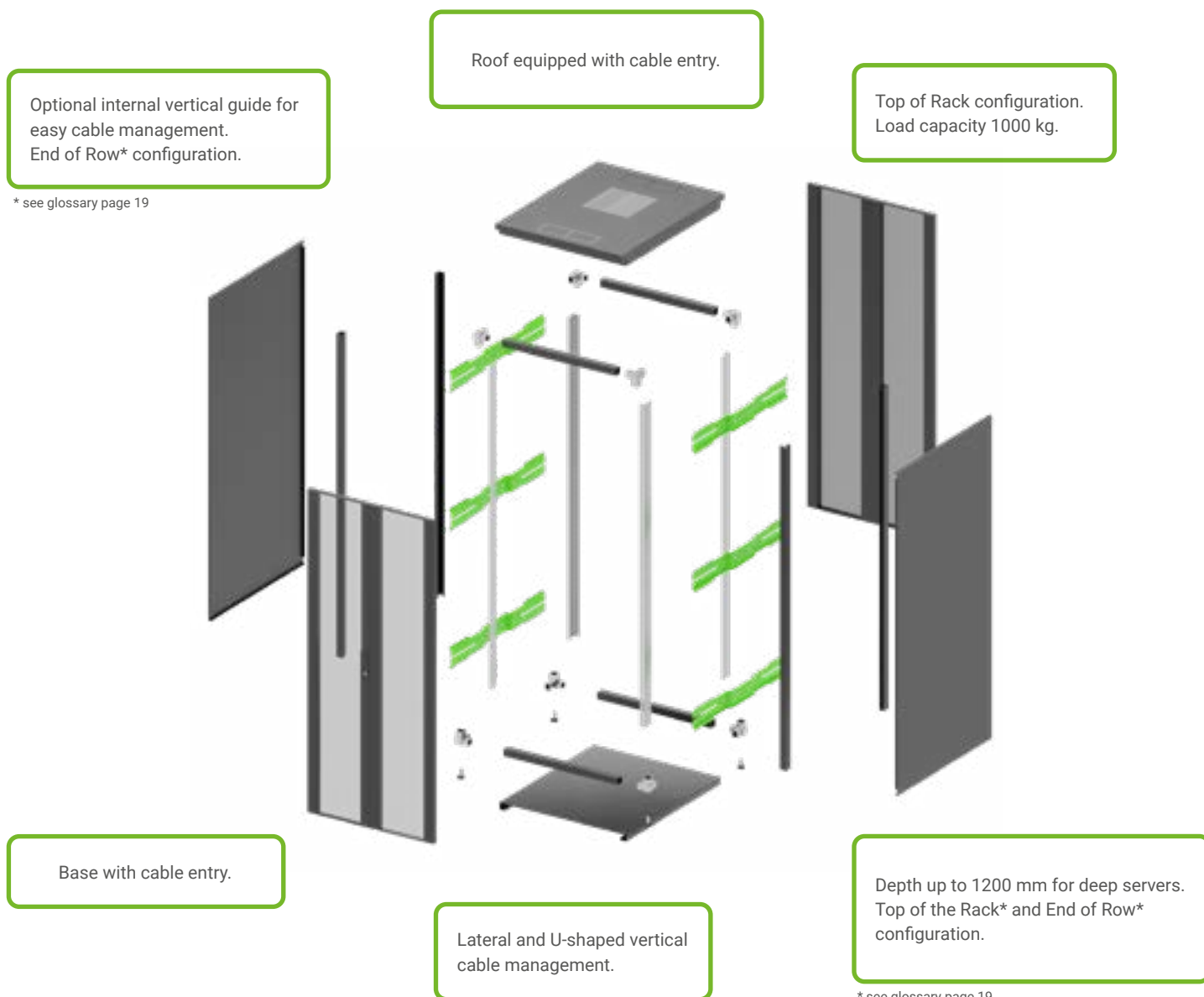


# DATA ROOM STORAGE RACKS

The storage rack is a key element since it allows the storage of a large number of elements, while ensuring the ventilation and cooling of the equipment.

The **TM1000** racks range of Multimedia Connect incorporates a number of features designed to ensure performance and ease of installation.

## Technic 1000 19" rack: design and features



The management of hot and cold air flows and the internal temperature is facilitated by the 80% perforated doors of our **TM1000** racks.

Multimedia Connect Technic 1000 racks are the ideal solution for the storage of your servers and other active pieces of equipment.

# SMART PATCHING

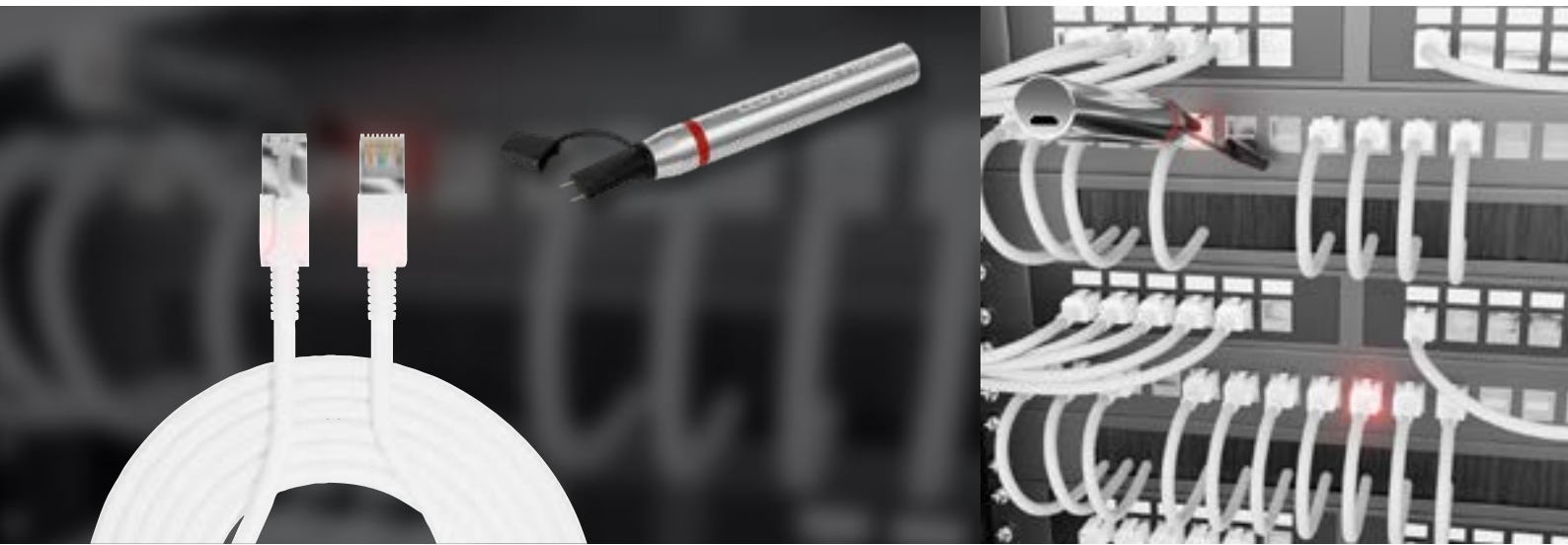
## Cables & patch cords

The key word in a data center is "reliability": ensuring fast maintenance and patching, will reduce disconnection time and therefore financial losses.

Multimedia Connect has proposed innovative solutions allowing fast patching within data center environments to address this major requirement.

### LED copper and fiber optic patch cords

To facilitate the identification at each extremity, Multimedia Connect offers a specific range of RJ45 and fiber optic patch cords.



### Fiber optic patch cords

MultiMedia Connect Fiber optic patch cords ensure fast patching without risking unintentional disconnection from the neighbouring port thanks to the UPPTS jumper solution.

- Pull-out tab
- Duplex connector
- Quick access to the tab in case of high density
- Reversibility for polarity adaptation



# PRE-CONNECTED LINKS

## French tailor-made solutions

Thanks to its production workshop located in Villabé (Parisian region), CAE GROUPE offers a wide range of tailor-made copper and optical cords.



**QUICK AND EASY  
TO INSTALL**  
Plug&Play system



**MODULARITY**  
Tailor-made link



**PERFORMANCE**  
40 Gb or 100 Gb MTP  
connectivity

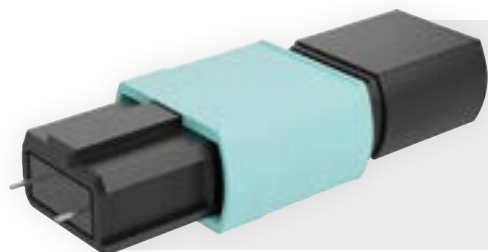
### Optical MTP links: performance and high density

MTP\* connectivity is now the most common connectivity used in data center applications. MTP\* Plug&Play links are therefore a solution that combines speed and ease of installation.

\* see glossary page 19



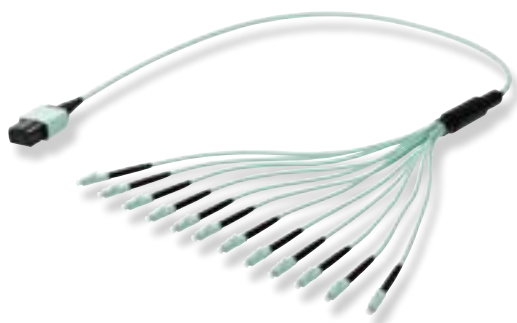
**12 & 24 fibers**



MTP Elite® connectors are high quality connectors with best-in-class performance and low attenuation. All Multimedia Connect MTP solutions are MTP Elite® connectors.

Thanks to its workshop, Multimedia Connect offers a wide combination of MTP links:

#### MTP FAN: MTP link to LC connectors



#### MTP RUG: MTP link to MTP



MTP links address any type of polarity, A, B or C in accordance with the TIA 568 standard (see *technical glossary p19*).

# COPPER LINKS

## Plug&Play system

Multimedia Connect offers a wide range of pre-connected copper links to meet all your cabling system needs. From Cat.6A to Cat.8, all our links are covered by our 25 years warranty system and are manufactured in our own workshop.



**CONTROL**  
Tested as a link or component



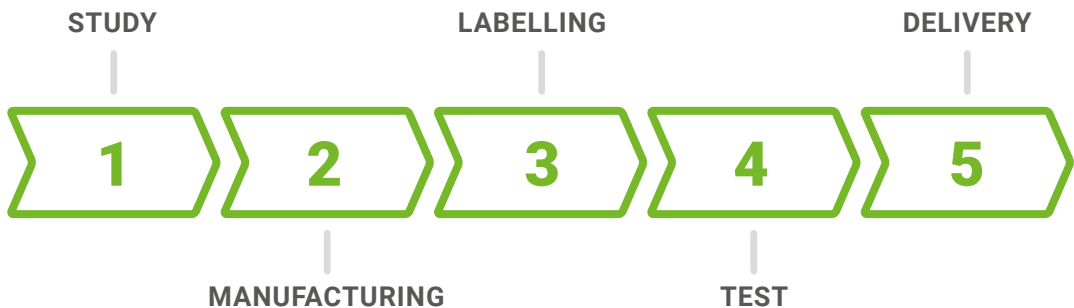
**MODULARITY**  
RJ/RJ male or female link



**PERFORMANCE**  
Cat.6A to Cat.8



Multimedia Connect will assist you in the design of your project, from the study to the delivery:



The links are individually tested to ensure compliance with wiring standards.

The workshop located in Villabé, in the heart of our 25,000 m² logistics warehouse, ensures immediate proximity to the components, allowing for greater reactivity and faster delivery times.



To find out more about our offer of pre-connected links, contact us:

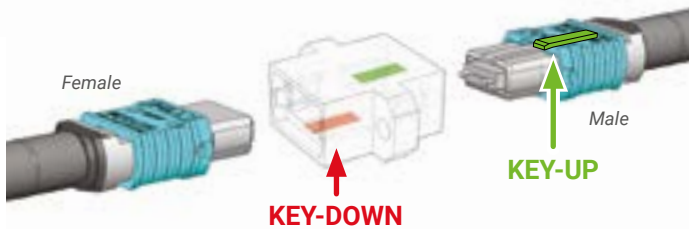


# GLOSSARY

## KEY UP / KEY DOWN

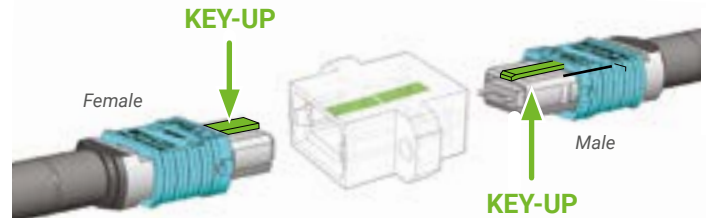
### Type A adapters

Type A crossings with reversed key (**UP** / **DOWN**)



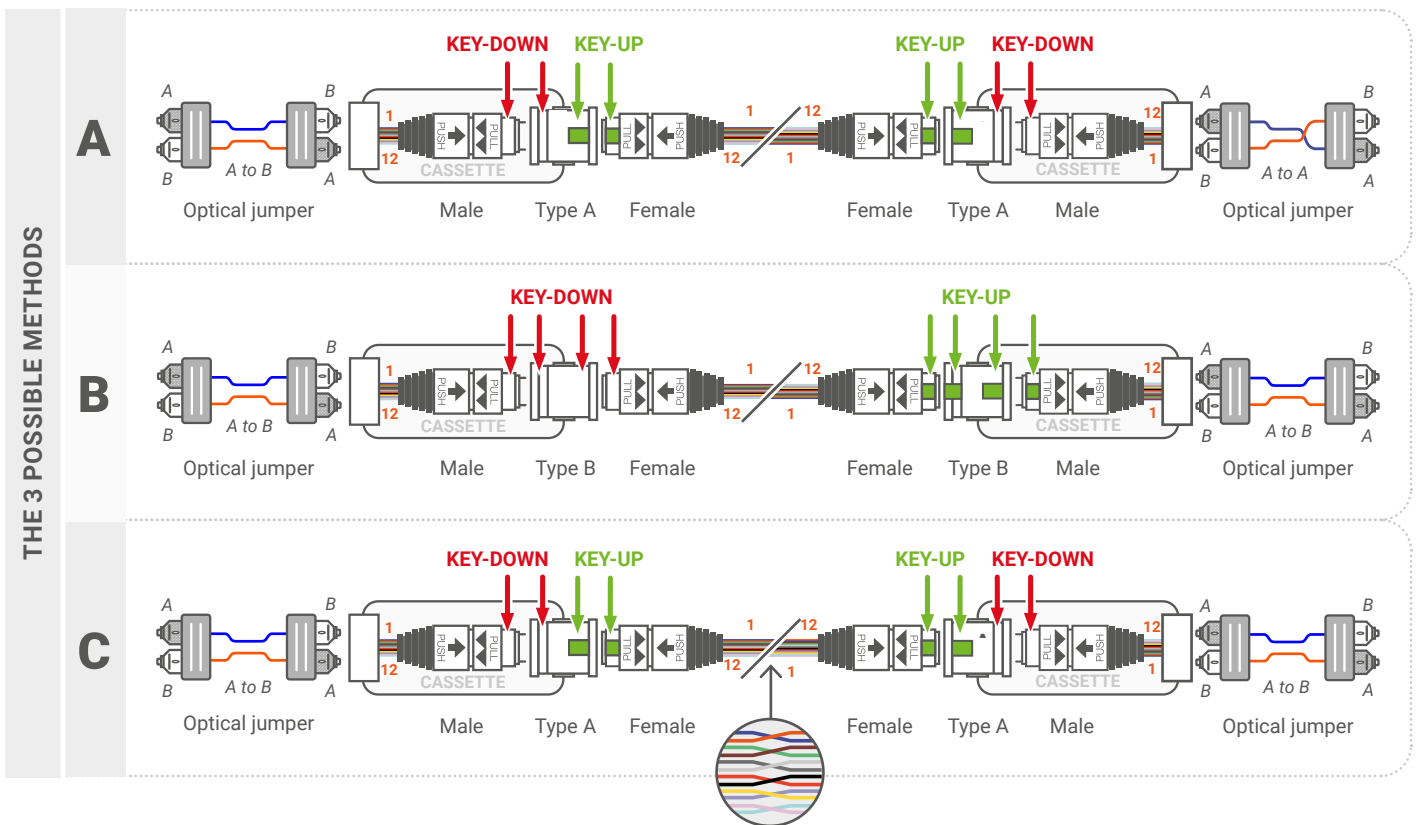
### Type B adapters

Type B adapters with aligned key (**UP** / **UP**)



## POLARITY

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



**EOR (End Of Row):** The active equipment (switch and server) is located at the end of each row.

**TOR (Top Of Rack):** One active device (switch) is located in each rack.

**MTP (Multi fiber Termination Puch-on):** A trademarked optical connector (US Conec). The MTP is a connector that complies with the MPO standard.

## THE STANDARDS

- NF EN 50600-1 general concepts - June 2019
- NF EN 50600-2-1 building construction - March 2016
- NF EN 50600-2-2 power supply and distribution - June 2019
- NF EN 50600-2-3 environmental control - June 2019
- NF EN 50600-2-4 dedicated cabling infrastructure for telecommunications - May 2018
- NF EN 50600-2-5 security systems - November 2016
- NF EN 50600-3-1 management and operating information - September 2016
- NF EN 50600-4-1 overview and requirements for key performance indicators - March 2017
- NF EN 50600-4-2/A1 energy use efficiency - March 2019
- NF EN 50600-4-3/A1 renewable energy coefficient - March 2019

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