

# Your Data Centre

in an increasingly  
connected world



Lighttera



# Lightera Data Centre Solutions

From design to support.  
From infrastructure to cabling.  
From installation to management.

Watch the solution video:



**HYPERSCALE  
DC**

**ENTERPRISE  
DC**

**COLOCATION  
DC**

**EDGE DC**

**Network infrastructure solutions  
for multiple applications.**

**Enterprise**

**Edge**

**Hyperscale**

**IoT AI  
eCommerce  
Smart Home  
Smart Office**

**Monitoring  
Electronic Security  
Process  
Automation**

**Robustness  
Reliability  
Colocation Services**



Lightera solutions are already operating in corporate environments.

# Why Lightera?

**BANKS**  
**AIRPORTS**  
**GOVERNMENT BUILDINGS**  
**HOSTING/COLOCATION**  
**INDUSTRIES**  
**TELECOM OPERATORS**

In recent years, data traffic has grown at an unprecedented pace, placing increasing demands not only on transmission networks but also on storage capacity, responsiveness and Data Centre management. This new reality requires highly skilled professionals, driving the creation of new careers, knowledge areas and infrastructures designed to protect and maintain data.

Data Centres are complex environments that depend on solutions from multiple vendors and integrated services, requiring strong management capabilities and clear objectives. The only way to minimise risks, from planning through operation, maintenance and upgrades, is to align every decision with the Data Centre's purpose.

This guide summarises best practices across the core pillars of Data Centre design:



High availability  
Minimised downtime risks



High density and operational efficiency  
Reduced energy costs



Performance  
High-speed data transmission



Management BIM architecture with management software



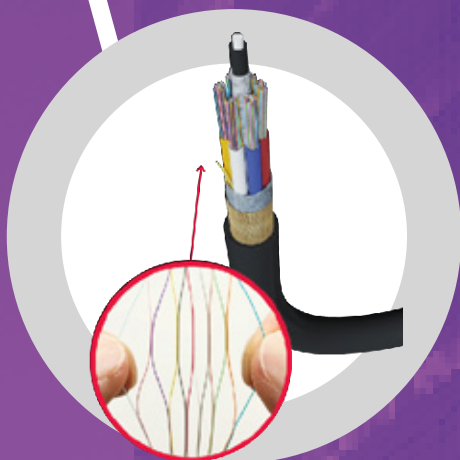
Future-ready Modular solutions that support scalable growth



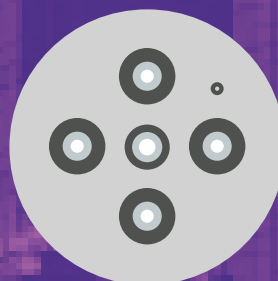
Support and services  
Project tracking and 25-year extended warranty



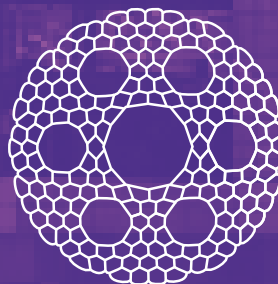
# Lightera



**Rollable Ribbon**  
Up to 6,912 fibres  
in a single cable



**Multi-Core Fibre**  
Four cores per fibre for  
increased transmission capacity



**Hollow Core Fibre**  
Lower latency



Creating brighter  
connections

# Premium Solutions

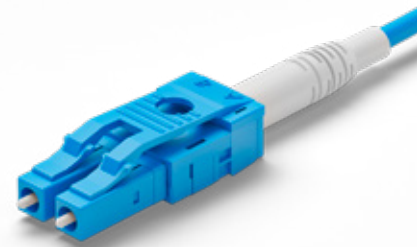
## ULL - Ultra Low Loss

- ✓ Ultra-low insertion loss.
- ✓ Infrastructure designed for standardised speeds (e.g. 40G, 100G, 200G and 400G) and emerging technologies (800G / 1.6 Tbps).
- ✓ Universal MPO connector – flexible gender and polarity



<b>Multimode Solution:</b>	STD IL < 0,75 dB ULL IL < 0,35 dB	STD IL < 0,50 dB ULL IL < 0,25 dB	STD IL < 0,30 dB ULL IL < 0,10 dB
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## Reversible Duplex LC Uniboot Optical Patch Cord – Premium



- ✓ Single 1.6 mm boot, reducing rack congestion and simplifying handling.
- ✓ Polarity inversion without fibre exposure
- ✓ Premium performance (SM IL 0.15 dB and MM IL 0.10 dB).
- ✓ Available with SM BLI, OM4 and OM5 fibres.

Transmission	40 GbE Tx Rx	100 GbE Tx Rx	400 GbE Tx Rx
10G Parallel lanes			N/A
25G Parallel lanes	N/A		
10G / 25G / 50G WDM and/or parallel lanes			

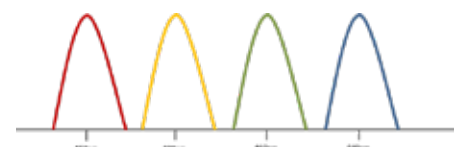
Note: Multiple lines represent parallel lanes, and lines with multiple colors represent WDM.

## OM5 Solution

- ✓ SWDM - Shortwave Wavelength Division Multiplexing.



- OM3** 850nm
- OM4** 1300nm
- OM5** 850nm, 880nm, 910nm, 940nm, 1300nm





# Next-generation projects

## Consultancy

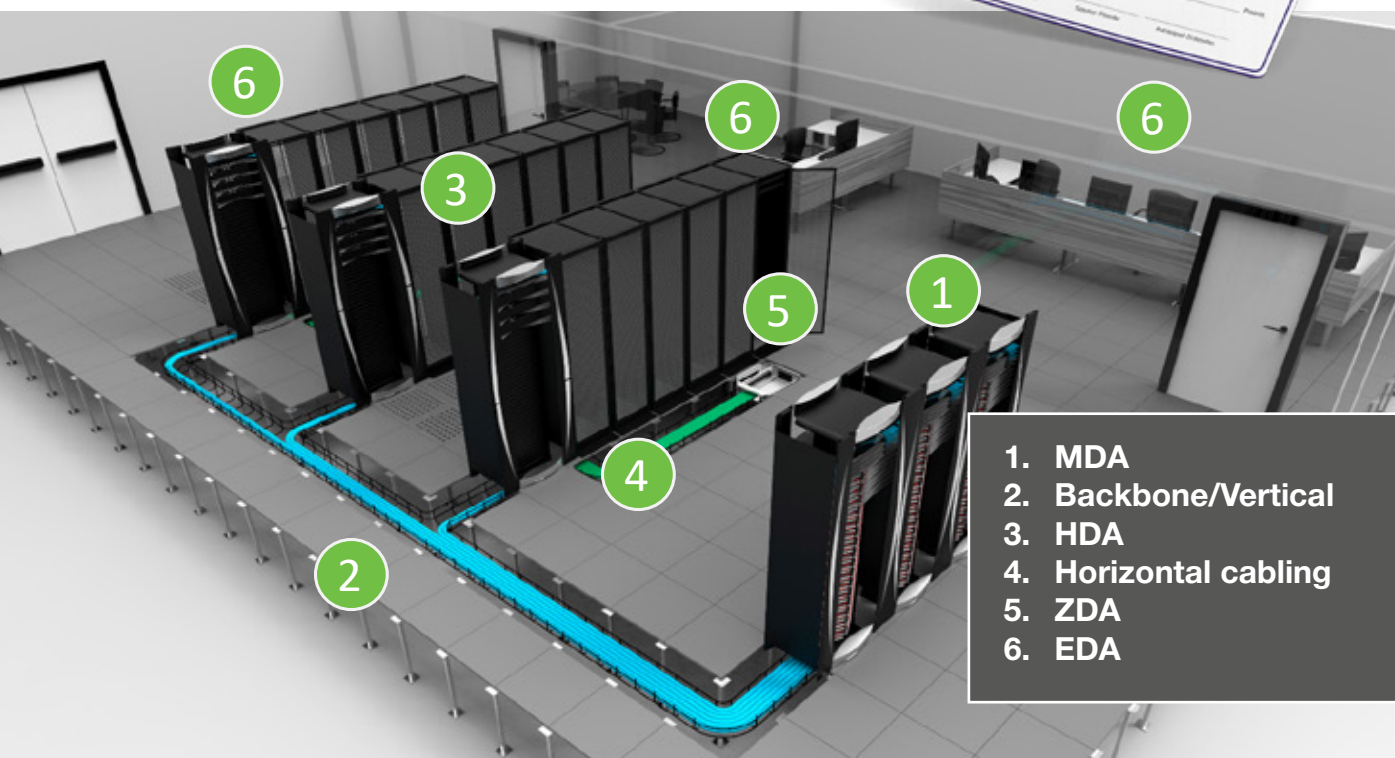
- ✓ Data Centre X-ray
- ✓ Design concept using flexible, modular and scalable solutions, based on international standards
- ✓ Project + Product + Service
- ✓ Customised architecture

## Security

- ✓ Technical training
- ✓ Best practice training
- ✓ Installation inspections
- ✓ 25-year extended warranty
- ✓ Optimised logistics

## Technology

- ✓ Single-mode and OM5 ULL optical fibres
- ✓ Optimised density
- ✓ A.I.M. physical layer management
- ✓ A flexible and scalable physical infrastructure system



1. MDA
2. Backbone/Vertical
3. HDA
4. Horizontal cabling
5. ZDA
6. EDA



**Discover Lightera solutions designed to take your Data Centre to the next level.**

**Scan the QR codes at the end of each page to access product line references and simplify your project development.**



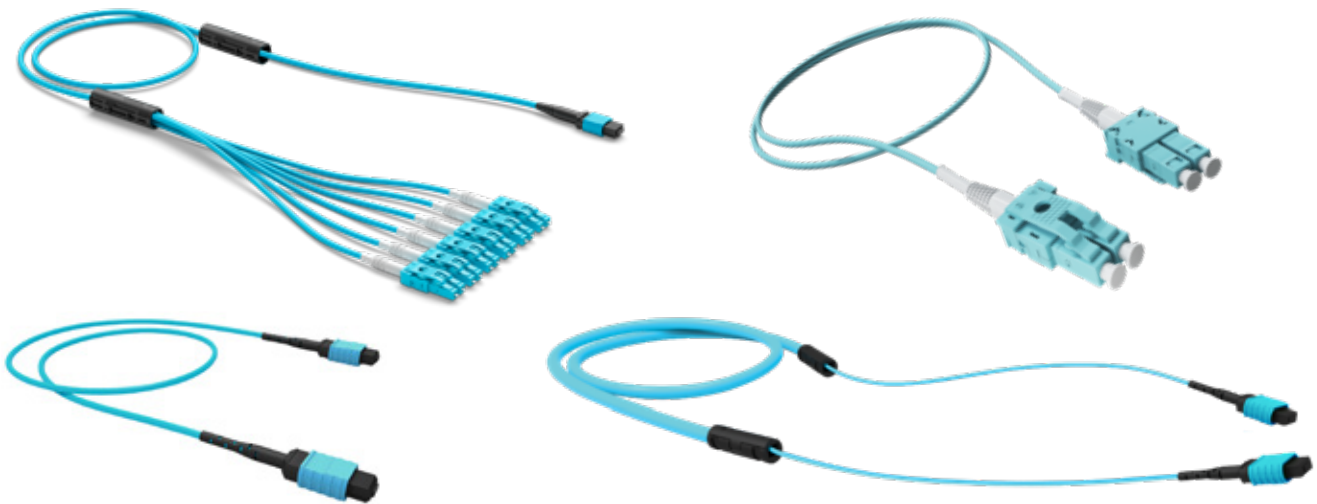


# High-Density and High-Performance Solutions

Plug-and-play connectivity for your equipment. Our next-generation optical solution enables maximum-speed data transmission.

- ✓ High density – up to 144 fibres per RU
- ✓ Flexible – OM4, OM5 and SM cassettes
- ✓ Modular – independent slots for scalable growth
- ✓ Premium solutions (ULL)

## Service cables and Uniboot patch cords



## EX96 Optical Distribution Frame

- ✓ Ideal for splice distribution frames (SDFs) and field optical terminations.
- ✓ Tool-free installation enables fast and simple deployment.
- ✓ Compact ODF design provides internal space for adapters, splices and fibre management, ensuring robust protection and full network safety.



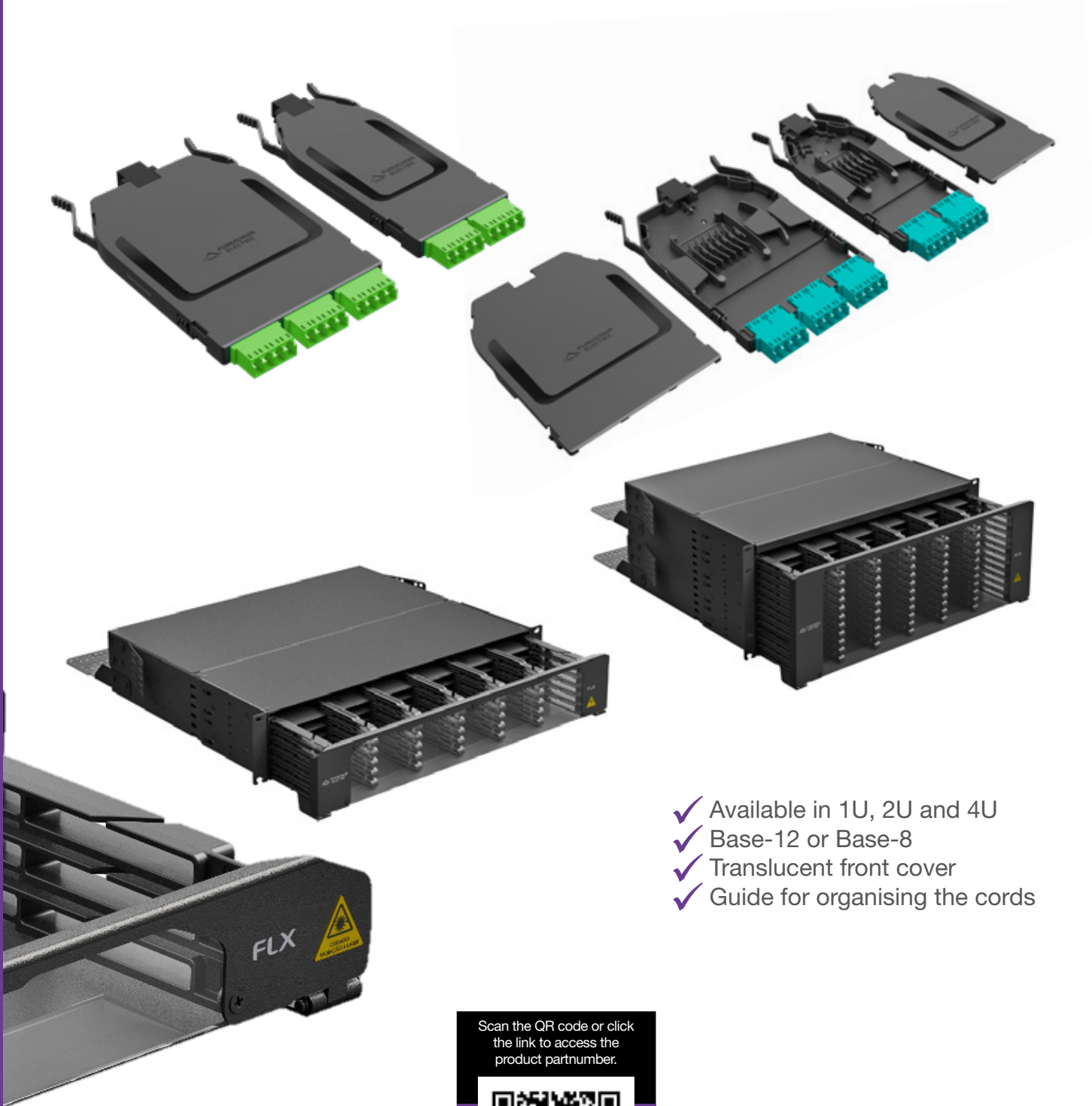
Scan the QR code or click the link to access the product partnumber.



# High-density and high-performance solutions

## FLX ODFs

- ✓ 144 fibres (1RU), 288 fibres (2RUs) and 576 fibres (4RUs)
- ✓ ODFs and cassettes supporting multiple standards.
- ✓ Modular and scalable - 12 (Base-12) or 18 (Base-8) modules per RU
- ✓ Pre-terminated solutions – investment protection
- ✓ MPO and/or LC cassettes and splice models



- ✓ Available in 1U, 2U and 4U
- ✓ Base-12 or Base-8
- ✓ Translucent front cover
- ✓ Guide for organising the cords

Scan the QR code or click the link to access the product partnumber.

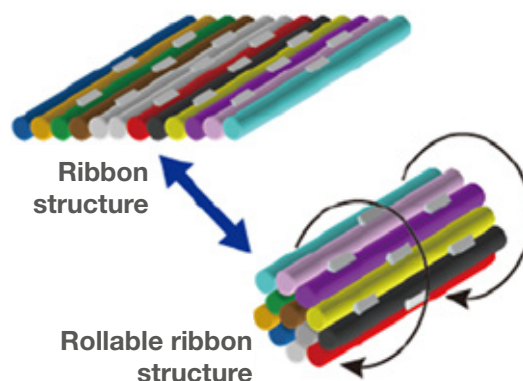
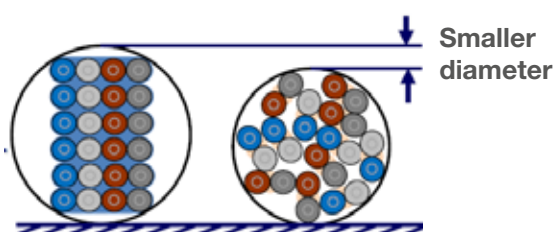
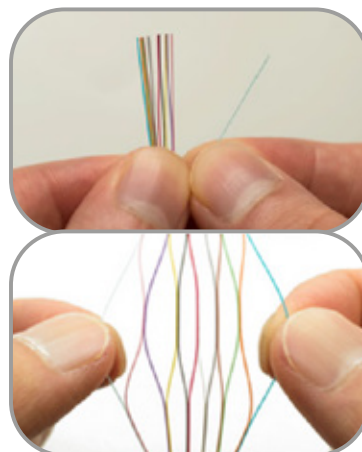




# Interconnection Solution

## Rollable Ribbon (RR)

- ✓ Designed for mass fusion splicing and easy single-fibre access
- ✓ Fully dry design for faster preparation
- ✓ Compatible with flat ribbon
- ✓ Enables ribbon to be rolled into a cylinder to increase packing density
- ✓ Loose tube design: Increased strength and Easier access
- ✓ Reduced diameter and weight compared to flat ribbon: Smaller reel size, simplified storage and installation



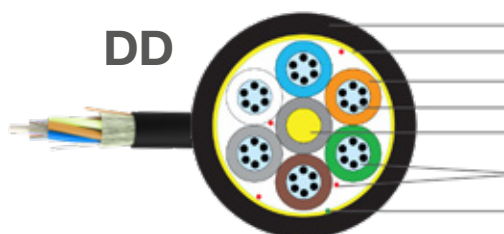
## Traditional Loose Tube vs Rollable Ribbon

#F.O.s	144	288
Diam (mm)	16,3	18,3
Mass (Kg/Km)	170	225

#F.O.s	432	864	1728	3456
Diam (mm)	16,8	21	25	35
Mass (Kg/Km)	210	315	460	828

## 3456 vs 288 fibres

- ✓ Up to 12x more fibres with only twice the diameter.
- ✓ Approximately 3x less mass per km for the same fibre count.



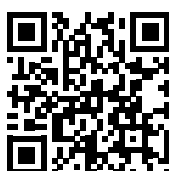
CFOA-X-DD-S 36 FIBRES

Outer sheath  
Strength member  
Buffer tube  
Optical fibres  
Central dielectric strength member  
Water-blocking  
Ripcord

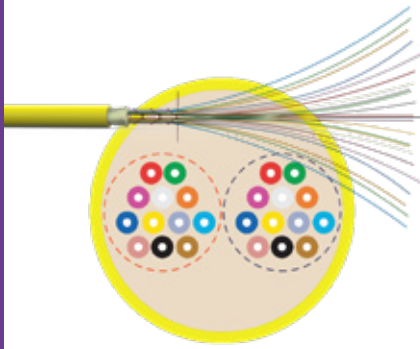


CFOA-X-DD-S 288 FIBRES

Consult Lightera  
for custom design:



# Indoor and Indoor/Outdoor Cables



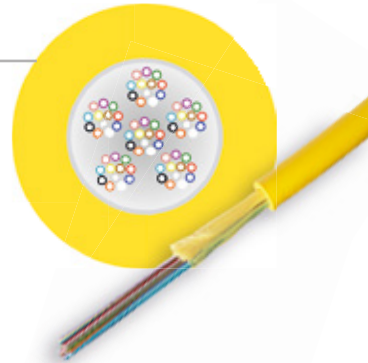
## M-PACK® INDOOR/OUTDOOR CABLE

- ✓ Compact and lightweight cable, suitable for horizontal backbone applications.
- ✓ CPR rating: Class B2ca (24F) and Cca (12F).
- ✓ Available fibre counts: up to 12 fibres (3.0mm) and 16/24 fibres (3.8mm)

## R-PACK ROLLABLE RIBBON

Compact, lightweight cable for horizontal backbone applications

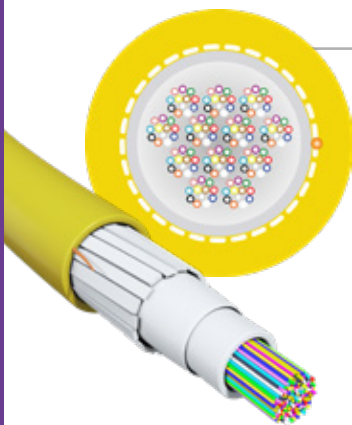
- ✓ Indoor backbone distribution cable.
- ✓ Available fibre counts: 12 –144 fibres.
- ✓ CPR rating: Class Cca.
- ✓ Indoor/Outdoor rating for short-distance installations, including building-to-building links or from the building entry point to the first handhole.



## ACCURISER ROLLABLE RIBBON

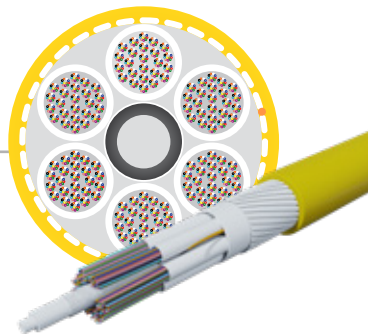
Versatile indoor/outdoor cable with high fibre counts, crush-resistant and highly flexible.

- ✓ Versatile indoor/outdoor cable.
- ✓ Can be installed from the handhole directly to the distribution frame, eliminating splices between outdoor and indoor cables.
- ✓ Crush-resistant and highly flexible.
- ✓ Fibre count: 144 – 864 fibres.
- ✓ CPR rating: Class Cca.

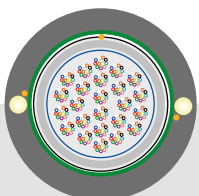


## ACCUTUBE ROLLABLE RIBBON

Indoor/Outdoor cable with 1,728 to 3,456 fibres and CPR rating (Class Cca)



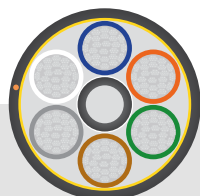
## Outdoor Cables



### AccuRoll® RR

Field-proven design offering an optimal balance of cost, density and handling performance.

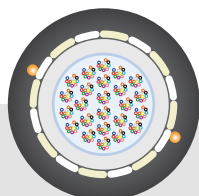
IDEAL FOR:  
BLOWING



### AccuTube® + RR

Robust cable designed for congested areas and frequent mid-span access applications.

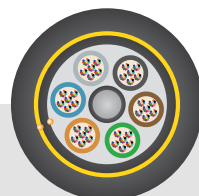
IDEAL FOR:  
FREQUENT ACCESS



### DuctSaver® RR

Reduced-diameter cable with enhanced flexibility for applications requiring tight bending or coiling.

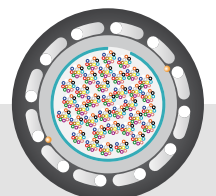
IDEAL FOR:  
TIGHT BENDS/COILING



### PowerGuide® AccuTube®+ ADSS RR

RR Self-supporting loose-tube aerial cable with double jacket construction.

IDEAL FOR:  
AERIAL APPLICATIONS



### RollIR®

Reduced-diameter cable with enhanced flexibility for microduct applications

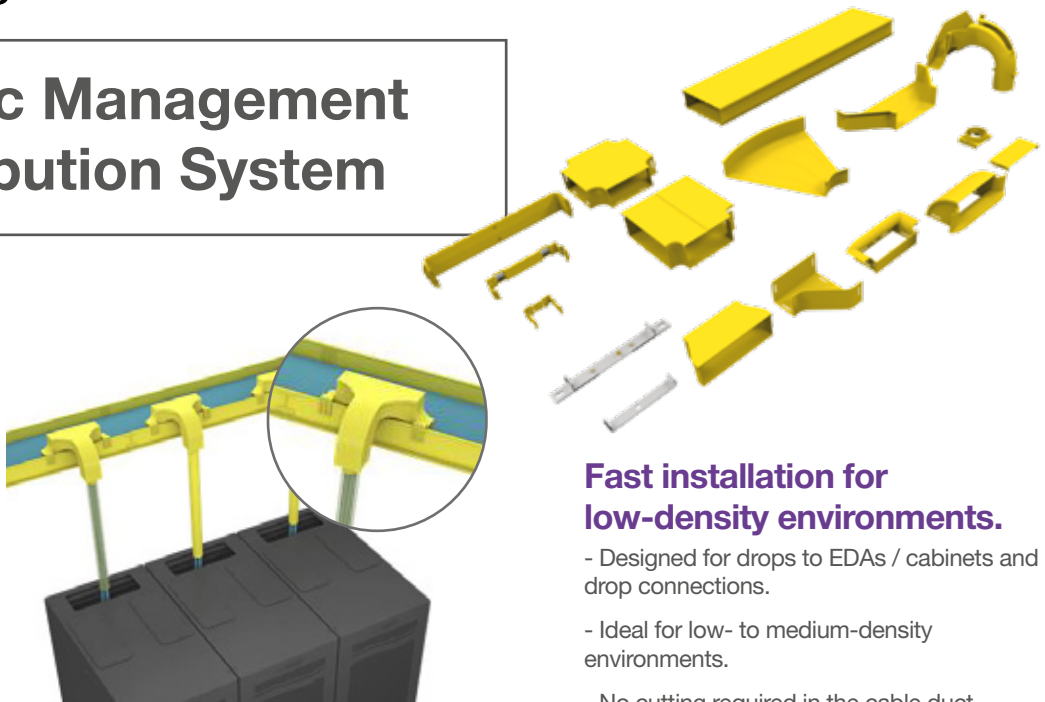
IDEAL FOR:  
MICRODUCTS



# High-performance infrastructure

## Cable Ducts

### Fibre Optic Management and Distribution System



#### Fast installation for low-density environments.

- Designed for drops to EDAs / cabinets and drop connections.
- Ideal for low- to medium-density environments.
- No cutting required in the cable duct.



#### Compliant with leading international technical standards.

The entire system has been designed in accordance with ANSI/TIA-569-E – Telecommunications Pathways and Spaces and NBR 16415 – Pathways and Spaces for Structured Cabling. Ensures proper fibre optic cable distribution. Prevents micro-bending through adequate protection.



#### Provide enhanced safety for your projects.

ITMAX cable ducts comply with UL2024 – Standard for Cable Routing Assemblies and Communications Raceways. They also meet the requirements of the European RoHS Directive.



#### Protect the most valuable asset of your organisation: people's lives.

The plastic components are manufactured using Noryl® – a high-performance engineering plastic with high mechanical strength, flame-retardant properties, halogen-free composition, and UL94 V-0 certification. In the event of a fire, the material does not release corrosive acids or toxic gases during combustion, helping to protect people and reduce health risks.



#### Allow for easy expansion after installation.

Adaptable to different scenarios, the wide range of components enables the diversion around physical obstacles at installation sites, allowing optical patch cords to be routed along multiple ducts within the facility.

Scan the QR code or click the link to access the product partnumber.

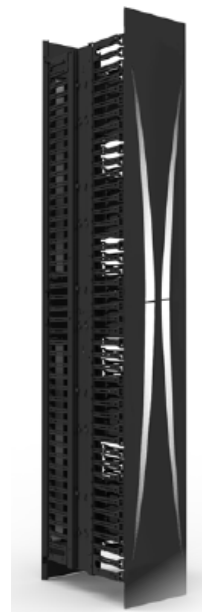
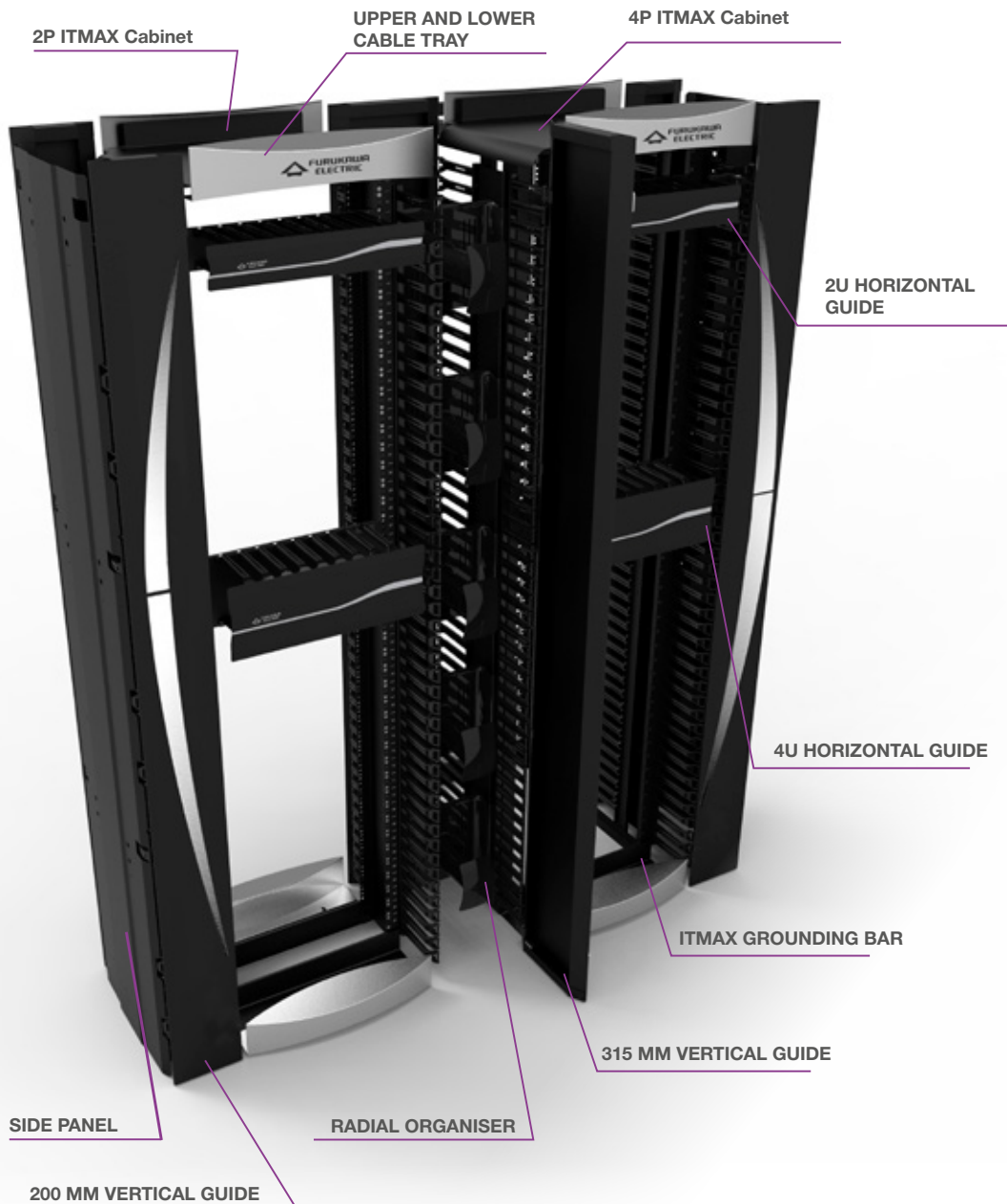
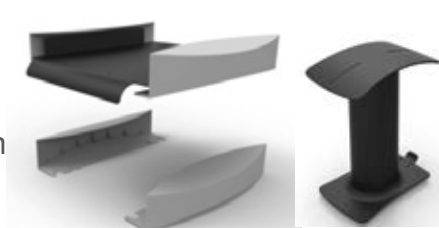




# High-performance infrastructure

## ITMAX Cabinet

- ✓ Open rack
- ✓ 45 RUs
- ✓ Vertical guides: 200 mm and 315 mm
- ✓ Top and bottom guides
- ✓ Radial organisers



Scan the QR code or click the link to access the product partnumber.





# Your Data Centre

- ✓ **Local engineering support before and after the project.**
  - ✓ **25-year extended warranty.**
- ✓ **Highly experienced and certified integrators.**
  - ✓ **Guaranteed product availability.**
  - ✓ **On-site supervision.**



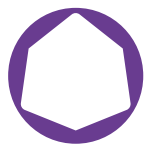
**CONSULTANCY**



**SECURITY**



**TECHNOLOGY**



Lightera

**FURUKAWA**  
ELECTRIC

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