

ORION

Confined Data Center

barpa

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Confined Data Center



Who we are

barpa is an international brand owned by Argon Group, a global business group headquartered in Portugal.

Founded in 2016, barpa specializes in the design, manufacturing and commercialization of Structured Cabling Solutions, offering a complete portfolio that includes Copper Systems, Optical Fiber Systems, Racks and Cabinets. With its headquarters and distribution center in Portugal and an office in Madrid, barpa operates as a trusted supplier in more than 20 countries.



barpa

The future
of networks
needs
structure.

It needs
barpa.

Driven by proximity, quality and innovation, we design resilient and secure infrastructures that ensure uninterrupted connectivity across multiple applications.

We aspire to become one of the most influential and forward-thinking companies in our industry worldwide.



Our purpose is clear

Unite **Humanity** through **Telecommunications** across **Generations**.

What Sets Us Apart

True differentiation comes from consistency, passion and purpose.

1 Trust That Inspires Confidence

Recognized for our quality, reliability and commitment, barpa has earned a strong reputation in the structured cabling industry.

2 Technical Expertise and Customization Capability

We have a highly specialized team and flexible processes that enable us to develop and produce tailored solutions to each client's specific needs.

3 Proximity That Builds Partnerships

We believe success is built together with proximity, collaboration and personalized support.

4 Driven by People

We foster a culture of collaboration, improvement and commitment, ensuring that every step we take brings us closer to our shared purpose.

5 Innovation at the Core

Innovation is part of our DNA. Our R&D department works continuously to create next-generation technological solutions, ensuring that every barpa product is aligned with the evolution of the industry and the future of connectivity.

6 Committed to Sustainability

We are committed to sustainable growth and responsible innovation. Through our ESG Committee and internal Turn Green initiatives, we promote efficient, sustainable practices, minimizing waste and optimizing resources.

7 Certified Quality

Our ISO 9001:2015 and ISO 14001:2015 certifications guarantee that every process meets the highest standards of quality, safety and environmental performance.

barpa is a proud member of **BICSI**, one of the most prestigious associations in the ICT industry worldwide.

This affiliation connects us to a global network of expertise and innovation, keeping us aligned with the latest technologies and best practices. It strengthens our ability to deliver reliable, future-ready solutions.

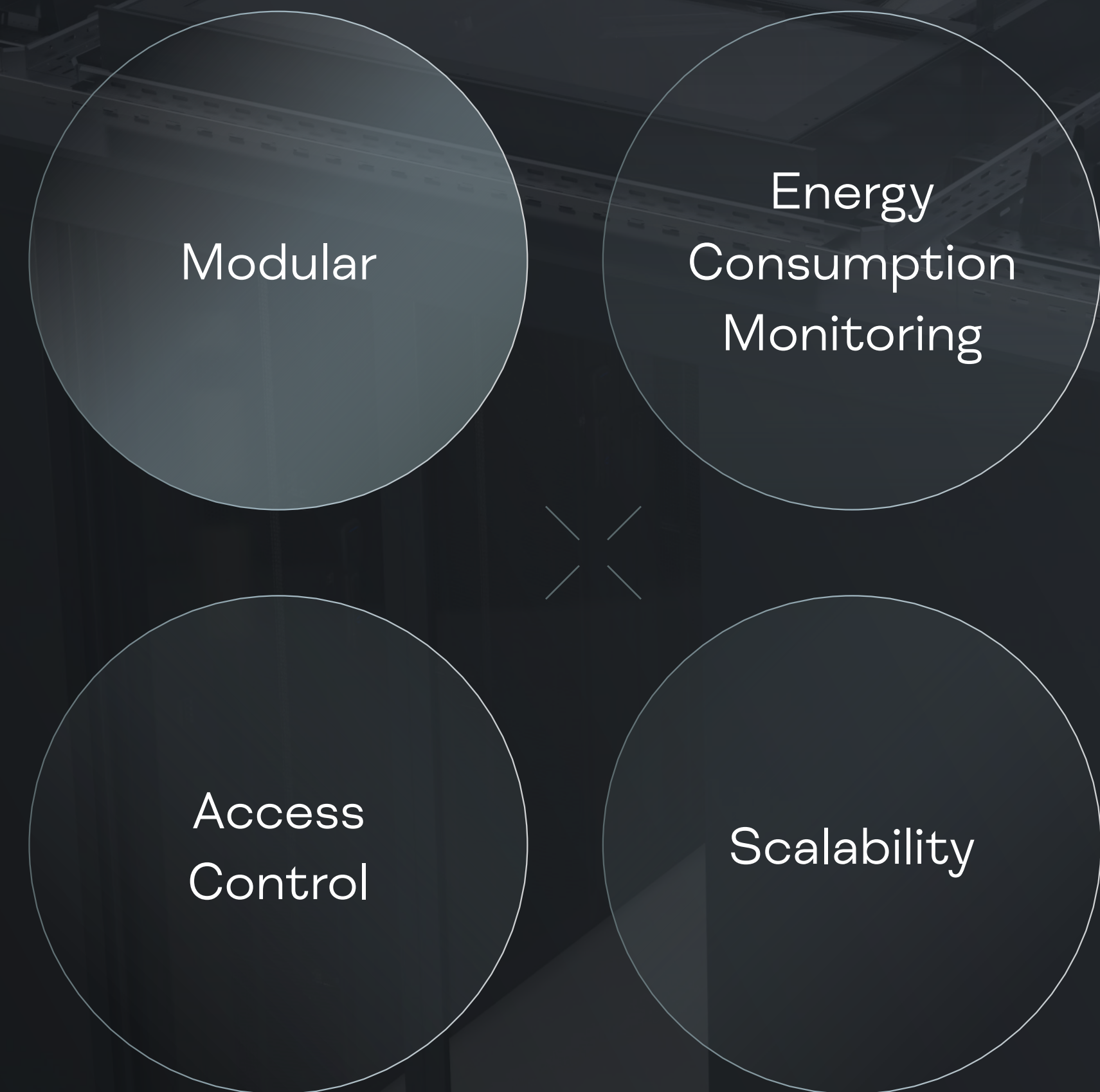


Building Data Centers That Evolve With You

There is no out-of-the-box design for Data Centers. Each Data Center must be designed to and cover the particular needs of the end user. These needs can vary largely depending on **parameters such as the need for reliability, availability, maintainability and scalability.**

They can go from a **Hyperscale Data Center** to a **Single Cabinet** communications room. barpa has solutions for each of them.

Confined Data Centers are the ideal solution when you need to give housing service for high demanding customers. As they are a **modular and scalable solution** they can grow at the same space as your needs do.



Choosing the Right Partner is Key for Success

Designing a Confined Data Center is not an easy task. It starts with defining what you need today and anticipating your future requirements.

That's a tough one.

And once you have that definition, the next challenge is turning it into a design that can actually be implemented.

This is why you need a partner who can support you throughout the entire process: definition, design, installation supervision, commissioning, and post-sales support.

For sure barpa is this partner.



Solutions that adapt to your reality

barpa has rapidly earned a solid reputation for delivering reliable, high-quality and innovative structured cabling solutions.

This is the result of combining highly motivated young talent with professionals holding 30+ years of field expertise.

Our Engineering Department supports you from the first idea to the final delivery of your Confined Data Center.

Step 1

We begin by identifying your current and future requirements, initiating a process that brings clarity to every question throughout the project.

Step 2

Our team develops the Data Center design based on all insights gathered, ensuring full alignment with your project specifications.

Step 3

Certified barpa Data Center Integrators carry out the installation of all passive components and Monitoring / Monitoring & Control systems, under our close supervision.

Step 4

The final stage is the commissioning phase. We verify that the Confined Data Center has been installed according to the design, validate its performance, and document the entire process. After commissioning, our post-sales support continues as part of our commitment to ensuring a reliable and stable operation over time.

Each project is unique. Our Engineering Department and R&D work together to design and produce the components required to meet the specific technical needs of your projects.

Building a data center is never a one-size-fits-all process.

Every project has its own technical requirements, each demanding a tailored approach.

That's why barpa presents **ORION**.

A complete and integrated solution designed to simplify the definition, the design and implementation of your Confined Data Center, without forcing you into a standard that doesn't fit.



Designed for
scalability,
reliability,
and control

The **ORION** concept brings together
three complementary segments that
operate as one, integrated ecosystem
for the next generation of Data
Centers.

ORION Structure

Mechanical infrastructure &
containment solutions for
Confined Data Centers.

ORION Intelligence

Monitoring, power, and access
systems for operational
control.

ORION Connectivity

High-density fiber and copper
systems ensuring network
performance

ORION

Structure

Mechanical Infrastructure & Containment Solutions.

At the core of the **ORION** solution lies its structural foundation, engineered to support the most demanding Confined Data Center environments.



Confined Data Centers are modular by design.

Adaptable, configurable and scalable to
your project’s needs.

From compact **single-row** layouts for edge or limited spaces, to larger **double-row** architectures for high-density environments, **ORION** adapts naturally to the space and requirements of each installation.

Whatever the scale, its modular design ensures consistent performance, efficient airflow, and rapid installation.

Scalable architecture	Enables capacity expansion without downtime or structural modification.
Accelerated deployment	Prefabricated and factory-tested modules ensure fast installation and commissioning.
Optimized airflow & cooling	Precision containment improves thermal performance and reduces energy loss.
Reduced TCO (Total Cost of Ownership)	Lower energy usage, simplified maintenance, and efficient space utilization.
Sustainable engineering	Reusable components and high-efficiency operation minimize environmental impact.

Single-Row

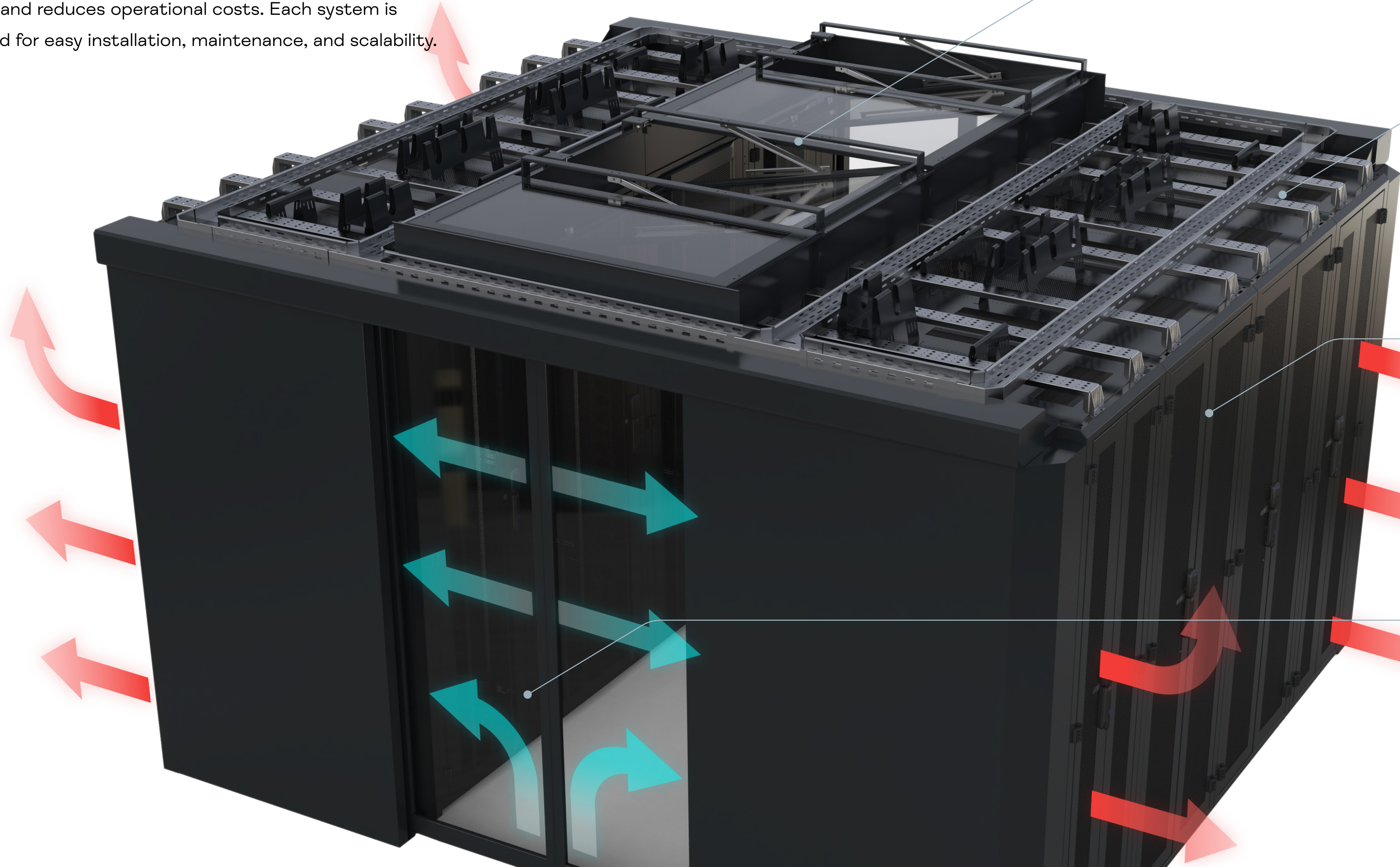


Double-Row



ORION **STRUCTURE**

The containment system is a key component of **ORION** Structure, ensuring precise airflow management and stable temperature control. By separating the cold aisle from the hot aisle, it increases cooling efficiency, enhances equipment reliability, and reduces operational costs. Each system is engineered for easy installation, maintenance, and scalability.



Roof Panels

Maintain airflow containment and thermal performance

Available in different materials

Optional integration with sensors for automatic opening

Cable Trays

Modular design for structured cable routing

Easy access for maintenance and reconfiguration

Structure & Materials

All-metal framework with high static load capacity

Powder-coated finish for corrosion resistance

Ensures containment performance along full rack height

Corridor Doors

Manual or automatic versions

Single or double-leaf sliding configurations

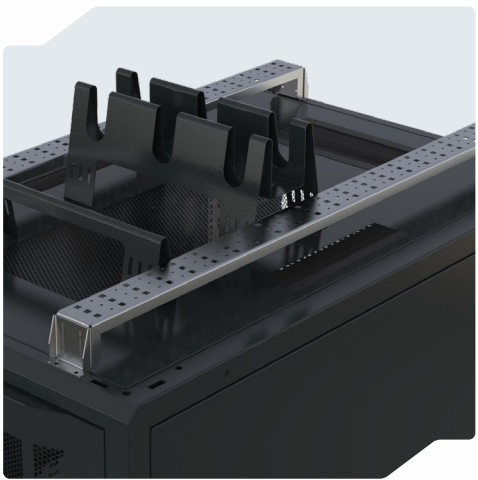
Designed for airflow containment and access-control integration



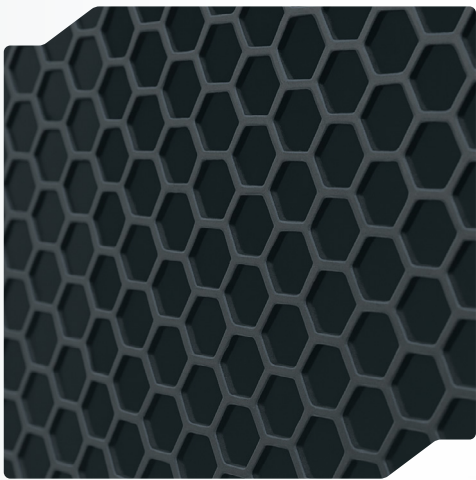
Racks Specifications



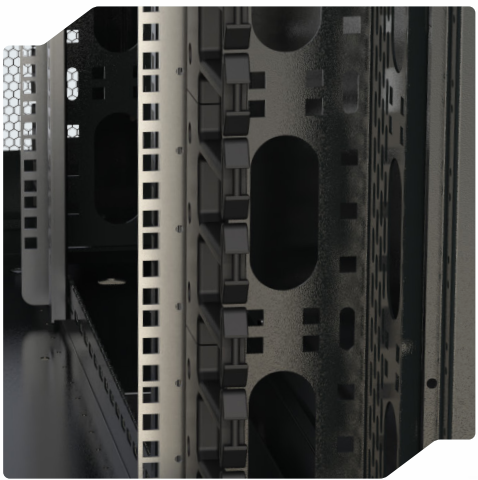
Heights 42U / 47U
Widths 600 mm and 800 mm
Depth 1200 mm
Static load Up to 2000 kg



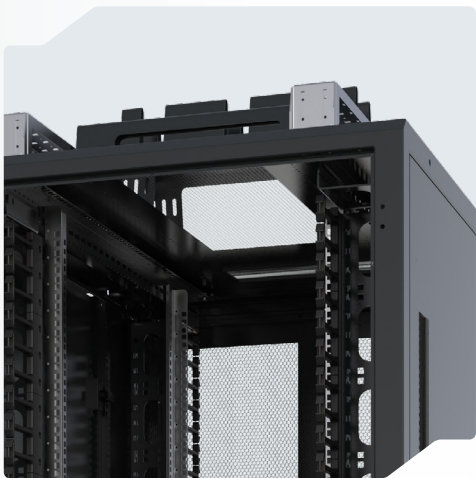
Brush Cable Entries
Multiple brush entries for clean pass-through and reduced air leakage



Front & rear perforated doors
80% open area for optimized airflow and efficient hot/cold aisle containment



Vertical organizers
With cable-management fingers for structured, high-density patch-cord routing



Perforated top covers
Improve upward airflow and prevent heat accumulation at the top of the cabinet.



Ensure proper electrical bonding and operational safety.



Allow lateral cable transitions while preserving airflow containment.



Optimized for rear vertical PDUs
Provides the space required for vertical PDUs in equipment-heavy racks.

The background is a dark navy blue with several thin, light grey diagonal lines crossing the frame from the bottom-left to the top-right. In the center, the word "ORION" is written in a large, white, sans-serif font. Below it, the word "Intelligence" is written in a smaller, white, sans-serif font.

ORION

Intelligence

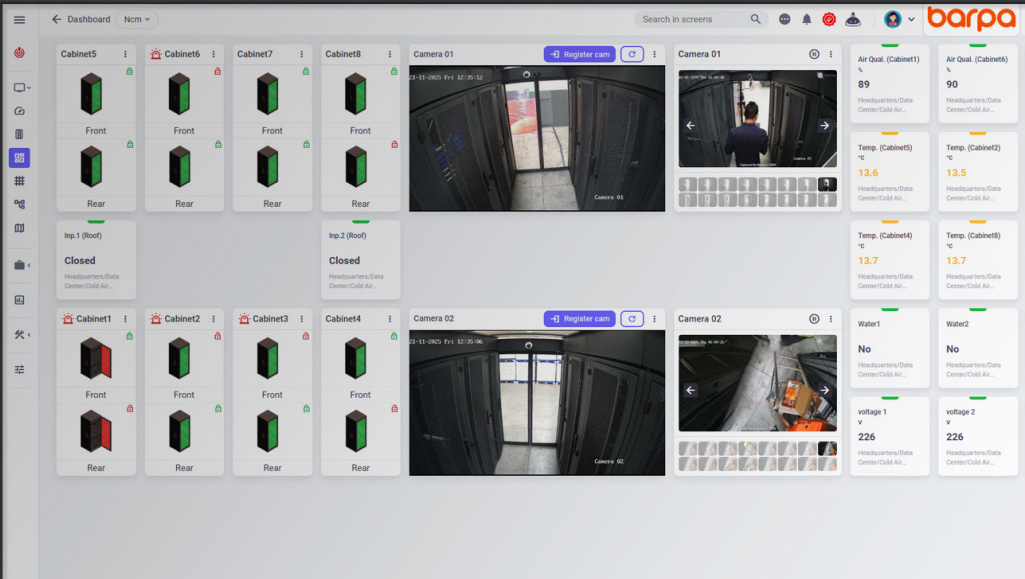
ORION Intelligence

Monitoring, power and access systems for operational control.

ORION Intelligence is the digital core of the **ORION Solution**, the layer that connects, controls, monitors and protects every critical element of the confined data center infrastructure.

Engineered to integrate access control, environmental sensors, intelligent power distribution, and centralized monitoring, it delivers total visibility and operational command over each rack, aisle and technical subsystem.

By transforming physical assets into connected, measurable, and automated systems, **ORION Intelligence** enables smarter, more sustainable and more predictable operations.



Access Control Systems

Access control is the first layer of operational safety. From corridor entry to individual racks, every zone can be managed and monitored and logged in real time.



- Multi-factor authentication with fingerprint, access card, or PIN code.
- Integrated access management for corridors and critical zones.
- Event logging and real-time remote auditing for complete traceability.



- Electronic locks with card or keypad authentication.
- Manual emergency release and LED status indicators for quick diagnostics.
- Fully compatible with barpa DCIM.
- Tradicional method with physical (non-eletrical) keys.



- Manages multiple racks and access zones simultaneously.
- Remote authorization and real-time logging of access attempts.
- Modular, scalable architecture designed for future expansion and system growth.



Environmental Monitoring

The environmental monitoring system operates as a distributed sensor network, delivering real-time data and early anomaly detection across the confined data center environment.

Temperature & Humidity Sensors	Continuous monitoring of thermal and environmental conditions.
	Configurable thresholds with automated alerts for deviations.
Smoke & Water Detection	Early detection of leaks and fire-related risks.
	Triggers local alarms and integrates with alerting systems and roof panels for rapid response.
Door Sensors	Quickly detects rack-door opening/closing.
	Detects physical impacts and unauthorized access attempts.
Data Integration	All environmental data is consolidated within the barpa DCIM.
	Custom dashboards and alert rules via email, SMS, call, or SNMP.
	Provides historical records and trend analysis for predictive maintenance.



Driving sustainability through intelligent monitoring

Energy efficiency is one of today's greatest challenges in data center design and every watt saved reduces both operational costs and environmental impact.

The **PUE (Power Usage Effectiveness)** indicator can only be accurately calculated when the entire infrastructure, including power, IT load, and cooling systems are continuously monitored and correlated.

barpa DCIM makes this possible by collecting and analyzing data from all these systems, allowing a complete and accurate view of the facility's energy performance.



Smart Power Distribution

Smart power layer delivers advanced electrical monitoring, control and efficiency across the data center infrastructure.

Power Monitoring	Real-time measurement of voltage, current, and load.
	Per-rack or per-outlet consumption metrics for precise energy management.
Control & Redundancy	Remote switching of individual outlets.
	Support for redundant power feeds and automatic load balancing for operational continuity.
Alerts & Efficiency	Overload, power failure and abnormal consumption alerts with instant notifications.
	Data collected via SNMP into the monitoring interface, enabling performance analysis and energy optimization.

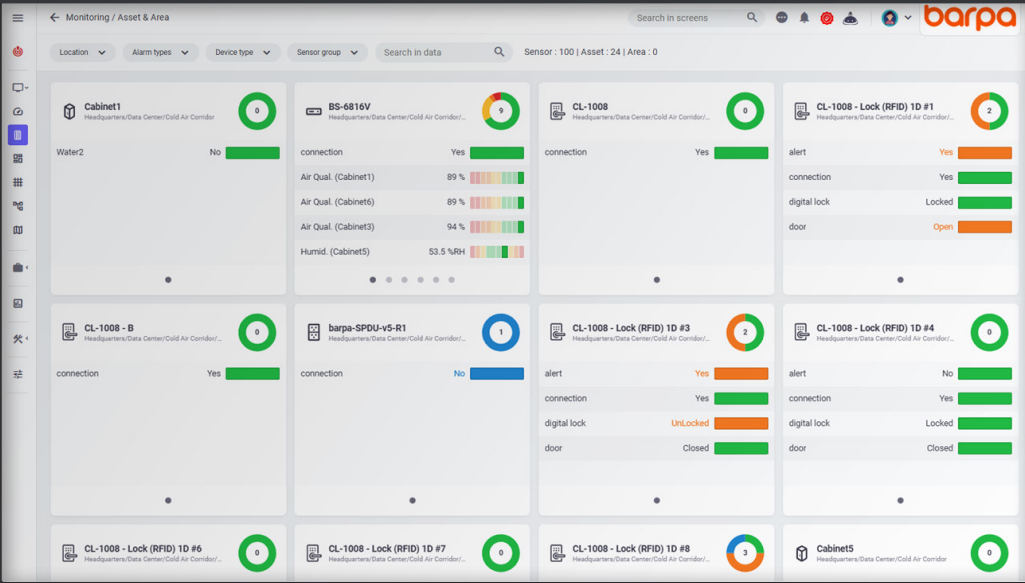


Centralized Monitoring & Control

Our **DCIM** is the command center of the entire infrastructure. It consolidates power, data, environmental sensors, and access control into a single unified interface, delivering total visibility and real-time operational control.

With this platform, every rack, aisle and devices can be visually monitored, from power consumption to environmental conditions and access logs, enabling fast and precise responses to any event or anomaly.

Unified Web Interface	Secure browser-based and mobile access with customizable dashboards and an integrated view of all subsystems.
Real-Time Monitoring	Real-time alarms and status indicators.
	Configurable thresholds and escalation levels.
Alerts & Notifications	Instant alarms via email, calls, SMS, or integrations with external monitoring platforms by SNMP, with configurable severity levels.
Analytics & Reporting	Performance history, automated reports, and trend analysis to support preventive maintenance and capacity planning.
User Management & Audit	Role-Based Access Control (RBAC) with detailed activity logs and end-to-end encrypted communication for maximum security and compliance.



ORION

Connectivity

Everything that
connects your
equipment.

Connectivity is the layer that brings a data center to life.
It ensures communication between systems, maintains stability,
and supports the ever-growing need for speed and capacity.

With years of experience in structured cabling, barpa integrates
its fiber and copper solutions into **ORION Connectivity**.

Explore barpa's range of connectivity solutions designed to enhance data center
performance and reliability.



SAGITTA

Ultra High-Density Solution

Sagitta represents barpa’s expertise in ultra high-density fiber systems, developed to maximize space and performance in data center environments.

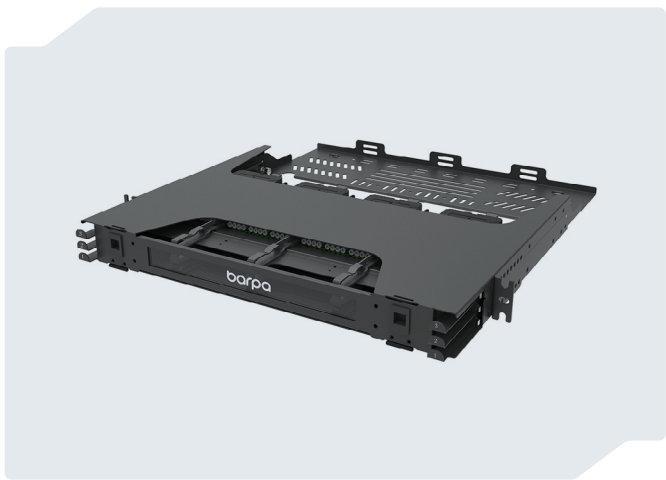
Based on **MPO/MTP® technology** for compact, fast deployment

Supports up to **144F, 288F and 576F** in **1U, 2U and 4U**

Designed for **clean installation**, easy scalability, and reliable operation

[Click here to know more about this solution](#)

barpa.eu/markets/data-center/sagitta



Ultra High Density Patch Panel



Ultra High Density Cassettes



Uniboosts

HYDRA

OM5 Fiber Solution

Built for modern data centers, Hydra provides the bandwidth and clarity required for demanding applications with OM5 fiber.

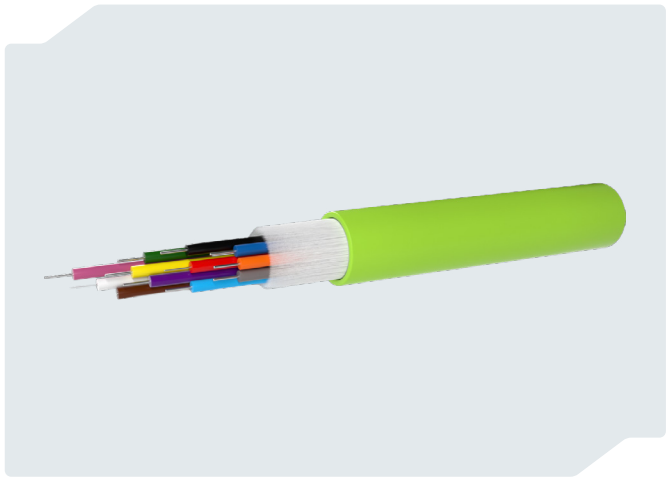
Up to 400 Gbps transmission capacity

Optimized for **SWDM** and **high-speed backbones**

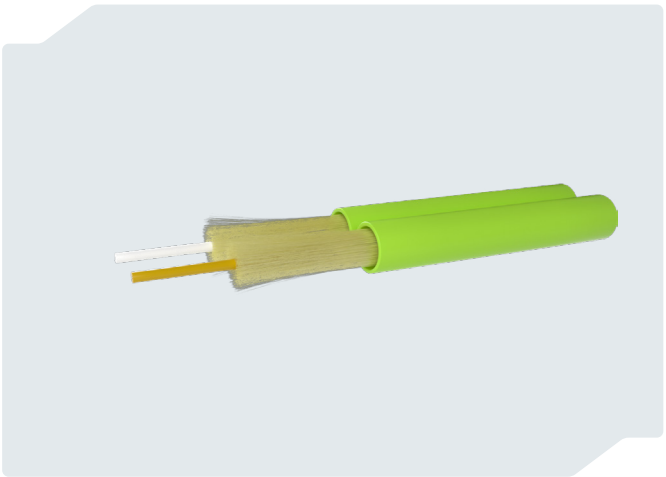
Complete range of cables, adapters, and pre-terminated assemblies

[Click here to know more about this solution](#)

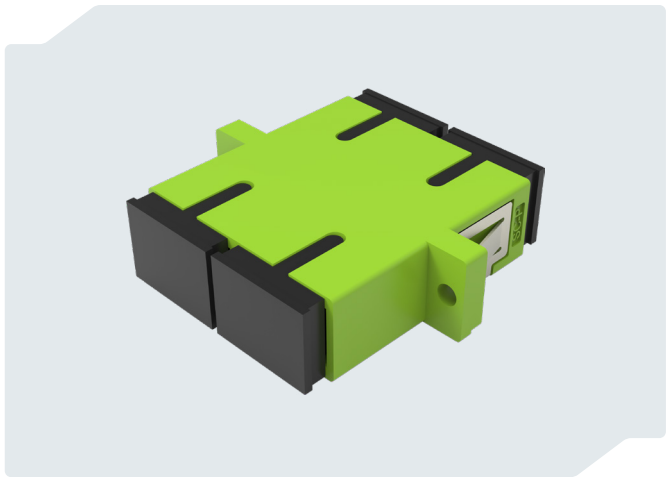
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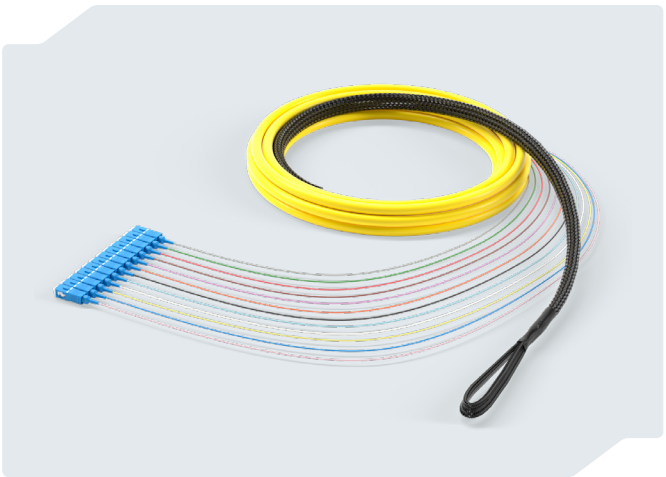
Distribution Cable



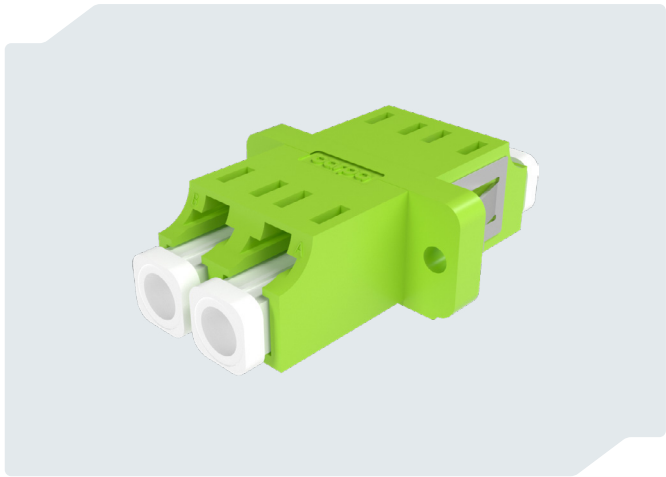
Zip-Cord Cable



SC Adapter



Pre-Terminated
Fiber Trunk Cable



LC Adapter

DRACO

Cat.8 Solution

For installations where copper remains essential, Draco ensures robust, high-speed connectivity. Engineered for up to 40 Gbps and 2000 MHz, Cat. 8 Solution provides strength and stability for critical short-distance links.

Advanced shielding against **EMI interference**

Complete range: Cables, Keystone, Field Plugs and Patch Cords

[Click here to know more about this solution](#)

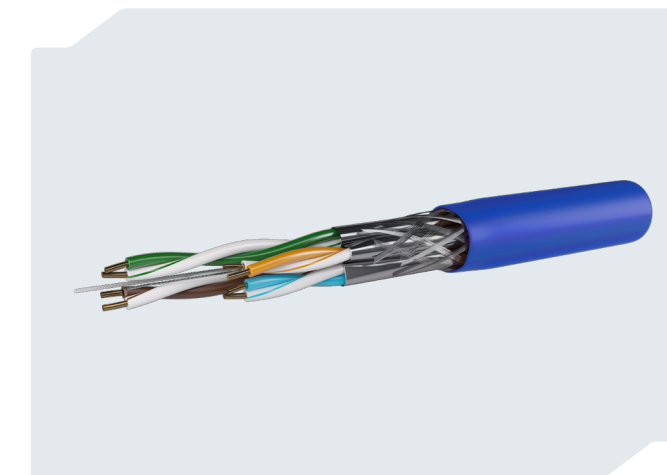
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Field Term Plug RJ45
Cat.8.1 - STP



Keystone Jack
Cat.8.1 - STP Toolless



Cable Cat.8.1 S/FTP
LSZH - 22 AWG



Patch Cord
Cat.8.1 S/FTP

HIGGS INTERNAL
PRODUCTION
UNIT

Pre-Assembled Solutions

barpa designs and manufactures pre-terminated fiber and copper systems in-house, supporting data center projects from the network design stage through implementation.

These customized assemblies simplify deployment, reduce installation times, and guarantee tested performance.

Pre-terminated fiber trunks and breakout assemblies

Pre-assembled copper trunks (Cat.6A to Cat.8)

Designed and produced according to project-specific requirements

Fully **tested**, traceable and compliant with international standards

[Click here to know more about this solution](#)

barpa.eu/markets/data-center/tailor-made



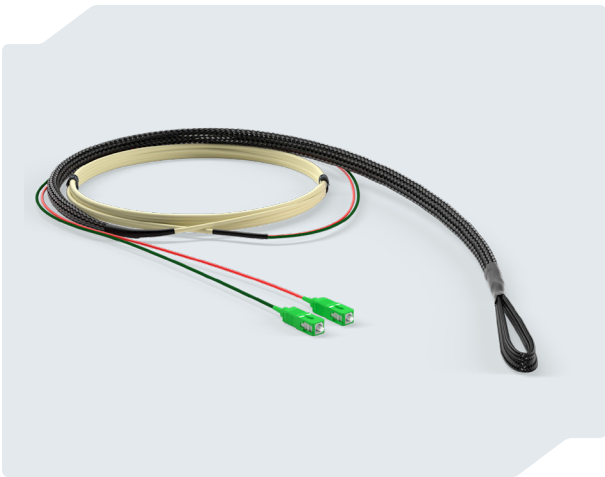
FO
Trunk Cables



MPO
Trunk Cables



Uniboosts



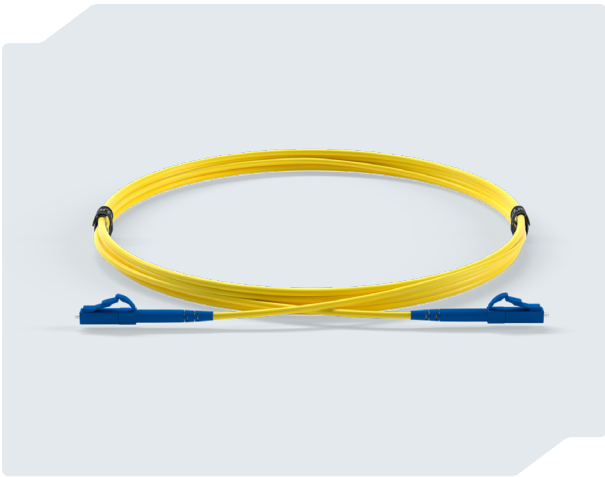
FO
Breakout Cables



MPO
Breakout Cables



Copper
Patch Cables



FO
Patch Cords



MPO
Patch Cords



Copper
Trunk Cables

ORION was created to ensure that every element, from mechanical containment to fiber systems and DCIM, works together seamlessly, delivering performance, security, and sustainability.

Our solutions are developed in alignment with the most recognized international data center standards, including ANSI/TIA-942, EN 50600, and ISO/IEC 30134 for energy efficiency and operational excellence.

These frameworks guide our engineering principles, ensuring reliability, traceability, and compliance across every project.

With **ORION**, we help you build infrastructures that are secure by design, efficient by operation, and sustainable by purpose.

We believe the future of data centers is not just about capacity.

It's about intelligence, responsibility, and trust.

Designed for Trust, Built for Excellence

Confined Data Center Training Program

barpa's Data Center Training Program was developed to train technicians in installation, configuration, and maintenance of complete Data Center solutions.

The program is composed of progressive modules, allowing participants to acquire technical skills according to the level of project complexity.

Each module includes theoretical lessons, practical demonstrations, and individual certification, ensuring that participants master the installation and configuration procedures of barpa systems.

Module 1

Rack and Confined Structure Installation Training.

Module 2

Sensors and PDU Installation Training.

Module 3

Software Installation and Configuration Training.

Contact our team for additional information.

WARRANTY & SUPPORT PROGRAM

To ensure reliability throughout the entire lifecycle of every **ORION** deployment, barpa provides a structured warranty and support framework.

This overview consolidates all components included in each segment of the **ORION** solution, along with the corresponding warranty periods and the support model **delivered** in collaboration with our certified Data Center Integrators.

	ORION STRUCTURE	ORION INTELLIGENCE HARDWARE	ORION INTELLIGENCE SOFTWARE	CONNECTIVITY
Included Components	Racks	Locks	barpa DCIM	All the products included in 25-Year Warranty Program
	Accessories	Access Control Sensors & Modules		
	Corridor Doors - Components & Sensors	Environmental Sensors & Modules		
	Roof Panels	Cameras		
	Cable Trays	Smart PDUs & Sensors		
Warranty	2 years	2 years	1 year (software updates included)	2 years
	25-Year Warranty Program (certified components)			
Support	Support is provided in collaboration with the Data Center Integrator, who ensures the first line of diagnostics and on-site verification.			
	barpa acts as advanced technical support (Tier 2), validating diagnostics and providing expert guidance whenever required.			
	SLA response times are defined according to component type, installed solution, and geographic logistics of the project.			
	Replacement parts follow contracted timelines, ensuring availability within the agreed periods*			
	barpa DCIM: software updates included for a defined period, plus remote assistance for configuration validation and system checks.			
	Service conditions, SLA response times and associated service fees are formalized in the final project agreement, according to the selected support package.			
	*SLAs represent contracted response times. Spare-part replacements may incur costs according to the predefined price list.			

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