

NAFICON

Data Center Solutions

The NAFICON logo is centered in the lower half of the image. It features the word "NAFICON" in a bold, white, sans-serif font. Behind the text is a graphic of a fiber optic cable with a blue jacket and a red connector, coiled into a circular pattern. The background of the entire image consists of dark blue diagonal stripes radiating from the bottom left corner.

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INTRODUCTION

Building Reliable and Scalable Data Center Infrastructure

For more than **30 years**, Naficon has built the invisible infrastructure that keeps modern society running. What began on the shores of Nauvo in **Finland's archipelago** has grown into **one of Northern Europe's most trusted names in passive fiber optic networks** — guided by a simple philosophy: **quality, flexibility and understanding** must lead everything we do.

Naficon delivers **high-performance mechanical, fiber, copper and power solutions for modern data centers** and corporate networks. **Our portfolio includes 19" mechanics, MPO/MTP fiber systems, modular patching solutions, prefabricated cable assemblies**, and a comprehensive range of **PDU and UPS systems** — all designed to support **high density environments** and **mission critical operations**.

With manufacturing in **both Finland and Dubai**, we combine **Finnish engineering, modern production technology** and **strict quality control**. This **dual site model** ensures **reliable supply, short lead times** and the **ability to scale quickly** — whether the need is standard or fully customized. We keep stock high, collaboration easy and delivery dependable **globally**.

What we do

We design and manufacture the connectivity that data centers and operators rely on: **fiber optic assemblies, MPO/MTP trunks, LC patching, cabinets, ODFs, copper systems and complete passive network components** for fixed and mobile networks.

How we do it

We design and manufacture the connectivity that data centers and operators rely on: **fiber optic assemblies, MPO/MTP trunks, LC patching, cabinets, ODFs, copper systems and complete passive network components** for fixed and mobile networks.

Our mission

Reliable

Engineered for continuous operation

Modular

Adaptable to changing capacity needs

Ready to use

Fast to install and easy to maintain

Naficon exists to make the foundation of modern data centers unshakeable — delivering connectivity solutions that perform flawlessly today and remain future proof for decades.

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INTRODUCTION

Proof of Quality

Naficon uses cables manufactured and tested according to the following international IEC standards. All termination work is carried out in our own production.

Connectors and Interfaces (our in-house manufacturing)

- **IEC 61754** – Fiber-optic connector interfaces (LC, SC, FC, ST)
- **IEC 61300** – Basic test and measurement procedures for passive components

Fibers and Cables (manufactured and certified by our supply partners)

- **IEC 60793** – Optical fibers (specifications for single mode and multimode fibers)
- **IEC 60794** – Optical fiber cables (construction, environmental performance)
- **IEC 61280** – Test procedures for fiber-optic communication systems

Fire and Smoke Safety (LSZH cables, certified by our supply partners)

- **IEC 60332-1-2** – Flame propagation testing (single cable)
- **IEC 61034-2** – Measurement of smoke density
- **IEC 60754-1/-2** – Halogen-free materials and acid gas emissions
- **EU CPR** – Construction Products Regulation fire classification (e.g., Cca; see product-specific rating)

We source our cables exclusively from manufacturers who provide product-specific **Declarations of Conformity (DoC)** and **CPR Declarations of Performance (DoP)**. All connectors and termination work are produced and inspected in-house in accordance with the standards listed above.



30-Year Naficon Guarantee

Every project is backed by the Naficon Guarantee for 30 years — valid even where part of your passive network uses another manufacturer's components.



DATA CENTER CABINETS

NAFICON

19-inch Data Center Cabinets

Naficon's cabinets form a stable, scalable, and future-proof foundation for your IT infrastructure. Designed for efficient installation, excellent cable management, and optimized airflow.

Key Features

- ◆ Robust steel construction
- ◆ High load capacity
- ◆ Excellent front and rear cable management
- ◆ Wide accessory range (shelves, guides, panels)
- ◆ Modular airflow control (cold-hot aisle)
- ◆ Lockable panels and high-security door mechanics
- ◆ Grounding points and full IEC/ISO compliance
- ◆ 42U, 47U and 52U versions
- ◆ Compartmentalized Cabinets
- ◆ Shelves, guides and panels available





DATA CENTER CABINETS

NAFICON

52U High-Capacity Cabinet

Designed for demanding data center environments, the 52U cabinet offers exceptional reliability and installation flexibility.

Technical Highlights

- ◆ Static load capacity: 1500 kg
(IEC 61587-1 NL 05)
- ◆ Dimensions: 1200 × 800 × 2492 mm
- ◆ Adjustable 19" rails: 250–1000 mm
- ◆ Perforated doors: over 80% airflow
- ◆ Lockable two-piece side panels
- ◆ Removable roof
- ◆ Brush-sealed cable entries
- ◆ Vertical cable tie rails, stepless adjustment
- ◆ PDU mounting for narrow and wide units
- ◆ Cabinets interconnect for stable rows, regardless of adjacent cabinet height





DATA CENTER CABINETS

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Compartmentalized, 42U and 47U Cabinets

Compartmentalized Cabinet

Ideal for multi-tenant, operator, or security-critical environments. Provides separated sections for structured cabling and equipment.

42U and 47U Standard Cabinets

A versatile and robust solution for enterprise and telecom installations.

600 x 600 and 800 x 800 Racks

Features

- ◆ Material is 1,5 mm thick hot-dip galvanized steel
- ◆ 19-inch mounting brackets are located both in front and behind the cabinet
- ◆ Shelves, removable walls, doors and roof are also available for the cabinets. The load capacity of the shelf is over 190 kg
- ◆ Two heights: 1600 mm and 2000 mm





High-Density MPO/MTP Solutions

Naficon's MPO/MTP systems enable fast deployment, reduced cable volume, and simplified management in high-capacity networks.

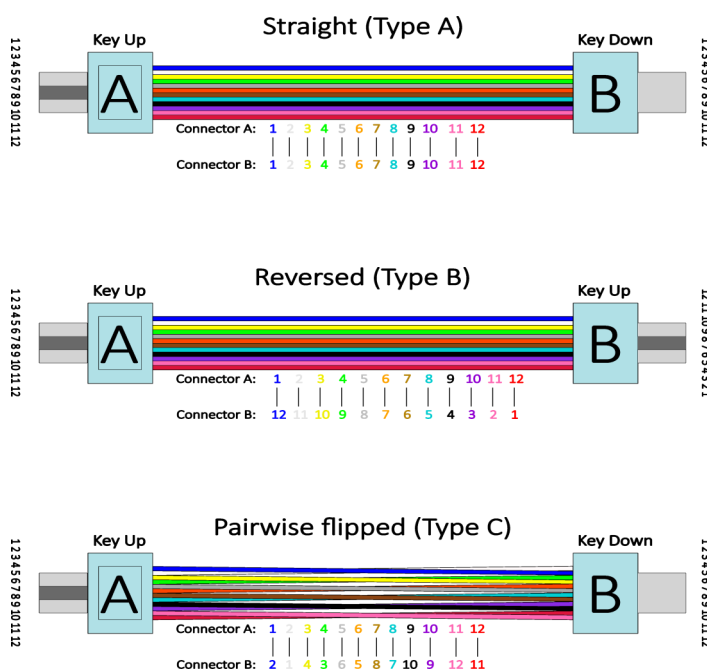
Connector Types

- ◆ MPO (standard multifiber connector)
- ◆ MTP® (enhanced MPO with higher precision)
- ◆ Male (pinned) / Female (unpinned)
- ◆ 8F / 12F / 24F versions

Performance

- Typical insertion loss: ~0.25 dB
- SM connectors always APC polished
- Return loss ~55 dB (APC)

Polarity Options





MPO/MTP FIBER SYSTEMS

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Patch Cords & Trunk Cables

Patch Cords

- ◆ 8F / 12F / 24F
- ◆ MPO–MPO or MPO–LC/SC or with MTP
- ◆ Custom lengths
- ◆ Fiber types (SM, OM3, OM4, OM5)



General Specifications

Standards	IEC 61 754-7	
Ferrule Type	PPS thermoplastic	
Polishing	UPC (0° convex)	APC (8° convex)
Cable	Flame retardant, Zero halogen	IEC 60332-3-24, 60332-1-2, 60754-1
Cable Diameter	MTP: 3/3.6 mm 12/24 fiber	LC and SC: 2 mm
Operating Temperature	-10° to 60° C	



MPO/MTP FIBER SYSTEMS

Multimode

Fiber Type	OM3 / OM4 / OM5	EN 50173-1, Aqua / Magenta / Lime
Insertion Loss, MTP	under 0.35 dB at 850/1300 nm	under 0.1 dB typical
Insertion Loss, LC and SC	under 0.20 dB at 850/1300 nm	under 0.1 dB typical
Return Loss, MTP	under -28 dB at 850/1300 nm	under -40 dB typical, all fibers
Return Loss, LC and SC	under -40 dB at 850/1300 nm	under -40 dB typical, all fibers

Single Mode

Fiber Type	ITU-T G.657.A1, OS-2	Compatible with G.652.D
Color	EN 50173-1, Yellow	
Insertion Loss, MTP/APC	under 0.35 dB at 1310/1550 nm	0.25 dB typical
Insertion Loss, LC/UPC and SC/UPC	under 0.20 dB at 1310/1550 nm	under 0.10 dB typical
Insertion Loss, LC/APC and SC/APC	under 0.30 dB at 1310/1550 nm	0.10 dB typical
Return Loss, MTP/APC	under -55 dB at 1310/1550 nm	
Return Loss, LC/UPC and SC/UPC	under -55 dB at 1310/1550 nm	
Return Loss, LC/APC and SC/APC	under -65 dB at 1310/1550 nm	
Classification	Class C1	All connector types

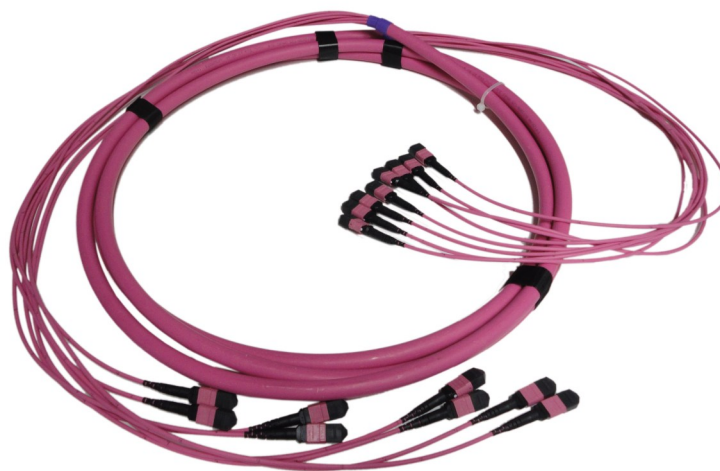


MPO/MTP FIBER SYSTEMS

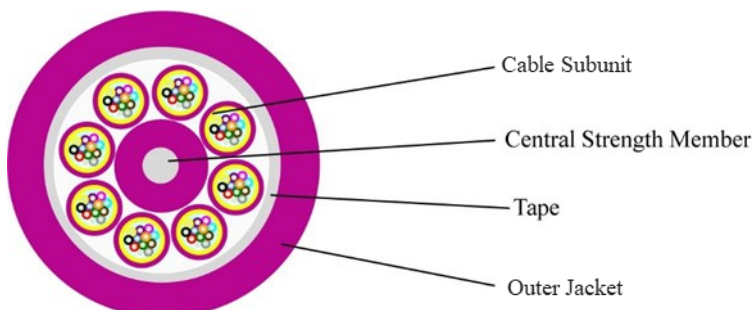
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Trunk Cables

- ◆ 12–192 fibers
- ◆ Factory-terminated
- ◆ Connectors on one or both ends
- ◆ Ideal for backbone cabling and rapid deployment
- ◆ Precise staggering for clean installations
- ◆ Custom lengths
- ◆ Fiber types (SM, OM3, OM4, OM5)



Cable Construction



Profile view of a 96-core miniature fiber optic cable. Subunits are grouped around a central strength member and protected by tape and a compact outer jacket - keeping the cable diameter small for high-density pathways.



MODULAR CHASSIS and MODULES

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Multi-Purpose Chassis (Fiber + Copper)

Module Options For 19-inch Frame

Module Type	Rear Interface	Front Interface	Internal Structure	Capacity / Stacking	Notes
12-fiber module	MPO/MTP adapter	12 × LC ports	MPO-LC fiber fan-out	Up to three modules stacked vertically	Fits one of the four openings in the frame
24-fiber module	MPO/MTP adapter, option for three adapters	24 × LC ports	MPO-LC fiber fan-out	Single-height module	Fits one of the four openings in the frame
CAT 6A module	—	6 × Keystone jacks	Pre-terminated cable option available	Single-height module	Copper cabling module; fits one of the four openings
Blanking plate	—	—	—	Covers unused openings	Used to close empty module slots





MODULAR CHASSIS and MODULES

NAFICON

Fiber-Only Chassis

- ◆ 2× MPO/MTP rear ports
- ◆ 6× LC-QUAD front ports
- ◆ Up to 96 LC connectors per 1U



LC Modules (45°)

- ◆ Only 100 mm deep
- ◆ Ideal for shallow cabinets, wall mounts, or wire shelves
- ◆ Intended for prefabricated cables



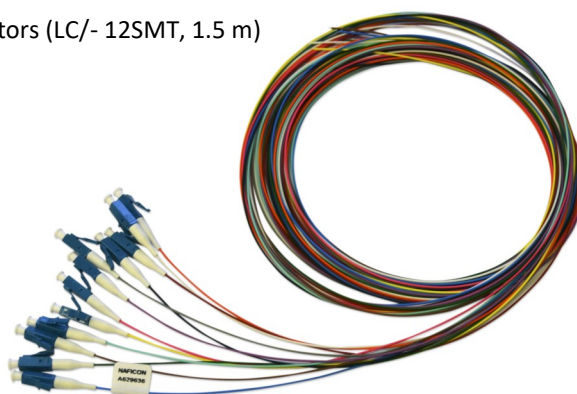


MODULAR CHASSIS and MODULES

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NAF 9.5" panel system

- ◆ **19" Frame for Two Modules**
- ◆ **Frame height:** 1U
- ◆ **Module depth:** 190 mm
- ◆ Rear side includes **two cable entry points**
- ◆ Module configurations:
 - ⇒ **12 × LC duplex adapters** → 24 LC connectors (SM or MM)
 - ⇒ **24 × LC duplex adapters** → 48 LC connectors (SM or MM)
 - ⇒ **6 × LC quad adapters** → 24 LC connectors (SM or MM)
 - ⇒ **12 × LC quad adapters** → 48 LC connectors (SM or MM)
- ◆ **Front-mounted assembly:** Modules are installed from the front; adapters are preassembled
- ◆ **Included installation kit (inside each module):**
 - ⇒ Splice protectors
 - ⇒ Splice protector holders
 - ⇒ M20 cable glands for cable entry
 - ⇒ 12-color fiber series with LC connectors (LC/- 12SMT, 1.5 m)





COPPER CABLING (CAT6A)

NAFICON

Cat6A Product Family

Designed for 10G Ethernet and high-performance copper networks.

Product Range

- ◆ Patch cords
- ◆ Keystone jacks
- ◆ Shielded and unshielded installation cables
- ◆ Patch panels

10G ready

Cat6A supports 10GBASE-T up to 100 m - a future-proof choice for server and office cabling.

Combine with fiber

CAT6A keystone modules fit the same modular chassis as our fiber modules.



PDU's

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Power Distribution Units

Naficon offers a comprehensive range of PDUs for all rack power needs.

PDU Types

Basic

simple and reliable power distribution.

Metered

Local load monitoring with LCD display.

Managed

Remote monitoring and per-outlet control.

High-Density

Optimized for large-scale racks up to 46 kW.





PDU Technical Specifications

Input voltage	230 V single-phase	400 V three-phase
Rated current	16 / 32 / 63 A	
Frequency	50/60 Hz	
Outlets	Up to 48 per PDU	IEC C13 / C19
Form factor	0U vertical, 1U/2U horizontal	Tool-less mounting
Outlet sections	Color-coded	Matching circuit breakers
Metering accuracy	±1 % (billing grade)	Metered and Managed models
Monitoring	V, A, W, kWh, power factor	Per section or per outlet
Outlet control	Remote on/off per outlet	Sequential start-up
Networking	Daisy-chain up to 8 PDUs	Single IP address
Security	HTTPS, SNMPv3, LDAP/RADIUS	
Display	Local LCD, rotatable	
Cable retention	Locking outlet grips	No accidental disconnects
Max rack power	Up to 46 kW per rack	High-density models
Operating temperature	Up to +60 °C	

All models support hot-aisle installation and custom outlet configurations.



UPS SYSTEMS

NAFICON

UPS Solutions for Critical Infrastructure

Single-Phase UPS (1–11 kVA)

Ideal for edge, enterprise, and small data centers.

Three-Phase UPS

Available on request for larger installations.





UPS Technical Specifications

Single-Phase UPS (1–11 kVA)

Topology	Online double-conversion	Power factor correction
Output power	1-11 kVA / up to 10 kW	Power factor up to 1.0
Efficiency	Up to 95 % online mode	98 % high-efficiency mode
Input voltage range	176-276 V without derating	100-276 V with derating
Frequency range	40-70 Hz, autoselection	Frequency converter mode
Voltage distortion	THDU under 2 %	THDI under 5 %
Overload capacity	110-125 %: 60 s	125-150 %: 10 s
Form factor	19-inch rack/tower, 2U-6U	10 kW in only 6U
Battery charging	Three-stage charging	Battery life up to 50 % longer
Runtime extension	Up to 12 ext. battery modules	Hot-swap, auto recognition
Bypass	Internal automatic bypass	Hot-swap maintenance bypass
Parallel operation	2 units	Redundancy or extra capacity
Load segments	2 controlled outlet groups	Prioritized shutdowns
Communication	USB, RS-232, relay contacts	Network / ModBus card slot
Noise level	Under 45-50 dB	
Operating temperature	0 to +40 °C continuous	
Standards	IEC/EN 62040-1, -2, -3	

Three-Phase UPS: modular systems available on request for larger installations.

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OUR CLIENTS



NAFICON

ISO CERTIFICATES



CERTIFICATE

This is hereby certified that the Quality Management System of
NAFICON FIBER OPTIC MANUFACTURING LLC
 P.O. Box: 19565, Warehouse No. 2, Nadd Al Hammar, Dubai, UAE.

Has been found to comply with the requirements of
ISO 9001: 2015

This certificate is applicable for the following scope:
Fiber Optic Cables Manufacturing.

Certificate Number: KAQM202310043

Date of initial registration:	21 October 2023
Surveillance audit 01 on/before:	21 September 2024
Surveillance audit 02 on/before:	21 September 2025
Certificate expiry:	20 October 2026





Website: www.iso-registrations.com | Email: info@iso-registrations.com
 ISO 9001:2015 certification is awarded to United Accreditation Foundation (UAF). UAF is internationally recognized by having a regulatory status across multilateral recognition arrangement of International Accreditation Forum (IAF) and Asia Pacific Accreditation Cooperation (APAC).
 The certificate is valid subject to successful completion of surveillance audits. Verify validity/data on www.iso-registrations.com or on email: info@iso-registrations.com
 UAF address: 400, North Centre Dr, STE 202, Norfolk, VA 23502, United States of America



CERTIFICATE OF REGISTRATION

It is confirmed that the management system of

Naficon Fiber Optic Manufacturing LLC
 WH No. 2, Nadd Al Hamr, Dubai, UAE

has been evaluated and complies with the requirements of
ISO 14001:2015
Environmental Management System

This certificate is valid for the following activities
Fiber Optic Cable Manufacturing

Certificate Number: SISTEMA-UAE/NFO-E21234
 Issue date: 21.12.2024
 Expiry date: 20.12.2025
 Date of First Surveillance: 21.11.2025
 Date of second surveillance: 21.11.2026
 Recertification date: 21.11.2027




Managing Director

Verify the certificate - www.sistemacerts.com



CERTIFICATE OF REGISTRATION

It is confirmed that the management system of

Naficon Fiber Optic Manufacturing LLC
 WH No. 2, Nadd Al Hamr, Dubai, UAE

It has been evaluated and complies with the requirements of
ISO 45001:2018
Occupational Health & Safety Management System

This certificate is valid for the following activities
Fiber Optic Cable Manufacturing

Certificate Number: SISTEMA-UAE/NFO-O21235
 Issue date: 21.12.2024
 Expiry date: 20.12.2025
 Date of First Surveillance: 21.11.2025
 Date of second surveillance: 21.11.2026
 Recertification date: 21.11.2027




Managing Director

Verify the certificate - www.sistemacerts.com

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