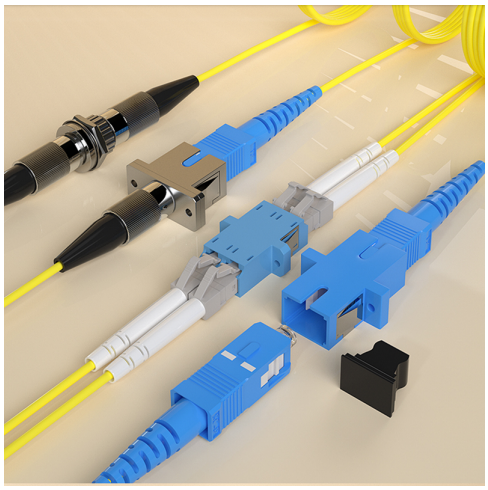
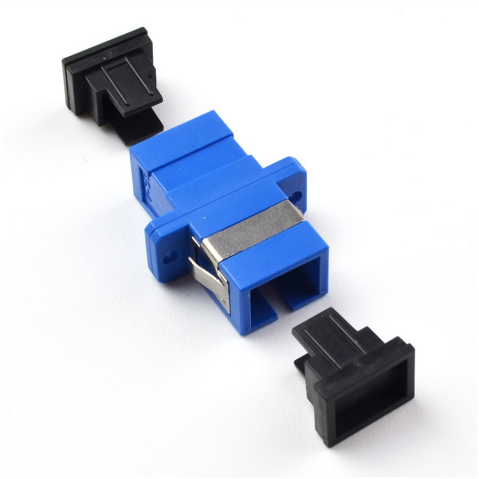
MapleArashi

Fiber Optic Cable Manufacturer

Fiber Optic Adapters



Adapter Types



Fiber Optic Adapters

Connector Alignment | UPC / APC | SM / MM

Connector Alignment | SC / LC / FC / ST / MPO | UPC / APC

Fiber optic adapters are passive components used to align and connect two fiber optic connectors in patch panels, ODFs, terminal boxes, wall outlets, telecom rooms, data centers, and fiber distribution systems. Available interface types include SC, LC, FC, ST, MPO, and hybrid options, with UPC/APC compatibility and single-mode or multimode configurations subject to project requirements. Final adapter type, sleeve material, housing design, color, flange structure, and packaging are subject to confirmed project specifications.

Product	Fiber Optic Adapters
Model	SC / LC / FC / ST / MPO / Hybrid Options
Category	Components & Accessories - Fiber Optic Adapters
Structure	Adapter housing with alignment sleeve, dust caps, and panel-mount design

This specification is for reference only. Final product parameters and adapter configuration are subject to project requirements and confirmed specifications.

1. Product Information

Field	Specification
Product	Fiber Optic Adapters
Model	SC / LC / FC / ST / MPO / Hybrid Adapter Options
Category	Components & Accessories - Fiber Optic Adapters
Structure	Adapter housing with alignment sleeve, dust caps, and panel-mount design
Interface Type	SC / LC / FC / ST / MPO / hybrid options, subject to project requirements
Polish Type	UPC / APC, subject to adapter type
Fiber Mode	Single-mode / multimode, subject to project requirements
Sleeve Material	Zirconia ceramic / phosphor bronze, subject to adapter type
Housing Type	Plastic / metal housing, subject to adapter model
Application	Patch panel / ODF / terminal box / wall outlet / fiber distribution

2. Company Profile

Maplearashi Technology, with 20 years of expertise in fiber optic communication, manufactures fiber optic adapters including SC, LC, FC, ST, MPO, and hybrid options in our facility located in the Guangdong-Hong Kong-Macao Greater Bay Area. Adapters are produced with precision alignment sleeves and compliant housings for use in patch panels, ODFs, terminal boxes, wall outlets, and fiber distribution systems. Compliance documents available upon request.

3. Product Overview

Fiber optic adapters are passive components used to align and connect two fiber optic connectors in patch panels, ODFs, terminal boxes, wall outlets, telecom rooms, data centers, and fiber distribution systems. Available interface types include SC, LC, FC, ST, MPO, and hybrid options, with simplex, duplex, quad, and hybrid configurations subject to project requirements. The adapter houses an alignment sleeve — typically zirconia ceramic or phosphor bronze depending on adapter type — within a plastic or metal body designed for panel-mount, snap-in, or flangeless installation.

4. Key Features

- Passive fiber optic connector-alignment component for patch panels, ODFs, and terminal boxes
- Compatible with SC, LC, FC, ST, MPO, and hybrid interface configurations
- Zirconia ceramic or phosphor bronze alignment sleeve, subject to adapter type
- Plastic or metal housing with simplex, duplex, quad, or hybrid structure
- UPC and APC polish compatibility for single-mode and multimode applications
- Low insertion loss design subject to adapter type, connector condition, and test methods

5. Recommended Use

- Connector mating in fiber optic patch panels and ODFs
- Terminal box and wall outlet fiber connection
- Telecom room and data center fiber patching
- Test equipment fiber connection and maintenance patching
- Indoor fiber distribution applications

6. Installation Benefits

- Snap-in or panel-mount design for quick ODF and patch panel installation
- Precision alignment sleeve reduces connector mating loss
- Compact form factor for high-density patching applications
- Color-coded options for UPC and APC identification

7. Technical Specifications

7.1. General Specifications

Layer	Component	Material / Function
Interface Ty	SC, LC, FC, ST, MPO, hybrid options	
Polish Typ	UPC, APC	
Fiber Mode Com	Single-mode, multimode	
Configurati	Simplex, duplex, quad, hybrid	
Sleeve Mat	Zirconia ceramic, phosphor bronze	
Housing Ma	Plastic, metal	
Insertion L	Typical ≤0.2 dB, subject to adapter type and test conditions	
Operating Temp	-40°C to +85°C, subject to adapter type and material configuration	
RoHS Compl	Compliance documents available upon request	

Specifications may vary by adapter type, interface, and manufacturer configuration. Confirm with project specifications.

8. Applications

- Fiber optic patch panels and distribution frames
- ODF subscriber and distribution connection
- FTTH terminal box and wall outlet connector mating
- Telecom equipment room fiber patching
- Data center structured cabling
- Fiber optic network maintenance and field patching
- Test and measurement equipment connection

9. Design Notes

- Fiber optic adapters are passive alignment components, not cable assemblies
- Adapter connects two connectors; does not terminate fiber cable ends
- For connector termination, use fiber optic connectors or field assembly connectors
- For optical power splitting, use PLC splitters, not adapters
- For optical power reduction, use attenuators, not adapters
- Adapter is a component mounted in ODF or patch panel; ODF itself is enclosure equipment
- Material, color, flange design, and packaging may vary by adapter type and project requirements

10. Installation Notes

- Ensure connector end-face is clean before insertion into adapter
- Use appropriate adapter for correct interface and polish type
- Do not mix UPC and APC adapters with mismatched connectors
- Panel-mount adapters with correct clip or flange orientation
- Avoid excessive insertion force to prevent sleeve damage

11. Handling & Cleaning Notes

- Keep dust caps on unused adapter ports to prevent contamination
- Clean alignment sleeve interior using appropriate cleaning tools if contaminated
- Inspect adapter ports for debris before use
- Do not use abrasive materials on adapter alignment sleeve
- Store adapters in clean, dry environment before installation

12. Adapter Type Options

Fiber Type	Description
SC Adapter	Simplex / duplex; push-pull coupling; widely used in ODF and patch panel
LC Adapter	Small form factor; simplex / duplex; high-density patching application
FC Adapter	Screw-on coupling; telecom and test equipment application
ST Adapter	Bayonet coupling; multimode and industrial application
MPO Adapter	Multi-fiber array; data center and high-density backbone application
Hybrid Adapter	Connects different interface types; subject to configuration

13. Installation Guidance

- Select adapter type and polish matching connector type for the project
- Confirm single-mode or multimode adapter compatibility with fiber type
- Mount adapter securely in patch panel or ODF before inserting connectors
- Verify alignment sleeve condition before installation for low-loss performance
- Color identification: UPC adapters commonly blue; APC adapters commonly green

14. Product Comparison & Reference

Adapter vs Fiber Optic Connector

Parameter	Fiber Optic Adapter	Fiber Optic Connector
Function	Aligns and connects two connectors	Terminates fiber cable end
Cable Length	No cable length	No cable length (component level)
Usage	Mounted in panel / ODF	Installed on fiber cable / patch cord
Note	Adapter is a passive alignment component	Connector is a cable-end termination component

Adapter vs Patch Cord

Parameter	Fiber Optic Adapter	Fiber Optic Patch Cord
Function	Connector alignment	Cable transmission with connectors
Cable Length	None	Included
Components	Housing, sleeve, dust cap	Cable with connectors on both ends
Note	Adapter is a panel component	Patch cord is a cable assembly

Adapter vs PLC Splitter

Parameter	Fiber Optic Adapter	PLC Splitter
Function	Connector alignment	Optical power splitting
Ports	1:1 coupling	1xN or 2xN split ratios
Note	One-to-one connector coupling	Power division device

15. Customization Options

- Interface type per project requirements
- Polish type per fiber mode and application
- Housing color and marking per customer specification
- Sleeve material per adapter type
- Flange / flangeless configuration per panel type
- Packaging per project or shipping requirements

Maplearashi

MapleArashi | maplearashi.com

Email: sales@maplearashi.com | WhatsApp: +86 189 9307 0653

Shenzhen Maplearashi Technology Co., Ltd. | Guangdong-Hong Kong-Macao Greater Bay Area, China