

Article Overview

LC (Lucent Connector) is a small-form-factor fiber optic connector, and DLC refers to its duplex configuration, housing two fibers for bidirectional communication.

LC Interface

LC (Lucent Connector) is a widely used fiber optic connector designed for high-density networking environments. It features a 1.25 mm ceramic ferrule, which is smaller than older SC or ST connectors, allowing for higher port density on panels and transceivers . LC connectors are used in both single-mode (SMF) and multimode (MMF) fiber applications, supporting speeds from 10G to 400G in enterprise, telecom, and data center networks . They are standardized for reliable mating across different manufacturers and are available in simplex (single fiber) and duplex (two fibers) versions .

DLC (Duplex LC) Interface

DLC (Duplex LC) refers to a duplex configuration of LC connectors, where two fibers are paired side-by-side--one for transmit (Tx) and one for receive (Rx) . This configuration is essential for bidirectional communication in Ethernet, telecom, and high-speed data links. A typical duplex LC connector includes:

- o Two 1.25 mm ferrules for precise fiber alignment
 - o Plastic housing and duplex clip to hold the pair together
 - o Push-pull latch for easy insertion and removal
 - o Boot to reduce strain on the fiber
 - o Polish types: UPC (flat, blue) and APC (angled, green) for different return loss requirements
- DLC connectors are commonly used in patch panels, transceivers, and breakout cables, and they support both multimode (50/125 um) and single-mode fibers .

Key Differences and Applications

Feature	LC	Duplex LC	Fiber count	Single fiber (simplex)	Two fibers (duplex)
Communication	One-way	Two-way (Tx/Rx)	Form factor	Small, 1.25 mm ferrule	Same ferrule, paired in duplex housing
Common use	Patch cables, client-side optics	Ethernet links, telecom, data center duplex links	Density	High	High, doubles port density compared to simplex

Applications: LC and DLC connectors are used in enterprise LANs, telco closets, data centers, and AI compute fabrics. DLC is particularly important for 10G-400G duplex links, while LC simplex may be used for single-fiber connections or breakout topologies . In summary, LC is the connector type, and DLC is its duplex variant, enabling bidirectional fiber communication while maintaining high density and reliability in modern network infrastructures.

DLC and LC interfaces

Data Link Control (DLC) is a set of protocols used in computer networking to ensure reliable data transmission

In duplex serial optics, structured cabling, client connections, PON, DWDM, and hybrid

DLC (dual core pull-out) base station patch cord is mainly used for connecting BBU (baseband processing unit) and RRU (radio

DLC base station patch cord: 5 protection level and anti salt spray funct Convenient, fast, and low-cost installation. The A-end is an

Make sure you're choosing the correct fiber optic connector for peak performance. Learn more about fiber connector types in our guide.

In the world of fiber optic communication, compactness, precision, and reliability define performance. Among all

The transceiver modules available for Aruba products use the following types of connectors: Lucent

The design and performance of LC connector address the need for high density and low insertion loss. Application of

However, SFP LC transceivers are gaining traction, too. Time Saving: As LC connectors are half-sized than their SC counterparts,

The data link connector (DLC) is the multi-pin diagnostic connection port for automobiles, trucks, and

LC duplex connectors are compact, high-performance connectors widely used in modern fiber optic networks. The LC connector,

This comprehensive guide unpacks the nuances of SC and LC patch cords, from their structural designs and technical

Compare LC, SC, FC, ST, MPO & MTP fiber optic connectors with expert insights. Learn which connector fits your

Explore LC fiber optics in depth: LC connectors, LC patch cables, uniboot designs,

A guide to LC fiber optics. Learn LC connector geometry, UPC/APC polish types, ULL

DLC and LC interfaces

In many data center applications, small (e.g., LC) and multi-fiber (e.g., MTP/MPO) connectors have

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