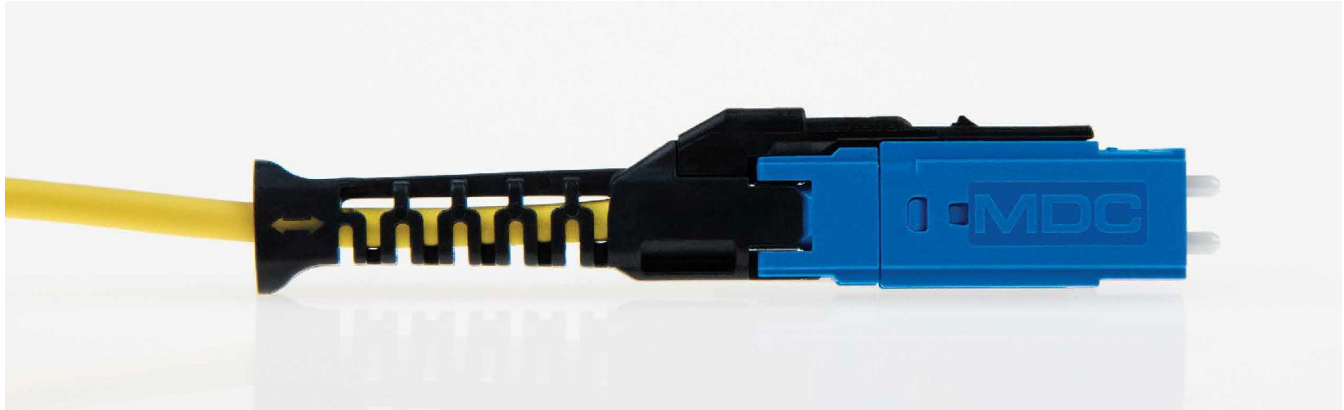


## MDC CONNECTOR SOLUTIONS



### ELiMENT™ MDC Connector

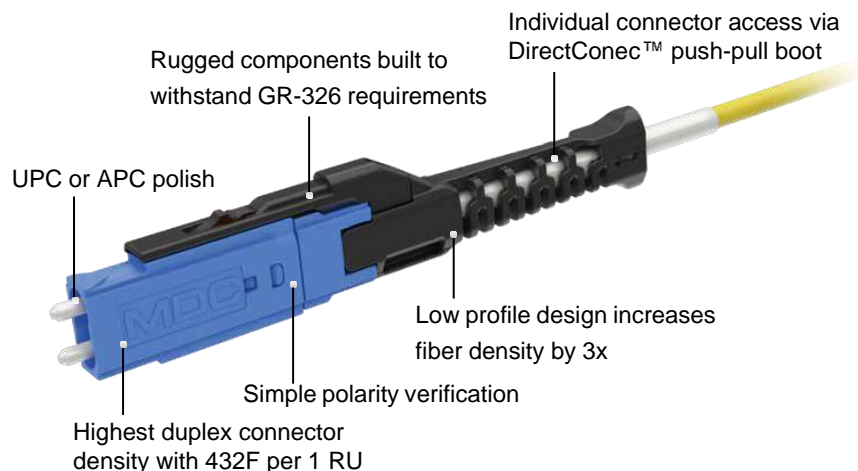
Fujikura's ELiMENT™ MDC connector is a Very Small Form Factor (VSFF) duplex optical connector designed for termination of single-mode and multimode fiber cables up to 2.0 mm in diameter. The MDC connector is manufactured with proven 1.25 mm ferrule technology used in industry standard LC optical connectors. Individual connector access in the most extremely dense connector environments is easily accomplished using the revolutionary DirectConec™ push-pull boot technology.

#### Features

- 3x fiber cabling density over LC connectors, providing 216 duplex connectors (432 fibers) within 1 RU.
- DirectConec™ push-pull boot for effortless connector insertion and extraction.
- Simple polarity reversal with no exposed fibers.
- Meets IEC Attenuation Grade B random mating requirements (0.12 dB mean, 0.25 dB maximum for  $\geq 97\%$  of the connectors).
- Telcordia GR-326 and TIA-568 compliant.
- Designed for cables up to 2.0 mm OD.
- Single-mode, Multimode and Single-mode APC available.

#### Applications

- Minimizes required hardware, leading to reduced capital and operational expense in telecom and datacom applications.
- Supports four individual MDC cables in a QSFP footprint and two individual MDC cables in an SFP footprint.



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### New Applications Require a Reduced Format Connector

Increasing connector density at the module/panel minimizes required hardware, leading to reduced capital and operational expense. Currently, a one Rack Unit (RU) housing is limited to 144 fibers using LC Duplex connectors and adapters. The smaller MDC connector increases the connector density by 3x, providing up to 432 fibers in the same 1 RU space.

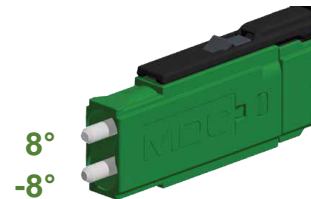
Multiple emerging transceiver Multi-Source Agreements (MSAs) have defined port breakout architectures that require a duplex optical connector with a smaller footprint than the LC connector. The reduced size of the MDC connector will allow a single array transceiver to accept multiple MDC patch cables which are individually accessible directly at the transceiver interface. The new format will support four individual MDC cables in a QSFP footprint and two individual MDC cables in an SFP footprint.

### Carrier Grade Performance

Although the MDC connector is almost half the size of an LC connector with twice the number of ferrules, its rugged housing, high-precision molding and engagement length allow it to exceed the same Telcordia GR-326 requirements as the LC connector, including the extremely demanding Proof and TWAL tests.

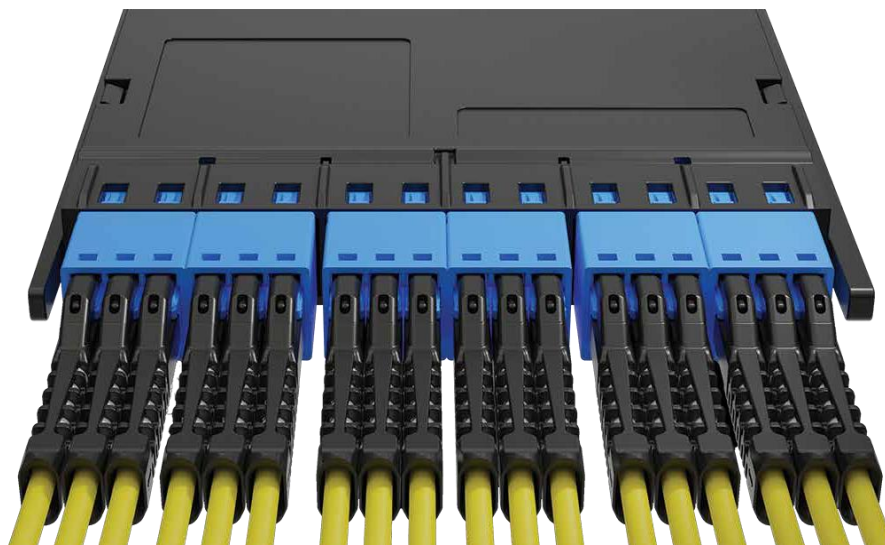
### MDC APC Connectors

MDC APC connectors are available for high density duplex connector applications requiring a very low reflectance. The unique opposing angled ferrule connector design allows for simple and effortless polarity reversal in the event the system polarity is not as expected.



### Maintaining Duplex Connector Accessibility with DirectConec™ Push-Pull Technology

MDC connectors with DirectConec™ push-pull boot technology allows installation experts to easily insert and extract the connector in tighter, more confined spaces without affecting neighboring connectors. The flexible boot maintains proper bend radius for cable routing and will not buckle during connector insertion and extraction.



Capacity Increased by 3x Using MDC Connectors and Adapters



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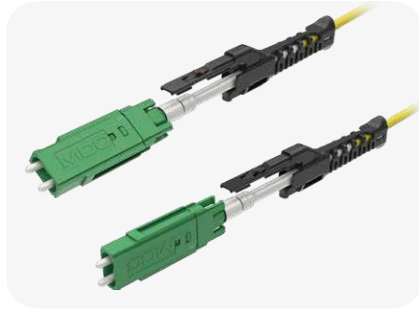
### Quick and Simple Polarity Reversal

The polarity reversal of the MDC connector is effortless and does not expose or twist delicate fibers during the process. To change polarity, pull the boot from the connector housing, rotate the boot 180 degrees, and re-assemble the boot assembly back onto the connector housing. Polarity marks on the top and side of the connector and the MDC logo provide notification of reversed connector polarity.

#### Polarity Reversal Process:



Separate connector housing from boot



Rotate 180°



Re-attach boot to connector housing

### Ever-Increasing MDC Ecosystem

US Conec, the licensor of the MDC connector, partners with industry leading vendors to develop components and equipment necessary to enhance the installer and end user experience with the following solutions:

- Multiple adapter variants
- Polishing equipment
- Test equipment
- Inspection scopes
- Interferometry

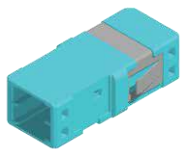
### Aggregation Solutions

Combining multiple connectors together as one unit reduces the number of connections and helps provide immediate identification of cable groupings. Fujikura offers several aggregation solutions including clips and consolidated connectors.



### Variety of Adapters

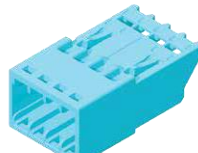
Fujikura offers 2-port, 3-port and 4-port adapters connecting MDC connectors to MDC connectors or MDC Jr. connectors. The 2-port and 3-port adapters are designed to fit through the same panel cutout defined for duplex LC adapters, allowing an instant 2x or 3x of the current module/panel connector density by simply removing the LC duplex adapters and installing the MDC adapters.



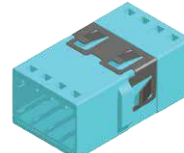
MDC 2-Port Adapter  
Aligned Key - MDC/MDC



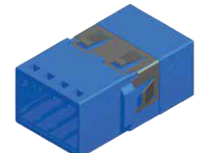
MDC 3-Port Adapter  
MDC/MDC Jr.



MDC 4-Port Adapter  
MDC/MDC Jr.



MDC 4-Port Adapter  
Aligned Key - MDC/MDC



MDC 4-Port Adapter  
Opposed Key - MDC/MDC



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### MDC Connector Cleaner

The new MDC cleaning tool uses the proven and reliable push technology pioneered by One-Click™ brand cleaners to allow swift and efficient cleaning of MDC dual ferrules with one actuation. The MDC cleaning tool features dual precision cleaning nozzles for pre-installed connectors in a panel or module adapter and a tethered adapter for accessible connectors.



DirectConec™ and ELiMENT™ are trademarks of US Conec Ltd.

### MDC Jr.

Optimized for breakouts and On Board Optic architectures, the MDC Jr. connector brings all the functionality and testability of a connector while minimizing valuable space consumption behind the panel.



One-Click™ is a trademark of Fujikura Ltd.



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