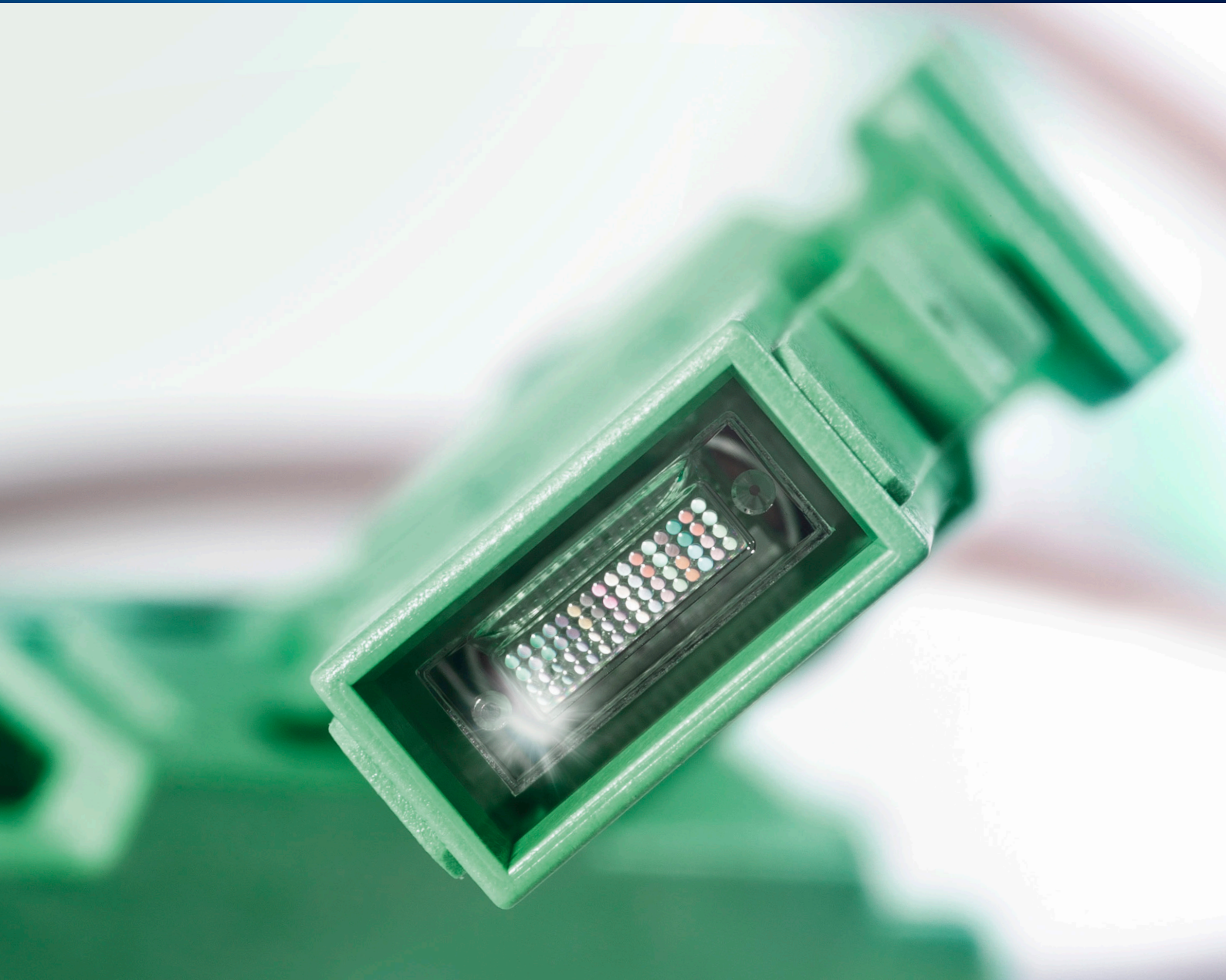


**Rosenberger**

The terabit-link to embedded optical devices

**MXC<sup>®</sup>: The big data connector**

OPTICAL SOLUTIONS & INFRASTRUCTURE



# MXC®:

## Terabits through expanded beam MT ferrule

MXC® is a brand new optical fiber connector system responding to the ever-increasing demand for data which is driving new hardware and applications in data centers and networks. Using advanced high-density interconnect technology, MXC® is a real breakthrough technology to provide a direct card edge interface to embedded optical engines from Intel Silicon Photonics and others.

### Up To 64 Micro Lenses

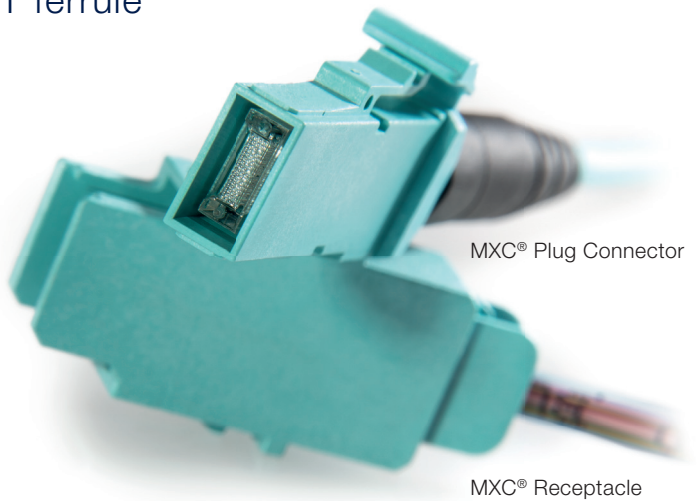
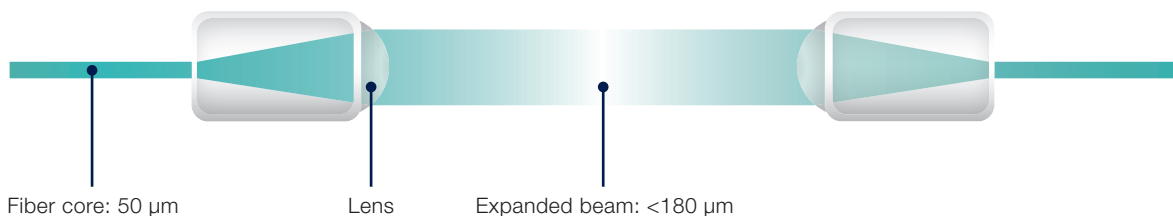
A key feature of the MXC® connector system is the hermaphroditic PRIZM® MT ferrule (also known as “lensed MT ferrule” or “expanded beam MT ferrule”) that enables the ultra-high connection density. The outer dimension of the MXC® ferrule remains the same as the classical MT ferrule of MTP®/MPO connectors. The PRIZM® MT technology enables a brand new design of the ferrule tip with a recessed area of up to 64 micro lenses, 4 rows with up to 16 lenses per row.

#### PRIZM MT® Ferrule

Same outer dimensions as traditional MT

Four rows, each row with up to 16 lenses

Hermaphroditic, post and hole alignment features



MXC® Plug Connector

MXC® Receptacle

### Main advantages of MXC®

(compared to conventional fiber optic connectors)

- Ultra-high performance terabit per second bandwidth capability; e.g. 64 fibers, each carrying one wavelength at 25 GBit/s = 1.6 Tbit/s per connector
- Smaller size providing even greater density than MTP®
- Rugged interface using expanded beam technology
- Lower cost due to fewer parts and no fiber polishing required for assembly

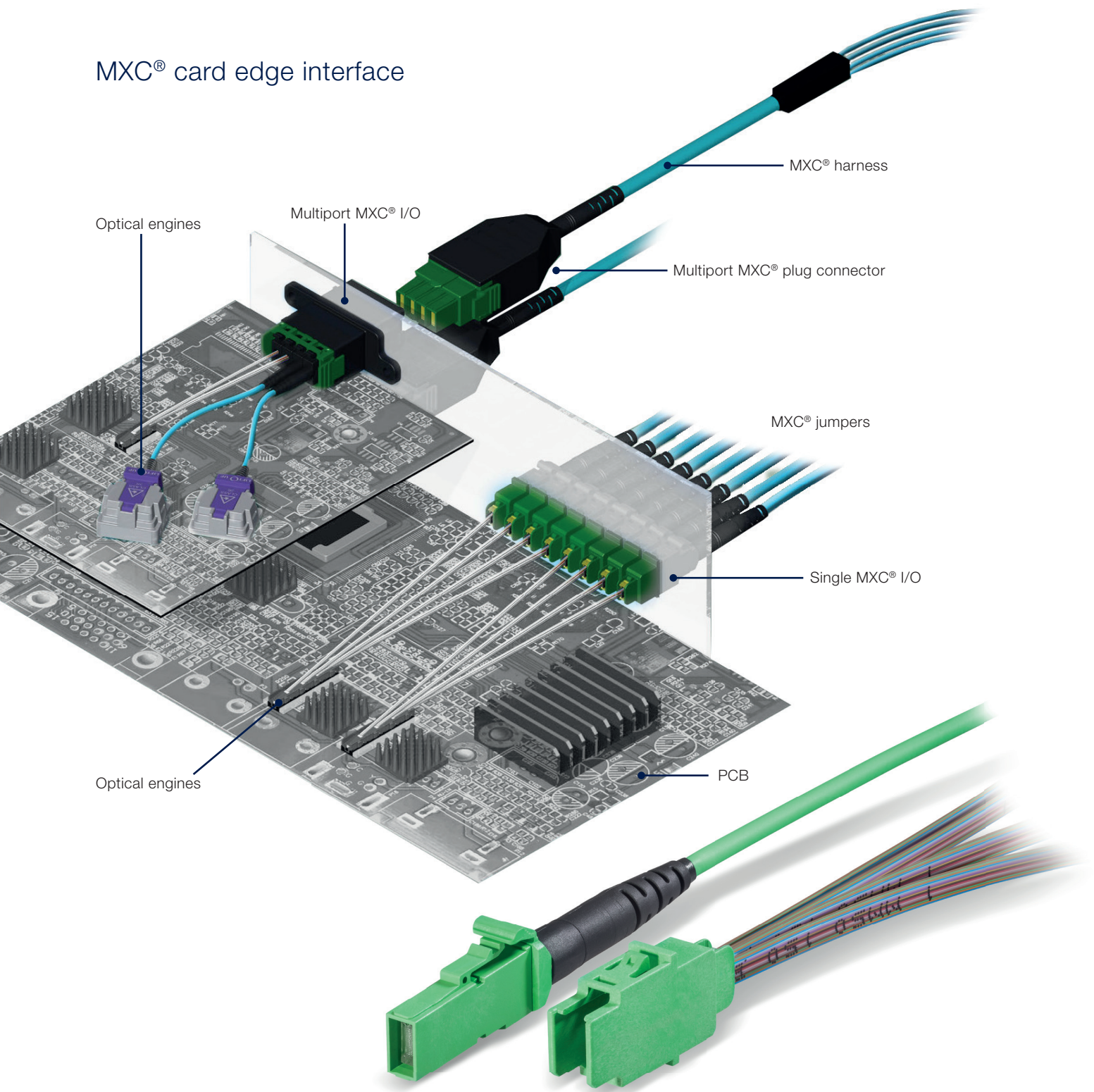
### Main benefits of PRIZM® MT ferrule

- Expanded beam technology results in decreased impact of debris
- Consistently low insertion loss and return loss due to greater alignment tolerances at the mating plane of the connectors
- Less spring force required for mating

### Expanded beam technology

- Alignment tolerances at the mating plane of expanded beam interconnectors are reduced
- Collimated light results in forgiving alignment in z-axis
- Stable return loss governed by lens geometry

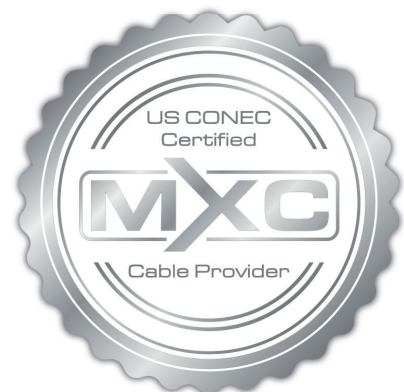
## MXC® card edge interface



### More to come

- MXC® multimode OM3, OM4 and LX cable assemblies are available. Singlemode MXC® is under development.
- MXC® bulkhead and blindmate connectors for mid- and back-plane card edge applications are under development.
- Future higher data rates >1.6 Tbit/s are expected.

If you want to know more about cable assemblies using the new MXC® connector, get in touch with us!



**Rosenberger**

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