

# Nominee: Corning Optical Communications

---

## Nomination title: **EDGE8™**

The increasing adoption of cloud computing and the growing demand for virtualisation, big data and video are driving the migration to faster transmission speeds and the continual evolution of standards for the data centre. Corning's EDGE8™ Solution is the most future-ready data centre connectivity solution available for simple, efficient and cost-effective migration to transmission speeds of up to 400 gigabits per second.

Our EDGE solutions were the industry's first pre-terminated optical cabling systems specifically designed for the data centre environment and the value that EDGE provides to the industry continues to be proven. Density, network uptime, speed, simplicity and a clear migration path to meet future requirements: EDGE addressed it all. However, technology roadmaps clearly indicate that transmission speeds ranging from 4G to 400G will be based on either 2- or 8-fibre connectivity solutions.

That's the motivation behind EDGE8 solutions. All the value of our original EDGE solutions, with the added superior network scalability, improved link performance and utilisation of a base-8 design. It provides a comprehensive solution for your connectivity with ultra-low-loss components, including trunks, patch cords, modules and harnesses.

### Key distinguishing features and/or USPs

Base-8 connectivity makes it easy to match the fibre count in the backbone of data centre networks and SANs for today and prepare for higher speeds in the future. As such, the EDGE8 solution strengthens the cabling infrastructure within data centres through a number of key features and benefits:

- **Risk avoidance and 100 percent fibre utilisation:** The technology roadmaps of major switch and transceiver vendors all point to 2- and 8-fibre solutions. By deploying the EDGE8 solution, data centres can be future-ready to support all network architectures and speeds from 1 through to 400G on two and eight fibres with 100 percent fibre utilisation (no conversion is necessary).
- **Increased asset utilisation:** With a 1:1 port mapping ratio, trunks, harnesses and cables match directly with the blade or switch port counts meaning there are no loose "tails" hanging in front of active equipment.
- **Pinned trunks to simplify patching:** Pinning the trunks mean installers only need a single patch cable for all direct connect, interconnect or cross-connect applications, reducing complexity. Users no longer need to stock different cable types (such as pinned to non-pinned cables).
- **Saves space, time and complexity:** Offers best-in-class fibre density that is easy to install (90 percent faster compared to field termination) and manage for future growth with superior

fibre access and intuitive fibre management for moves, adds and changes – providing 25% faster MACs.

- **Ultra-low-loss performance:** All EDGE8 components deliver ultra-low-loss performance as standard, enabling users to exceed specified distances while dealing with the lower loss budgets that higher-speed applications demand.

#### **The tangible impact on the market and customers**

EDGE8 solutions are now being deployed globally due to the high shipment volume of QSFP transceivers and the need for future adoption of higher speeds using parallel optics. The types of transceivers that switch, server and storage vendors are using, combined with the transceiver roadmap guiding the industry from 10G Ethernet to 40G, 100G, and 400G, are moving the industry towards Base-8 connectivity. Light Counting market research shows shipments of over 4 million 40G QSFP transceivers were expected in 2015 with a growth forecast to over 9.4 million units by 2020.

Already, the EDGE8 solution has been taken up and deployed by many customers around the world to address their needs today, solve technology challenges and provide a migration path that easily scales out to 400G transmission for tomorrow. These are not just early adopters or big technology companies, but also those operating in healthcare, transportation, retail and manufacturing sectors.

One significant advantage addressed through collaboration with customers is that of 40G disaggregation for use with 10G applications. Disaggregating 40G ports into 4 x 10G ports (currently only possible with parallel optics) through harnesses or port breakout modules provides significant density advantages both in terms of the attached electronics (and therefore costs) and the housings in the wiring areas. For example, using 40G instead of 10G QSFP line cards for 10G connectivity reduces overall cost per port for the electronics (a smaller footprint) and it means that customers will already have the technology in place when they are ready to upgrade to 40G.

#### **Major differentiators**

EDGE8 is the industry's first modular, pre-terminated optical cabling system to feature an eight-fibre (Base-8) cabling design.

Eight-fibre MTP® connectors make it easy to match the fibre count in the backbone of data centre networks and SANs with today's Base-8 QSFP transceivers. This results in 100% fibre utilisation, streamlined 1:1 port mapping, and up to 50 percent reduction in link attenuation through the elimination of conversion modules.

EDGE8 trunks are pinned allowing for a single pinless patch cable deployment for all installations, reducing deployment complexity and inventory.

## Why nominee should win

- A culture of innovation and close collaboration with customers to solve tough technology challenges enables Corning to develop breakthrough optical fibre products and solutions that address enterprise needs of today, while being future-ready for tomorrow.
- First to market with a modular, pre-terminated optical cabling system featuring a Base-8 cabling design that has received good uptake globally across multiple industry sectors.
- Provides a simple migration path to higher speed technology adoption with 100% fibre utilisation for 40G, 100G and even 400G speeds.
- A 40G port disaggregation provides a cost saving approach now for 10G deployments, while being future ready for 40G.