

## **Nominee: Corning Cable Systems**

### **Nomination title: Corning Optical Cabling Infrastructure solution for datacentres – Corning Pretium EDGE® Solution incorporating Clearcurve OM3/OM4 cable.**

The Corning Pretium EDGE is an optical fibre-rich cabling infrastructure solution for datacentres. It consists of optical trunks, harnesses, modules, housings and jumpers and incorporates Corning ClearCurve® optical fibre as standard. This innovative solution addresses the concerns of datacentre owners and operators, helping them increase revenue, reduce costs and minimise risk.

Specifically the solution:

- Can be installed 85% faster than traditional cabling systems.
- Enables 25% faster moves, adds and changes (MACs).
- Provides 100% more density, for space savings and cost reduction
- Supports potential energy savings of up to 25%
- Mitigates datacentre entropy and bend induced losses improving reliability
- Facilitates easy migration to 100G speeds

As such, it is designed to improve the efficiency of datacentres whilst providing cost effective and flexible capacity to meet the business needs and data growth over the next decade. Pretium EDGE can be installed 85% faster than traditional cabling systems, meaning the infrastructure can go operational and generate revenue faster than ever before. A new and innovative hardware design allows modules to be installed via the front or the rear of the housings, giving the installer the option of deploying the network in the fashion they find most efficient. One-handed strain-relief operation is achieved with a snap-on trunk cradle, simplifying and speeding up installation. Pretium EDGE enables 25% faster moves, adds and changes (MACs) ensuring they happen quickly and without disrupting the datacentre's daily operations. Individual trays make it easier and less time consuming to add trunk cables during MACs, and every housing has separate routing guides, so jumpers are easily managed and accessed when adding new jumpers or re-routing existing ones. Pretium EDGE provides 100% more density than current systems, enabling datacentre owners and operators to support more data in a finite amount of space. It offers unprecedented patchcord/connector access while achieving the highest port density in the market of 576 fibres in a 4U housing and 96 fibres in a 1U housing. Pretium Edge uses ClearCurve bend-insensitive fibre, mitigating the risks of bend-induced loss which can impact the performance and reliability of systems. Bending of cables is commonplace as moves adds and changes are made within the datacentre over time. The bend-induced loss with Corning ClearCurve cable is ten times lower than with a conventional multimode fibre, therefore protecting the system margin or power budget headroom, and ensuring that the infrastructure continues to operate and unscheduled downtime is avoided. ClearCurve optical fibre allows for a minimum bend radius of five times the cable outer diameter (OD) in Pretium EDGE trunk cables (compared to 10 times the OD in traditional trunks), and eight times the OD in interconnect cables. With 25% smaller trunk cable diameters and 50 percent smaller jumpers, more cables can be routed and stored in the same amount of space. The small diameter multi-fibre optical cables, coupled with high-density MTP connectors supports offers greater than 20 times the data density of

Cat.6 copper cable. Corning's cable infrastructure design minimises network cabling provision and space, reducing costs within the datacentre. Deployment of the fibre-rich cabling infrastructure plays a significant role in contributing to the improved energy efficiency. Firstly, the lower power consumption of optical transceivers and the fewer number of switches required in an optical system results in potential energy savings of up to 25% when compared to the copper equivalent. 100G ready with simple migration – Corning's fibre-rich cabling infrastructure Pretium EDGE incorporating Clearcurve OM3/OM4 cable is designed to meet the requirements of 100G Ethernet, and universally wired components provide a simple upgrade path from 2-fibre to parallel optic applications. The cable, together with the low-loss MTP connectors, minimises the optical link loss budgets for extended distances and higher speeds throughout a datacentre. Low insertion loss allows flexible network design with longer links and multiple interconnects. Reliable operation at 100G is available over the longest future trunk cable runs, should this be needed. With 24-hours-a-day, seven-days-a-week operation at stake, the need for a high performing, reliable network is a given. Mere seconds of downtime can result in thousands or even millions of Euros in lost revenue, so the network must provide consistent uptime. 100% factory-tested solutions provide consistent quality, ensure system performance and reduce installation time. Corning Cable Systems invented pre-terminated optical systems for the datacentre over a decade ago and continues to set the standard for the performance of these systems. With the fibre-rich optical cabling infrastructure solution (Pretium EDGE incorporating ClearCurve optical cable), Corning has combined industry-leading performance with a revolutionary approach to network deployment and operation. This enables owners and operators to overcome the challenges of today's datacentre requirements while also preparing for future growth.

### **Why nominee should win**

- 1) 40 years of continuous optical innovation crystallised as pure performance in Corning Pretium EDGE incorporating ClearCurve OM3/OM4 cable, providing an optical fibre cabling infrastructure solution for High Performance Datacentres.
- 2) Factory pre-terminated, high density bend insensitive fibre, with the modular design of Pretium EDGE delivers faster time to service and a plug-and-go migration strategy from today's 1Gbps through 40Gbps to 100Gbps to meet explosive growth in data needs.
- 3) Innovative design results in 85% faster installation time than traditional cabling systems and 25% faster MACs without disrupting the datacentre's daily operations.