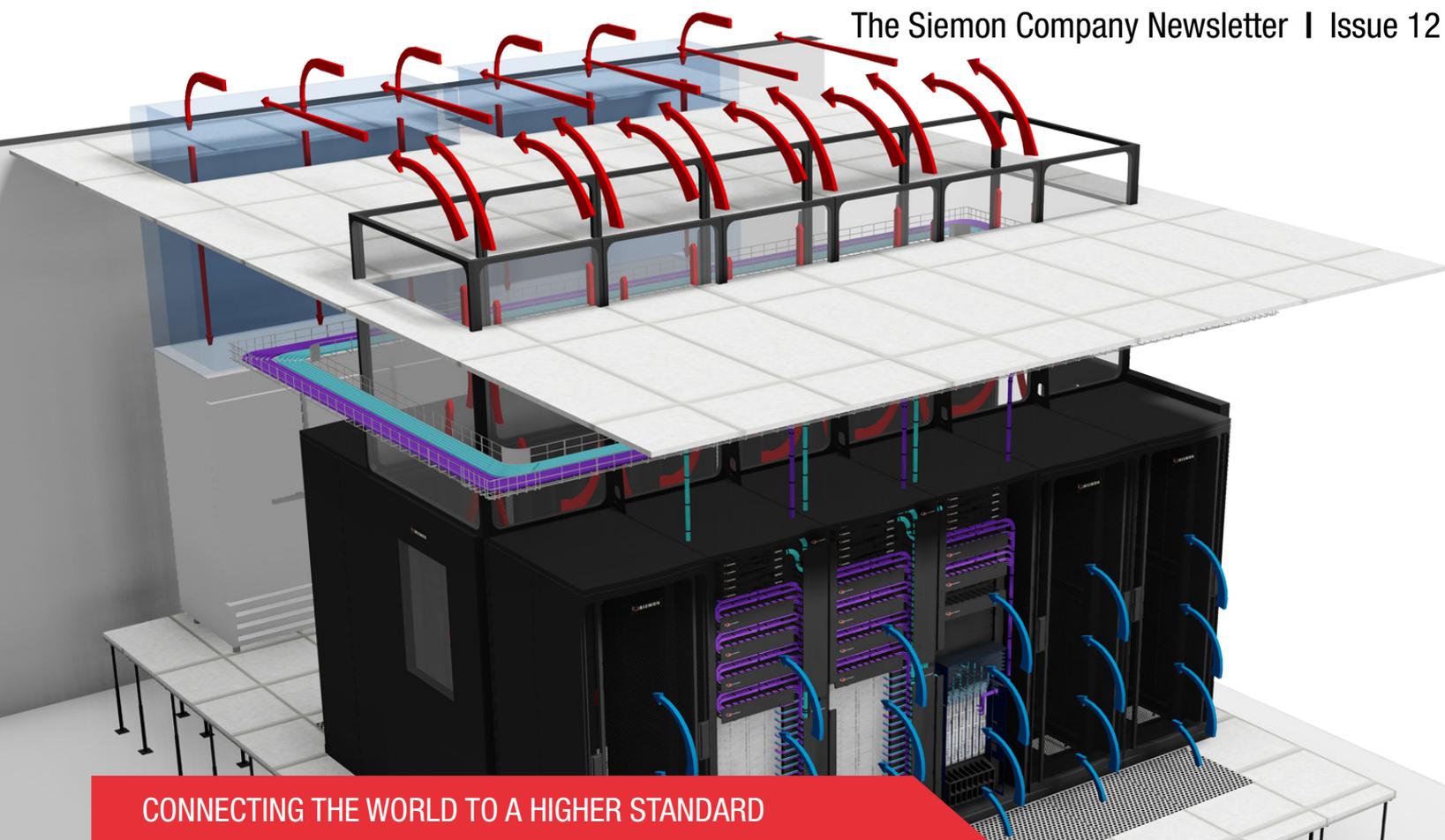


CABLING FOR THE FUTURE

Innovate

The Siemon Company Newsletter | Issue 12



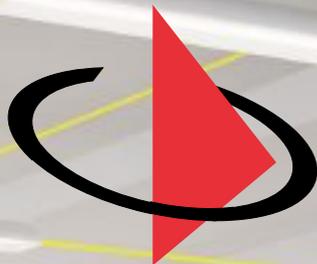
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SIEMON™



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Cisco® Digital Ceiling Partner

Providing ConvergeIT™ Cabling Solutions for Intelligent Buildings that support the convergence of low-voltage building systems onto a single IP network for better user experiences, improved efficiency and lower facility operating costs.

Only Siemon's comprehensive line of shielded cables, connectivity and zone enclosures featuring patented innovative technologies provide superior support for PoE applications and converged devices in the Digital Ceiling.

CONNECTING THE WORLD TO A HIGHER STANDARD

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EXPLORE



Siemon Develops Valuable Planning Guide for Highly Automated Intelligent Buildings

Siemon announced the release of a new Zone Cabling and Coverage Area Planning Guide developed to assist infrastructure designers and architects ensure flexible zone cabling designs that provide significant benefits within intelligent buildings.

By 2020, it's estimated that there will be 26 times as many connected devices and connected people! The growing adoption of Internet of Things (IoT) will be optimally supported by a cabling design where low-voltage building, network and security systems are converged on a single IP network infrastructure and powered by advanced power over Ethernet (PoE) technology. Ideally suited for these converged infrastructures, zone cabling consists of horizontal cables run from telecommunications rooms to intermediate connection points housed in zone enclosures typically placed in the ceiling space. Cables from zone unit enclosures connect directly to building devices such as sensors, wireless access points, cameras and digital signage

or to outlets serving any such device. Combining these connections within zone enclosures supports rapid, less disruptive changes and reorganisation of work areas while simplifying deployment of new devices and applications.

“Deploying a zone cabling approach that facilitates building device connections within zone enclosures saves significant cost for automated buildings where a variety of low-voltage systems are converging on a single unified physical infrastructure,”

Valerie Maguire, Global Sales Engineer, Siemon.

“It's important for those designing these converged infrastructures to realize the benefits of this highly economical and functional standards-based design and to understand how best to deploy it.”



Siemon Enhances Low-Voltage Infrastructure Design with New Standards-Compliant BIM Models

Siemon have announced the addition of building information modeling (BIM) solutions that meet American Institute of Architects (AIA) and National Institute of Building Sciences (NIBS) standards. Now available on Autodesk® Seek and

conveniently accessible from the www.siemon.com website, the new standards-compliant BIM models are part of Siemon's long-standing commitment to support architects and engineers with valuable education and tools.

[EXPLORE](#)

Siemon Announces Acquisition of the Gigaduct Fiber Containment System

Siemon announced its acquisition of the Gigaduct Fiber Containment System from UK-based Gigacom Ltd. Under this definitive agreement, Siemon will acquire all existing Gigaduct assets, inventory, tooling and customer base. Gigaduct is

a flexible raceway system for routing, managing and protecting fiber optic cables in data centers, colocation centers, service provider hosting and other fiber computing environments.

[EXPLORE](#)

Siemon exceeds ISO/IEC class II channel requirements with TERA

Siemon has announced that its fully shielded TERA end-to-end twisted-pair copper cabling system exceeds the draft class II requirements of ISO/IEC 11801-1 (Committee Draft N2483). Class II channels

and permanent links are qualified up to 2 GHz and constructed from category 8.2 connecting hardware, cables and cords to meet future 25 Gb/s (25GBASE-T) and 40 Gb/s (40GBASE-T) applications.

[EXPLORE](#)



Preferred
Solution
Partner

Siemon is proud to be named a Cisco® Digital Ceiling Enabler Partner for Cisco's Digital Ceiling Framework.

The Digital Ceiling Framework accelerates digital transformation and extends benefits of the Internet of Things (IoT) throughout facilities by converging multiple building networks—lighting, heating and cooling, IP video, IoT sensors and much more—on a secure and intelligent network platform

Unequivocally aligned with Siemon's ConvergeIT™ Cabling Solutions for Intelligent Buildings that create a unified physical infrastructure for converging low-voltage building systems, Cisco's Digital Ceiling framework and set of solutions aims to create buildings that are not only smart, but also connected, secure and easy to manage.

disparate systems and devices on a single IP network using Cisco switches and Power over Ethernet (PoE), including PoE-powered LED lights with sensors that provide 85% lower energy costs. Siemon's ConvergeIT Cabling Solutions include advanced copper shielded cables and connectivity that provide superior support of PoE-enabled systems.

A key part of the Cisco Digital Ceiling framework includes converging previously

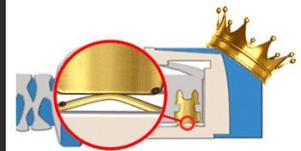
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Siemon Jacks Crowned King of PoE



Siemon is pleased to announce that its patented Z-MAX[®] and MAX[®] RJ-45 jacks and TERA[®] jacks deliver the industry's most reliable jack-plug connection for superior support of the latest PoE applications.

In an effort to improve the electrical and mechanical performance of traditional modular jacks, Siemon invented and patented a curved or “crowned” contact shape for its modular jacks. In addition to achieving the industry's highest transmission performance and eliminating the risk of permanent contact deformation due to mechanical stress, Siemon's crowned jack contacts provide superior support for remote powering applications.

Unmating a jack-plug connection under a PoE load produces an arc that erodes the gold plated jack-plug contact surfaces at the arcing location. When this erosion occurs in the area of the fully mated position, the result is an unreliable connection that can cause degraded network performance and bit error

rates. While some manufacturers have succeeded in ensuring that erosion on jack contacts is separate from the fully mated position, their contact geometry does not ensure the same for plug. Erosion on either the jack or plug contacts results in an unreliable connection.

“Only Siemon's patented crowned contact geometry places arcing damage to the both the plug and jack contacts away from the fully mated position,”...“This allows our customers to connect and disconnect to the latest PoE applications with zero risk over the lifetime of the system -it's what makes our jacks King of PoE.”

John Siemon, CTO, Siemon.

[EXPLORE](#)



Siemon Improves Data Center Efficiency and Capacity with New Aisle Containment Solutions

Siemon announced the expansion of its line of WheelHouse Advanced Data Center Solutions to include comprehensive aisle containment solutions with both cold aisle containment (CAC) and hot aisle containment (HAC) options that significantly improve efficiency and cost-effectively expand capacity for today's data centers.

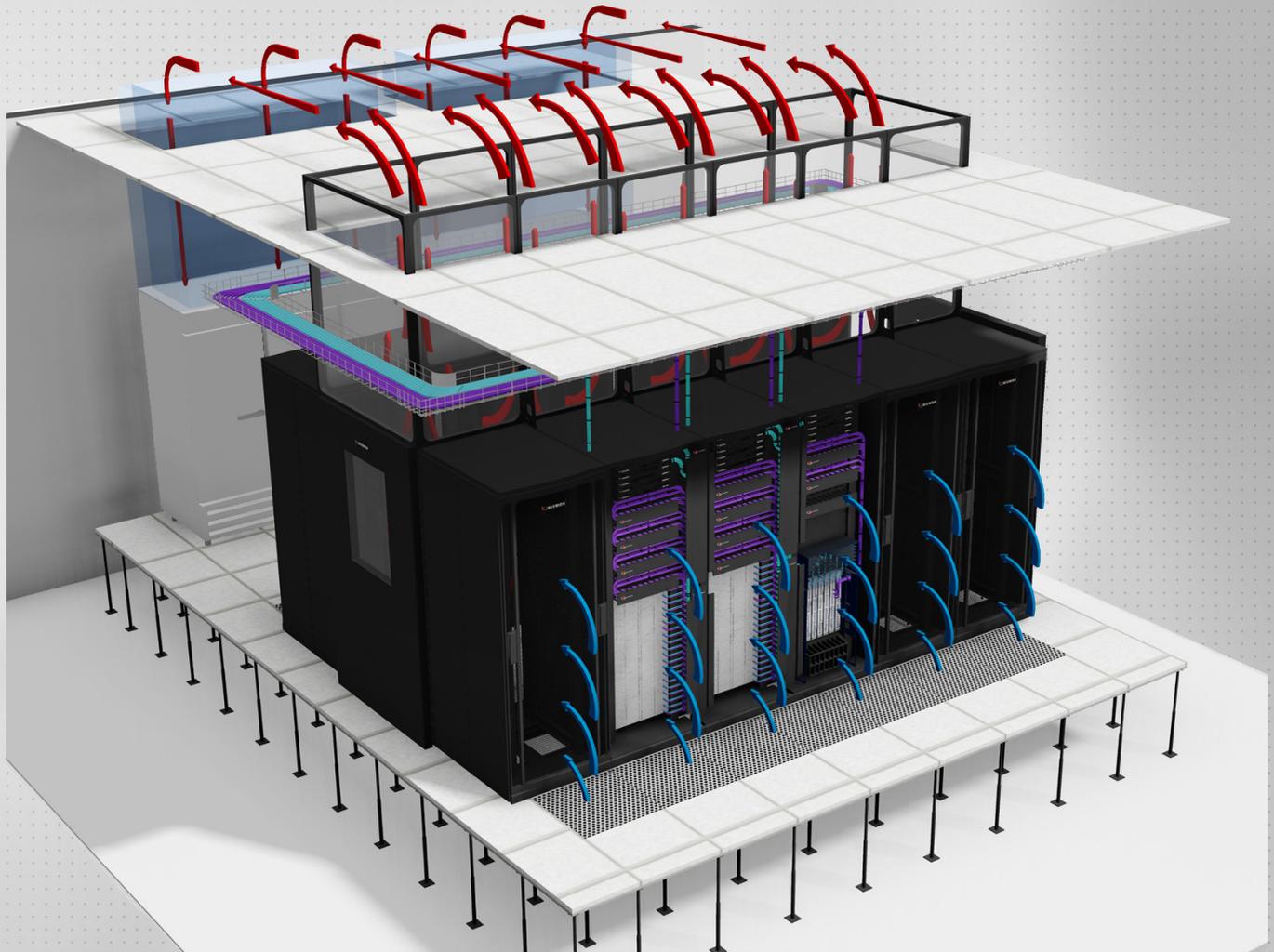
By either containing and isolating the cold air supply (CAC), or by guiding hot exhaust to overhead return air spaces (HAC), Siemon's Aisle Containment Solutions prevent the mixing of hot and cold air in the data center.

This allows for higher temperature return air to improve the efficiency of existing cooling systems and reduce energy costs, while

preventing over provisioning of computer room air conditioning (CRAC) units.

Alternatively, these solutions cost-effectively expand the capacity of the data center to cool higher heat densities, maximising both cabinet and data center floor space without the need for supplemental cooling.





“Hotter return air temperatures facilitate heat exchange within cooling systems, improving power usage effectiveness (PUE) and reducing energy costs through lower fan speeds, higher chilled water temperatures and greater economizer hours while sufficiently cooling data center equipment to maximize performance and life expectancy,”

Tony Veatch, Director of Product Management, Siemon.

“For both new and retrofit situations, aisle containment systems are an economical way to prevent costly oversupply of cold

air while enabling growth in data center environments-whether using cold aisle containment for a raised floor environment with no overhead return air space or hot aisle containment to maintain an overall cooler working environment outside of the contained area.”

Designed with robust seals for optimal thermal isolation, Siemon’s Aisle Containment Solutions consist of CAC roof panels, HAC vertical standing and end panels, single and double manual and self-closing doors, and end panels that have been designed for quick and easy on-site attachment to rows of Siemon VersaPOD[®], V800[™] and V600[™] data center cabinets.

[EXPLORE](#)

Siemon furnishes IKEA with a state-of-the-art network infrastructure

IKEA required a state-of-the-art cabling infrastructure to support two brand new retail stores in the Belgian cities of Mons and Hasselt. The stores would need a cabling infrastructure capable of supporting all of the day-to-day business needs as well as facilitating a wide range of applications for staff while enhancing the visitor experience.



Having worked with IKEA regularly over almost 10 years, Siemon was called in to suggest the most appropriate structured cabling platform to meet the company's objectives. 'IKEA relies upon its cabling infrastructure to allow the seamless operation of its stores, so having a system that is robust, reliable and future proof is a must,' commented René Proost, Sales Manager for Benelux, South Africa & Namibia.

'After considering the various options we decided that a solution comprising our

Z-MAX® Category 6 unshielded copper cabling would be implemented, supported by OM3 Multimode optical fiber cabling from the XGLO™ range in the backbone.'

IKEA are delighted with the final installations; both new build environments cover a combined area of 20,000m² and have been designed to accommodate the latest Internet protocol (IP) based functionality throughout while provide the foundation to support future growth as required.

A photograph of an Ikea store at night. The building's facade is dark blue, and the 'IKEA' logo is prominently displayed in large, illuminated yellow letters. Below the logo, the words 'Home furnishings' are written in a smaller, illuminated yellow font. Several tall, thin light poles are visible in front of the store, and a parking lot is partially visible on the right side. The sky is dark with some clouds.

IKEA

Home furnishings

“Having already experienced the benefits of Siemon’s innovative cabling solutions...it seemed logical to work together again on the Hasselt and Mons stores. I’m confident that the finished installation will meet all of our requirements and having a 20 year system warranty offers us significant piece of mind.”

Ken Struelens, IKEA’s retail IT manager.

[EXPLORE](#)

PowerMax™

Intelligent PDUs

Siemon's line of PowerMax PDUs provide valuable energy consumption data while reliably delivering power to critical IT equipment.

Each of our PDU families deliver real-time power information with varying degrees of intelligent functionality ranging from Basic and Metered units to full-featured Managed PDUs - providing multiple options based on the level of data and control requirements. Siemon's PowerMax PDUs may be used as stand-alone units, or they can communicate

with third-party software through common open networking protocols. All of our network-capable intelligent PDUs also have the capacity to connect environmental sensors, allowing temperature, airflow, and humidity to be measured to further troubleshoot and optimize data center efficiency.

MOUNTING

- Vertical PDUs mount via tool-less button attachments
- Horizontal PDUs mount to standard EIA 19 in. configurations

FEATURES

- NEMA and IEC plug inputs
- Single and 3-phase voltages
- Horizontal and Zero-U vertical styles
- 3m (10 ft.) cords with other lengths available
- Soldered connections for high reliability

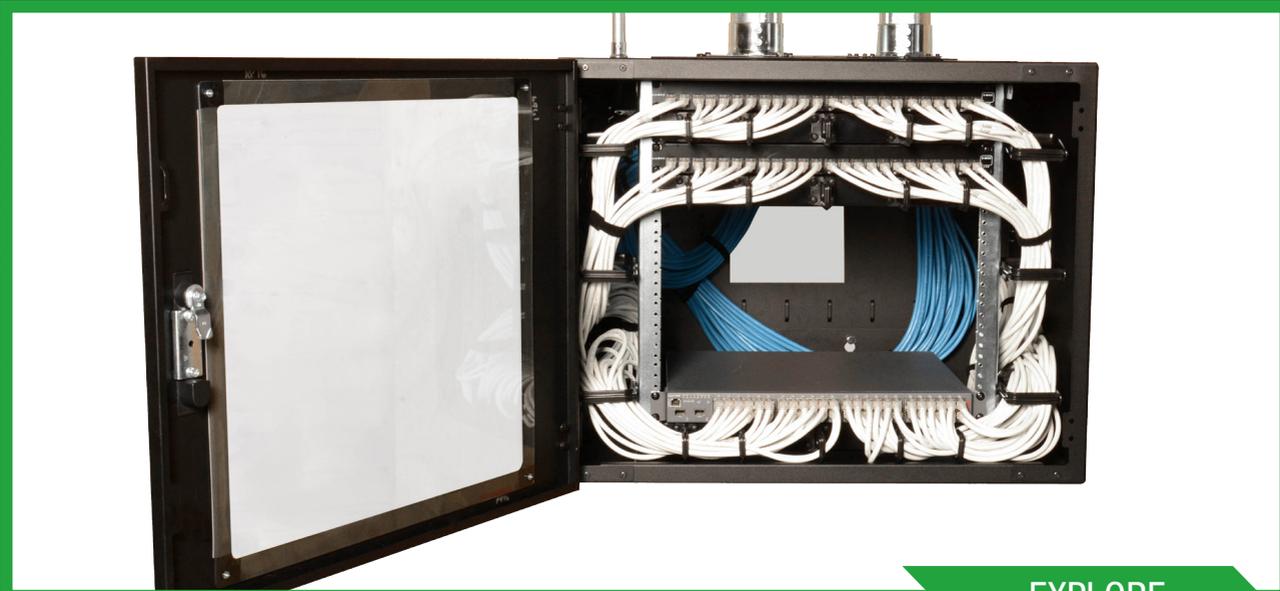


[EXPLORE](#)



Siemon introduces new Wall Mount Cabinet

Siemon has introduced a new Wall Mount Cabinet that saves valuable floor space whilst providing a cost-effective means to secure and protect network equipment from dust, tampering and other hazards in a wide range of applications.



[EXPLORE](#)

Siemon's Passive Ceiling Zone Enclosure Optimizes Digital Ceiling Deployments

Siemon announced a new Passive Ceiling Zone Enclosure that installs flush within a 2 X 2 foot drop ceiling tile space to support flexible, cost-effective zone cabling in today's highly automated buildings by enabling shorter, easy-to-manage copper or fiber connections directly to building devices or to equipment outlets supporting a variety of low-voltage building systems.



[EXPLORE](#)

EXPLORE

TIA Approves Category 8 Addendum for Publication

Category 8 cabling is a shielded balanced twisted-pair media type constructed from category 8 components and designed to support the 25GBASE-T and 40GBASE-T

applications currently under development by the IEEE P802.3bq 25G/40GBASE-T Task Force.

EXPLORE

The 2016 Ethernet Alliance Roadmap has Arrived

The Ethernet Alliance recently released their 2016 Ethernet Roadmap, which shows historical application speeds leading

to the latest developments in Ethernet and progressing to estimates for what future speeds may become available and when.

EXPLORE

A Closer Look at 40 Gigabit Duplex Fiber Solutions

There's been a lot of talk lately surrounding bidirectional 40 Gb/s duplex applications, or BiDi for short. Currently offered as a solution by Cisco®, BiDi runs over duplex

OM3 or OM4 multimode fiber using QSFP modules and wavelength division multiplexing (WDM) technology.



FEATURED BLOG: SIEMON STANDARDS INFORMANT REACHES MILESTONE



READ MORE

- TIA Approves Category 8 Addendum for Publication
- The 2016 Ethernet Alliance Roadmap has Arrived
- A Closer Look at 40 Gigabit Duplex Fiber Solutions
- Will 802.11ac Wireless Make Cabled Networks Obsolete?
- 25GBASE-T to Optimize Migration to 40GBASE-T

Standards Activity Update
This PDF lists the latest standards





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Siemon featured at the Cisco Digital Ceiling Partner Pavilion at Cisco Live!

Siemon was a proud participant at Cisco Live! 2016 in Las Vegas, Nevada. As a member of Cisco's Partner Ecosystem, we featured our ConvergeIT™ Cabling Solutions for Intelligent Buildings in the Digital Ceiling Partner Pavilion alongside a variety of partners, including PoE-enabled LED lighting providers Philips and Cree.

Unequivocally aligned with the Cisco Digital Ceiling that aims to extend the benefits of the Internet of Things (IoT) throughout facilities by converging multiple building networks, ConvergeIT Cabling

Solutions combine Siemon's proven quality with advanced copper and fiber cabling technology to create the unified structured cabling system that enables convergence of these building networks-lighting, heating and cooling, IP video, IoT sensors and much more. As partner in the Digital Ceiling, Siemon showcased its advanced copper shielded cables and connectivity that provide superior support of PoE-enabled systems, as well as innovative zone cabling solutions ideal for supporting a cost-effective, flexible Cisco Digital Ceiling deployment.



EXPLORE

Avaya Technology Forum 2016, Dublin, UK

Siemon UK sponsored the Avaya Technology Forum held at the Doubletree by Hilton Hotel in Dublin on 10-13th May 2016 and showcased its data center and intelligent building solutions. 450+ industry professionals attended the event, coming from the UK, Western and Eastern Europe to hear from industry experts and participate in the interactive breakout sessions. They were invited to 'evolve to a digital enterprise' and to learn about the latest technical strategy and transformational solutions designed to change business outcomes.

AVAYA | Technology
Forum 2016



EXPLORE

Data Center World 2016, London, UK



Siemon were joined by local distribution partner Networks Center at the prestigious Data Center World event at the Excel center in London. The event welcomed the largest delegate attendance in the event's history across the 3-days. Siemon promoted our WheelHouse® advanced data center solutions and services, including an example of the latest cabinet, fiber, copper,

automated infrastructure management and PowerMax™ Intelligent Power Distribution Unit (PDU) solutions available. As well as a great opportunity to network and meet existing contacts and customers, we were inundated with enquiries and leads from the event which are now turning into promising opportunities and we're certainly looking forward to returning in 2017.

A Closer Look at Plug and Play MPO/MTP Assemblies

The Internet of Things (IoT) and Big Data are driving the need for more bandwidth and increased transmission speeds from 10 to 40 and 100 gigabit per second (Gb/s) within data center switch to-switch backbone links to handle larger sets of complex data from multiple sources. New optical fiber technologies and standards have thankfully made it easier, more cost-effective and less complex to deploy high speed fiber backbone links.

Both 40 Gb/s (40GBASE-SR4) and 100 Gb/s (100G BASE-SR4) transmission are based on 8 multimode optical fibers – 4 transmitting and 4 receiving at 10 Gb/s or 25 Gb/s each. These applications use plug and play MPO/MTP Trunk Assemblies that enable faster deployment and ease of migration from 10 to 40 and 100 Gb/s. Even in 10 Gb/s applications, plug and play MPO/MTP-to-LC Hybrid Assemblies are used due to their easy plug and play deployment and ability to connect to MPO/MTP backbone cabling. These hybrid assemblies are also often used in 40 Gb/s link aggregation applications that aggregate

four duplex LCs running 10 Gb/s. With today's 40 and 100 Gb/s applications using the MPO/MTP interface, overall fiber cabling performance has become a critical factor, especially in the face of the more stringent channel insertion loss requirements of these next generation transmission speeds. Unfortunately, not all MPO/MTP assemblies are created equal, and selecting lower-cost versions from unproven sources can compromise performance. This article discusses and evaluates MPO/MTP Trunk Assemblies and MPO/MTP-to-LC Hybrid Assemblies to determine their viability in today's high speed fiber optic links.



In a previous white paper, A Closer Look at Fiber Optic Cable Assemblies, Siemon evaluated the performance of LC laser optimized multimode OM3 fiber jumpers from various suppliers and the impact on network installation. This white paper expands the focus to look at the performance of MPO/MTP laser optimized multimode OM3 trunk assemblies and MPO/MTP-to-LC laser optimized multimode OM3 hybrid assemblies. This study includes MPO/MTP Trunk Assemblies and MPO/MTP-to-LC Hybrid Assemblies from Siemon and four different generic assembly houses. Five samples of each assembly were purchased from each manufacturer through standard distribution channels. Siemon Labs tested each assembly to Siemon's specifications, as well as to TIA and IEC standards for end face geometry, cleanliness, optical performance and mechanical reliability.

Siemon's specifications are more stringent to ensure superior performance and application assurance for today's high speed fiber applications.

The MPO/MTP Trunk Assemblies evaluated in this study were 24-fiber plenum rated assemblies with 0.5 meter breakouts to two 12-fiber MPO/MTP connectors. The MPO/MTP-to-LC Hybrid Assemblies evaluated in this study were 12-fiber MPO/MTP hybrid assemblies with 0.5 meter breakouts to six duplex LCs. The evaluation tests included end face geometry, visual inspection, end face cleanliness, optical transmission performance and mechanical reliability.

End Face Geometry

End face geometry is an essential characteristic of repeatable and reliable optical fiber connections. Overall performance of fiber optic connectivity depends on the mechanical characteristics that control alignment and physical contact of the fiber cores. End face geometry parameters for MPO/MTP connectivity include:

- Angle of the polish
Horizontal or X axis (RX and GX)
- Angle of the polish
Vertical or Y axis (RY and GY)
- Fiber Protrusion Height (H)
- Maximum Fiber Height Differential
Among all Fibers (HA)
- Maximum Adjacent Fiber Height
Differential (HB)

Visual Inspection & End Face Cleanliness

Surface defects and overall fiber end face cleanliness is critical to optical performance, but will not always be detected via end face geometry testing. A smooth but fractured fiber will not necessarily fail end face geometry inspection for angle of the polish and fiber height.

EXPLORE



SIS

Siemon Interconnect Solutions

SIS are a division of the Siemon Company dedicated to supporting OEM's, VAR's, integrators and other organisations that incorporate network connectivity into their market centric solutions.

DAC Passive Copper Cables

- SFP+
- Cisco Compatible SFP+
- QSFP+
- QSFP+ FDR
- QSFP+ to 4 SFP+

Active Optical Cables

- QSFP+ AOCs
- QSFP+ FDR AOCs



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