

SIEMON | NEWS, EVENTS, AWARDS, PRODUCT & CASE STUDIES...

CABLING FOR THE FUTURE

Innovate

The Siemon Company Newsletter | Issue 10



EagleEye™ Connect

DISCOVER A NEW LEVEL FOR YOUR INFRASTRUCTURE MANAGEMENT:

**Siemon's EagleEye™ Connect (AIM)
Automated Infrastructure Management**

P04

**MapIT® G2 Next Generation Intelligent Infrastructure
Solution for Physical Layer Network Management**

P10



►► Siemon's Lighthouse Family of High-Performance Fiber Optic Products includes:

- A Complete line of high-density Plug and Play solutions supporting up to 40 and 100Gb's featuring Siemon's innovative LightStack™ solution with best in class cable management accessibility and ease of use
- Comprehensive line of RIC, SWIC and FCP rack and wall-mount fiber enclosures
- Rapidly deployed, predetermined and tested trunking assemblies in custom lengths, fiber counts and configurations
- High-performance, factory-tested jumpers and pigtails including Siemon's innovative push-pull LC BladePatch®
- Field-terminated connectivity - multiple LC, SC and ST configurations, individual and mass fusion splice solutions
- Fiber Cable Offering - Multimode OM1 62.5/125, OM2, OM3 and OM4 50/125, and Singlemode OS1/OS2
- Passive Optical LAN splitters and enclosures
- Cost effective Cisco-compatible SFP+ and QSFP high speed interconnect assemblies

To learn more about Siemon's LightHouse advanced fiber cabling solutions visit: www.siemon.com/lighthouse

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Monitor **Your** Network...
Manage **Your** Network...
Protect **Your** Network...

EagleEye™ Connect Software

Siemon's EagleEye Connect (AIM) Automated Infrastructure Management software provides unparalleled network visualisation, IT asset monitoring and connectivity management capabilities.

Physical layer connections and IT device status are automatically monitored and documented, providing IT staff a highly reliable database of information for network management decisions.

Better management of IT assets, improved network security, reduced downtime and increased IT staff productivity are just some of the benefits of EagleEye Connect.

EagleEye Connect software provides the critical central interface for the entire MapIT G2 system.

This web-based software collects, monitors and stores network intelligence data from MapIT G2 smart panels and connectivity, delivering this information in a robust and user-friendly set of network management features.



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EagleEye™ Connect

▶ Automated Infrastructure Management Software



Siemon's new EagleEye Connect automated infrastructure management software combined with Siemon's MapIT® connectivity management capabilities. Physical layer connections and IT device status are automatically monitored and documented, providing a highly reliable database of information for more efficient network management decisions.

Better management of IT assets, improved network security, reduced downtime and increased productivity are just some of the benefits of EagleEye Connect.

To learn more about Siemon's MapIT G2 and EagleEye Connect please visit www.siemon.com/eagleeye

New catalog inspired by our past, focussed on the future

In 1903, Carl Siemon launched The Siemon Company on the strength of his own innovative plastic compounds and soon began pioneering new telecommunication technologies.

Over a century later that spirit of innovation is still at the core of everything we do at Siemon – driving us to develop the most forward-looking, high-quality line of network cabling solutions in the world.

This catalog represents over a century of Siemon development, innovation and expertise. Detailing information on Siemon's comprehensive line of existing end-to-end copper and fiber network cabling systems.

“Despite the every-growing use of the Internet to access information, we still find print catalogs to be a relevant counterpart to our living online e-Catalog, statistics show that more than 50% of consumers use catalogs before making a purchase, and we want to be sure to still provide the tactile experience of a print catalog to those who prefer the option.”

Robert Carlson, Vice President of Global Marketing, Siemon.



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Siemon Unveils Data Center Showcase

The Data Center Showcase is to exhibit the company's comprehensive suite of high quality, high performance infrastructure solutions for the data center, including fiber and copper connectivity, cabinets, cable management, power and cooling systems, and Automated Infrastructure Management solutions.

Located at Siemon's corporate headquarters in Watertown, Connecticut, the high tech Data Center Showcase houses rows of Siemon's innovative VersaPOD[®], V800[™] and V600[™] data center cabinets designed to effectively save space, manage cabling and improve thermal efficiency.

[EXPLORE](#)

40/100G Fiber Cabling Solutions

Siemon is pleased to announce 40/100G Fiber Cabling Solutions that provide a fast, simple and economical upgrade path from 10 gigabit to 40 or 100 gigabit applications.

Part of Siemon's LightHouse™ Advanced Fiber Optic Cabling Solutions, the new solutions include a variety of equipment cords that allow customers to maintain and fully utilize their existing Siemon Plug and Play enclosures and Trunks for next generation 40/100 gigabit performance in network, server and storage applications.

To connect MTP trunk backbone cabling to active equipment via Siemon's Quick-Pack® or Ultra High Density LightStack™ MTP adapter plates that offer easy pass-through connectivity within Siemon's fiber enclosures, the new 40/100G Fiber Cabling Solutions include conversion cords that transition two 12-fiber MTP connectors to three 8-fiber MTP connectors, ensuring 100% utilisation of the 12-fiber MTP backbone trunks.

“Current 40 gigabit transmission and upcoming 100 gigabit transmission are both based on 8-fibers, leaving 33% of 12-fiber backbone trunks unused. Our conversion cords transition two 12-fiber MTP connectors to three 8-fiber MTP to prevent having unused fiber.”

Charlie Maynard, Fiber Optic Product Manager.



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Siemon's 4U LightStack™ optimises high density data centers

Siemon has launched a 4U version of its LightStack™ ultra high density fiber system to house 576 LC fiber or 3456 MTP fibers in just four rack units of space while ensuring superior port access, cable management and fast, seamless migration to advanced 40 and 100 gigabit applications.



Siemon MAX® In-Line Coupler Panel Speeds Deployment and Disaster Recovery

New MAX In-Line Coupler panel with RJ45 connections on both the front and rear of the panel for faster deployments and quick duplication of active equipment ports in a variety of applications.



Keep Pace With Big Data Demands Through Advancements in Storage Area Network (SAN) Technology

Data is growing at explosive rates in today's businesses. Big Data is increasing storage demands in a way that could only be imagined just a few short years ago. A typical data record has tripled if not quadrupled in size in just the last five years, however this data now has many forms including structured, semi-structured and non-structured.

In fact, according to a recent IBM® study, 2.5 quintillion bytes of data are written every day and 90% of global data has been created in the last two years alone. It is glaringly apparent that the size of databases is growing exponentially.

Aside from a company's human resources, data has become the most valuable corporate asset both tangibly and intangibly. How to effectively store, access, protect and manage critical data is a new challenge facing IT departments. A Storage Area Network (SAN) applies a networking model to storage in the data center.

Storage Technologies

With the advent of the Internet, Big Data, corporate intranets, e-mail, e-commerce, business-to-business (B2B), ERP (Enterprise Resource Planning), Customer Resource Management (CRM), data warehousing, CAD/CAM, rich media streaming, voice/video/data convergence, and many other real time applications, the demands on the enterprise storage capacity has grown by leaps and bounds.

The data itself is as important to a business's successful operation as its personnel and systems. The need to protect this strategic asset has far exceeded the capabilities of a tape backup. Tape access and capacities can simply not address the growing demands. Growing data stores meant having to implement tape libraries. Even then, there are inherent issues with tape media that could only be addressed with either supplemental storage or replacement of the media altogether.



Direct Attached Storage (DAS)

DAS is the traditional method of locally attaching storage devices to servers via a direct communication path between the server and storage devices. As shown in Figure 1, the connectivity between the server and the storage devices are on a dedicated path separate from the network cabling. Access is provided via an intelligent controller. The storage can only be accessed through the directly attached server.

This method was developed primarily to address shortcomings in drive-bays on the host computer systems. When a server needed more drive space, a storage unit was attached. This method also allowed for one server to mirror another. The mirroring functionality may also be accomplished via directly attached server to server interfaces.

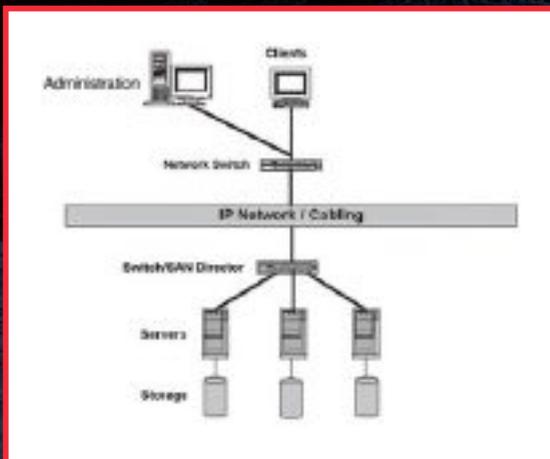


Figure 1: A Simple DAS Diagram

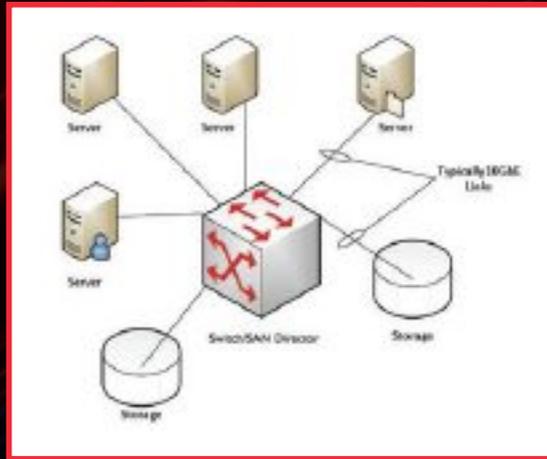


Figure 2: Simple NAS Architecture

Network Attached Storage (NAS)

NAS is a file-level access storage architecture with storage elements attached directly to a LAN. It provides file access to heterogeneous computer systems. Unlike other storage systems the storage is accessed directly via the network as shown in Figure 2. An additional layer is added to address the shared storage files.

This system typically uses NFS (Network File System) or CIFS (Common Internet File System) both of which are IP applications. A separate computer usually acts as the "filer" which is basically a traffic and security access controller for the storage which may be incorporated into the unit itself.

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Zone Cabling for Cost Savings

Workspaces are becoming increasingly social and flexible and are constantly being re-arranged and updated.

To determine how structured cabling can best support this evolving trend, Siemon studied the cost and environmental impact of various structured cabling designs. The results are in: zone cabling deployments provide the optimum balance of performance, flexibility, and efficient use of cabling materials in today's enterprise environments.

Cables are then run from the outlets or connecting blocks in the zone enclosure to telecommunications outlets in the work area (WA), equipment outlets serving BAS devices, or directly to BAS devices. Patch cords are used to connect voice and data equipment to telecommunications outlets and to connect BAS equipment to equipment outlets.

What is Zone Cabling?

A zone cabling design (or topology) begins with horizontal cables run from patch panels in the telecommunications room (TR) to connections within a zone enclosure (ZE), sometimes referred to as a zone box, which can be mounted under a raised floor, in the ceiling, or on the wall.

Note that the connections in the zone enclosure are made using modular outlets and/or punch down blocks - there is no active equipment in the zone enclosure. When deploying a zone cabling solution, Siemon recommends positioning zone enclosures in the most densely populated areas of the floor space. Figure 1 shows an example of a zone cabling layout.



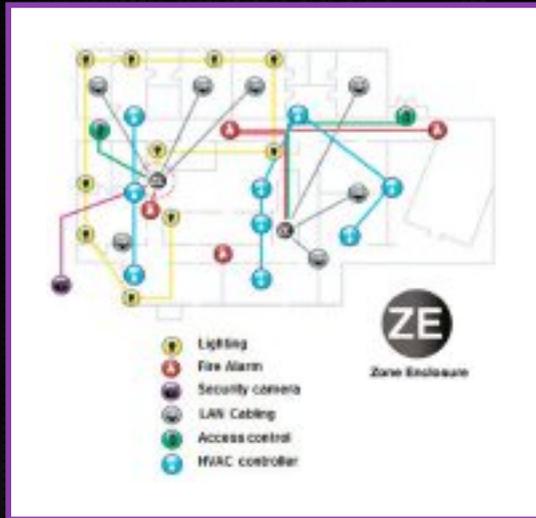


Figure 1: Example zone cabling layout serving voice, data, and BAS applications.

Enabling flexible client work spaces that efficiently accommodate moves, adds, and changes (MACs) is a signature element of a zone cabling design. Through analysing customers' office re configuration needs, Siemon observed that zone cabling deployments have the potential to provide significant cost savings benefits compared to traditional "home run" work area to TR cabling. This is because MACs performed on traditional home run topologies require more cabling materials and more installation time to implement.

As an example, Figure 2 shows a traditional home run cabling link and a zone cabling link; both of which are supporting a work area outlet located 200 feet away from the TR. The zone enclosure is pre-cabled from the TR with spare ports available to support new services and is located 50 feet from the work area outlet. If a second cable needs to be deployed, 200 feet of new cable needs to be pulled from the TR with a traditional design, while only 50 feet needs to be pulled when using a zone design. Significantly reduced installation times and minimized client disruption are additional benefits associated with pulling 75% less cable, which all contributes to improved return-on-investment (ROI) when using zone cabling designs.



Figure 2: Example 200 foot traditional and zone cabling links depicting new cabling length required to support the addition of a new service.

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Cabling Contractor Best Practice

The Impact of Termination Speed on Your Bottom Line

As a network cabling contractor, you need to keep an eye on product costs. When it comes to the cabling products you choose, you're balancing your customer's needs against what works for your bottom line.

But, it is important to remember that not every bottom line benefit can be measured in the product cost you see on your invoice.

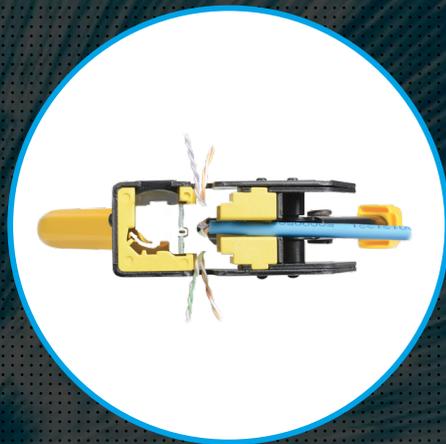
Sometimes, a product's ability to make you more efficient can outweigh the purchase price. Termination speed is a great example.

As a contractor, you know that labor costs are a major piece of a cabling project – an area where your customers may be looking to cut their own costs. So, it makes sense that if you can bid lower labor costs than your competition, you stand to win more business.



Siemon's MAX TurboTool enables category 5e and 6 terminations in as little as 18 seconds.

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Of course, you can't just go in there and slash your labor below the point of profitability. The key is driving labor efficiencies that give you the breathing room to profitably bid lower labor – simply put, you need to be able to get it done faster. If you can do the job faster than your competitor, you can bid lower, win the job, and still turn a decent profit.

Let's look at an example of a basic cat 6 UTP job and how termination times impact your profits. In this sample, we're looking at a theoretical 1000-drop cat 6 job. To make it easier, we're just looking at the terminations, not pulling cable or testing – just terminating jacks. Obviously, this is a

very simplified look at just one aspect of a project, but it does a good job of showing how the amount of time saved per jack can add up to significantly better profits and better chances of winning for you. Let's start with actual termination times. Outlet A can be terminated in 1 minute, outlet B in 2 minutes, and outlet C in 3 minutes. When it comes time to calculate a bid, you're not going to base your labor estimate on the exact termination time – that would leave no margin for error and would be totally impractical in the real world.

So let's say you add 2 minutes to the actual termination time for each outlet to calculate your bid estimate (as you can see in the table below). While you're estimating a lower labor cost on the bid for outlet A than for B or C. You are in fact giving yourself more room between your actual termination time and your bid estimate. For outlet A, your bid estimate is 3X higher than your actual time. Outlet B cuts it to 2X, and outlet C leaves just a 60% cushion. That extra room can have a real impact on your profitability.

[CLICK HERE TO DOWNLOAD THE FULL PAPER](#)

25GBASE-T to Optimize Migration to 40GBASE-T

Is there a “sweet spot” for data centers transitioning from 10GBASE-T to higher speeds? Based on recent market surveys and technical feasibility analysis, the answer is definitely yes. Trends for cloud servers and the latest forecast on server port speeds, both reported by Dell’Oro, lead to the conclusion that 25GBASE-T is a critical and heretofore lacking point on the migration roadmap to 40GBASE-T. In addition, multiple feasibility presentations...

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Answers to Your Category 8 Cabling Questions

“When will category 8 standards be ratified?” Both ISO/IEC and TIA Telecommunications Cabling Standards bodies are developing requirements for the balanced twisted-pair media that will support the 25GBASE-T and 40GBASE-T applications that are currently under development by IEEE 802.3. ISO/IEC is developing requirements for class I cabling constructed from category 8.1 components and class II cabling constructed from category 8.2 components. TIA is developing requirements for category 8 cabling constructed from category 8 components and is also undertaking an initiative to develop class II cabling requirements...

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Cabling Recommendations for 802.11ac Access Point Connections

Siemon recommends that two or more category 6A or higher rated shielded channels, deployed as part of an overall zone cabling configuration, are provided to every 802.11ac access point connection for three very important reasons:

1. TSB-162-A, “Telecommunications Cabling Guidelines for Wireless Access Points”, expressly provides the following recommendation and note...

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DEPLOY A RICH MOBILE APPLICATION

IN 1 DAY

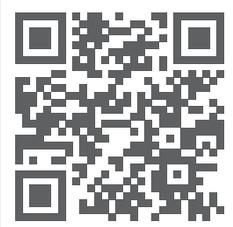
CAN YOUR NETWORK DO THAT?™

Avaya SDN Fx™ Architecture can.

97% of IT professionals expect software-defined networking (SDN) to solve their most persistent problems, from application performance to network management.* And those are two key components that make it possible to deploy a rich mobile application with Networking OnAvaya™.



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Claim of single-day app deployment from Dynamic Markets,
Fabric Connect Customer Experience Survey 2015

*Source: SDN Expectations, 2015

University of Bristol Life Sciences case study

Siemon supports technical advancement at the University of Bristol's £56.5m Life Sciences Building

The University of Bristol has completed a £56.5m investment in a new build, state-of-the-art Life Sciences site, designed to explore new horizons in biology and medicine.

Opened by Sir David Attenborough, the site is the University's biggest construction project to date and is a significant landmark on the Bristol skyline. The ground-breaking research at

the University of Bristol will be supported by a high performing Siemon network, to foster both academic advancement and a sustainable environment.

An iconic building now houses the School of Biological Sciences; fully equipped to become one of the UK's leading facilities for the advancement of Biological Sciences and a range of related disciplines. The new site is split



into three zones, including a five-storey laboratory wing, complete with acoustic chambers, spectroscopy and microscope rooms, clean rooms, a double height plant room and green houses for plant studies. Clustered around a central atrium, state of the art laboratories, teaching spaces and offices are all part of the build and are all supported by a Siemon category 6A F/UTP network infrastructure.

Located on St Michael's Hill in the center of Bristol, the Life Sciences Building regenerates 13,500 square metres of space in the heart of the city. The site for the new building used to house disused blocks of the old Children's Hospital, plus a building from the 1960's and two blocks of houses. All have been cleared to make way for this technologically advanced site, whilst the listed frontage of the hospital has been retained to provide an inspiring bridge from the city's heritage to its developing future.

To date, the School of Biological Sciences housed up to 2,000 occupants in cramped Victorian buildings, dating back to around 1880. Site managers realised that a complete new build would prove more cost-effective than refurbishment of

existing facilities and allow for progress to be made, not only in the sustainability of the site, but also in the environment for learning. The new building, with its visually arresting glass atrium, provides outstanding facilities for science teaching and is designed to enhance research-led study and staff-student interaction.

Progressive learning

The Life Sciences building boasts one of the largest teaching labs in the country, capable of teaching 200 students at once. There are multiple screens to ensure all students can see close-up what the lecturer is doing, plus the new laboratories are fully equipped with notebook computers and cutting edge equipment for microscopy, genetic analysis and environmental monitoring.

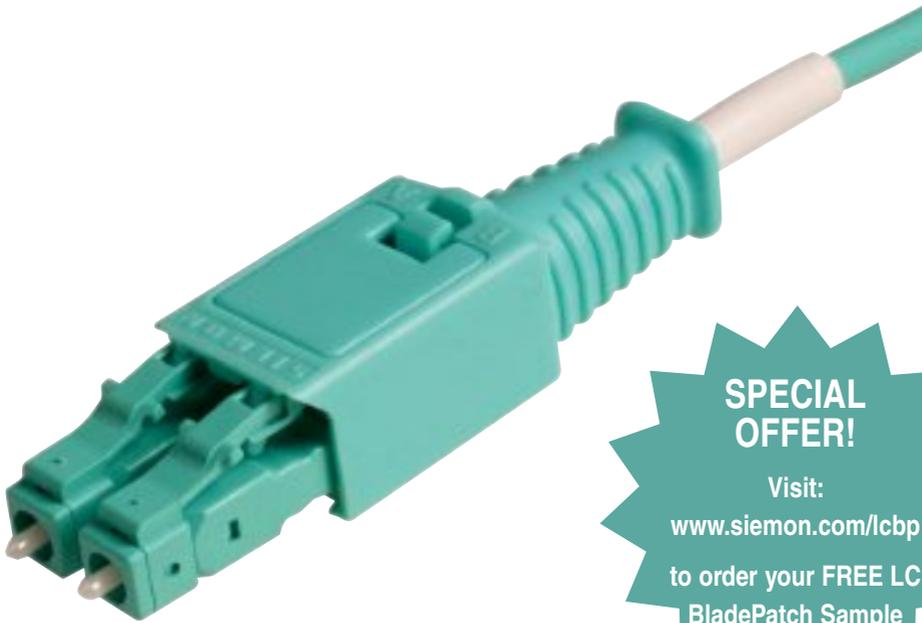
The facilities are all specially equipped to support physically and visually impaired students, with all of the benches being wheelchair accessible and white network outlets mounted on grey faceplates to give sufficient contrast to comply with the needs of the visually impaired.

[VIEW THE FULL CASE STUDY](#)

SIEMON's

LC BladePatch®

REVOLUTIONIZING HIGH DENSITY FIBER PATCHING



SPECIAL OFFER!
Visit:
www.siemon.com/lcbp
to order your FREE LC BladePatch Sample

Innovative, Easy Access, Push-Pull Latch Activation

Siemon's LC BladePatch® duplex jumper offers a unique solution for high-density fiber optic patching environments. It features a revolutionary and innovative push-pull boot design to control the latch, enabling easy access and removal in tight-fitting areas.

The LC BladePatch utilizes a smaller diameter uni-tube cable design which reduces cable pathway congestion improving air flow and increasing energy efficiency while simplifying overall cable management. The LC BladePatch provides low-loss performance for Multimode and Singlemode supporting the precise optical performance requirements for high speed networks and improving network performance. The LC BladePatch is ideal for patching high density blade servers, patch panels and equipment.



Fits within any standard LC adapter opening or LC SFP module (not compatible with internally shuttered LC adapters)



Rotating latch design eliminates potential fiber damage during polarity changes



The push-pull design enables easy access and removal via the boot in tight-fitting areas

