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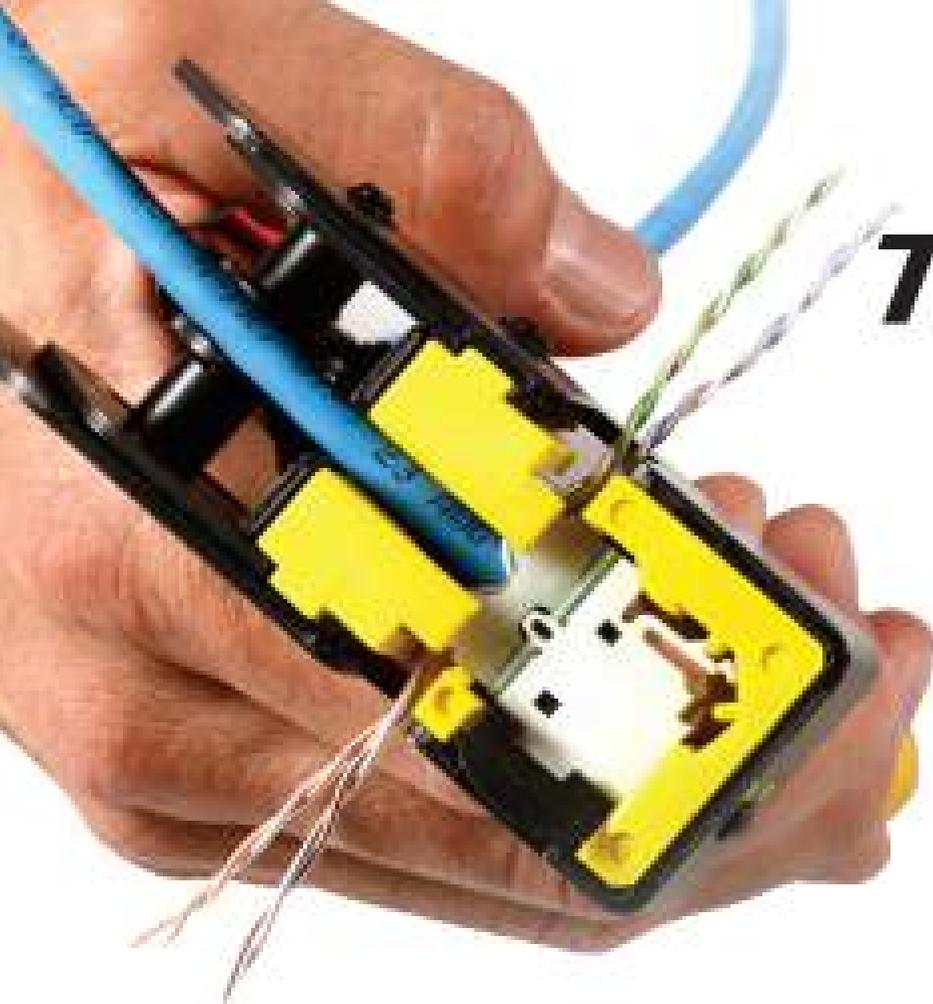
The Siemon Company Newsletter | October 2014

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Siemon IcePack™ proves the perfect solution for Genesis Oil & Gas **P18**

MAX[®] TurboTool™



▶▶ FAST

For cabling pros, fast and reliable terminations equals labor efficiency – and labor efficiency equals increased profitability. To see just how fast you and your team could be terminating category 6 outlets, and to find out how you can get a **FREE** MAX TurboTool, go to: www.simon.com/maxturbotool



▶▶ HOW FAST?

Check out the latest world-record-setting video at: www.simon.com/maxturbotool



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EXPLORE



Siemon responds to global data centre demand with V800 high density cabinet system

Siemon is pleased to announce the launch of its V800 cabinet system, designed to provide a robust, high performance enclosure that is cost-effective for both high density data centre environments as well as floor distributors.

The V800 cabinet offers increased cabling and equipment density, whilst providing easy accessibility and thermal efficiency. Effective as a stand-alone enclosure, or in a multi-bayed configuration, the V800 provides a modular configuration to enable use as a cabling, network switch or server cabinet.

Zero-U space in the V800 is provided on each side of the fully adjustable equipment rails for cable management, PDU mounting or connectivity on both the front and rear of the cabinet. This achieves maximum space utilisation within the cabinet footprint. Four zero-U spaces

on the front and four at the rear of the cabinet allow for mounting of eight zero-U panels... Each zero-U panel provides 2U of mounting space for any combination of 19 inch patch panels or fibre enclosures, offering up to 16U of additional mounting space per cabinet. Accessibility is a key feature of the new cabinet and the 1000mm or 1200mm depth options are exact, allowing for full access to adjacent tiles immediately to the front or back of placed cabinets. This ensures that the full 1.2 metres of aisle spacing recommended by ISO/IEC 14763-2 and EN 50600-2-4 is afforded by the V800. Quick release functionality allows the doors to be



rapidly removed and the full front and split rear doors are fully field reversible. Enhanced side access is provided by split side panels, allowing convenient access to installed equipment. The side panels feature integrated grounding via spring loaded bonding clips - eliminating the need for dedicated bonding conductors.

Thermal efficiency is achieved by the V800 with its contoured high-flow doors, built with 71 per cent perforation to exceed the air flow requirements of the major active equipment manufacturers. In addition, the cabinet lid includes four integrated brush guards to ensure that cables can enter the cabinet without compromising thermal integrity. Further thermal management options are available for the V800, including exhaust fans and vertical exhaust ducts. Siemon also offers SnapFit™ thermal blanking panels to populate any unused space in the cabinet to further optimise thermal efficiency.

Available in 42U, 45U and 48U heights, with a choice of 1000mm or 1200mm depths, the high-capacity V800 cabinet is designed to be lightweight yet extremely stable, providing a dynamic load rating of 1021kg and a static load rating of 1361kg. It can be used in conjunction with Siemon's standard V600 cabinets or premium VersaPOD® cabinets and shares a common design appearance. The V800 has its own specific range of accessories

including various panel mounting and cable management options, brush guards and blanking panels.

“Siemon’s V800 delivers high capacity, exceptional functionality and thermal efficiency to suit a wide range of application environments and is the perfect expansion of our global choice of cabinet offerings.

Whilst feature-rich, this cabinet is cost-effective and its modular design enables flexible scalability. The initial feedback has been very positive and we are seeing strong interest from the market for this cabinet solution.”

Dave Valentukonis, Product Manager,
Siemon

EXPLORE



Siemon launches copper/fibre combo panel

Siemon has launched a new mixed media patch panel. The 1U 'Copper/Fibre Combo Panel' allows copper outlets to be mixed with fibre ports in the same rack mount space to efficiently maximise rack space utilisation.

The new 'Combo' panel offers exceptional versatility and density, making it ideal for any situation where space is limited. It is compatible with all Siemon Plug and Play metal (PPM) fibre modules and metal fibre adapter plates, accepting up to four fibre modules or adapter plates within its 1U height.

Each copper adapter plate fits up to six copper outlets with individual port identification and accommodates both shielded and unshielded copper systems, from category 5e to Siemon's high performance category 7A TERA® and category 6A Z-MAX® outlets. Constructed of lightweight high strength steel with anodised black finish, the Combo Panel is robust and, like all Siemon

products, is designed to be installer-friendly. It is ANSI/EIA 310-D compliant with an integrated grounding strip to ensure proper ground path from copper outlets to grounding point. The design includes integrated cable management features to secure cables in order to provide proper strain relief and the panel is supplied complete with tie-wraps, grounding kit, and mounting screws.

“The Combo Panel efficiently utilises rack mount space to maximise density. By accommodating a range of fibre and copper combinations, it provides considerable flexibility and choice for those designing cabling infrastructure.”

Brian McCaffrey, Product Manager, Siemon

EXPLORE



Siemon Announces MAX[®] TurboTool Challenge Winner

18-Second Category 6 MAX termination beats previous world record by over 6 seconds.

Siemon is pleased to announce the US winner for round 2 of its MAX TurboTool Termination Challenge. This online contest challenged cabling contractors to test their skills against fellow cabling pros to see who could perform the fastest Category 6 UTP MAX outlet termination using Siemon's MAX TurboTool.

The contest asked contractors to send Siemon a video of their fastest TurboTool termination, offering \$1000 to the top performer with an additional \$500 bonus if the winning entry beat the previous 24.18-second world record held by Alberto Luna.

The fastest termination, submitted by John Crawford, a Low Voltage Tech from HITECH Communications in Robins, Iowa, came in at 18 seconds flat – an amazing effort that surpassed all Siemon expectations. John's actual video entry may be viewed at: www.siemon.com/maxturbotool.

“John’s video blew us away...All of the Siemon judges, myself included, didn’t think the previous MAX record of 24.18 seconds would be beaten at all, let alone beaten by over 6 seconds.”

Brian Duval, Channel Marketing Manager, Siemon

According to Duval, Crawford's record 18-second termination was made even more impressive considering his relative lack of familiarity with the Siemon TurboTool.

“In fact, he only had the tool for a couple of days before he sent us his video. If John can set an 18-second termination benchmark with just a few hours of practice, you have to wonder how fast other cabling installers might be after a full day's worth of TurboTool terminations on the jobsite.

[VIEW THE VIDEO HERE](#)



LightStack™ Ultra High Density Fibre Enclosure



Siemon has created a new video to illustrate the advantages of the LightStack ultra high density fibre Plug and Play system for high performance data centres.

As the film explains, the revolution caused by Big Data, Cloud computing and virtualisation has driven the need for even higher port density in data centres and this video...



demonstrates how to achieve the maximum connectivity in the lowest amount of space.

Siemon's new end-to-end fibre system, LightStack™, is showcased in the video which illustrates how fibre counts of up to 144 LC, or 864 fibres via 12 fibre MTP interface, can be accommodated in a single rack unit (1U).

The complete system is outlined, including the innovative patent-pending enclosure, high performance low loss plug and play modules, pass through adapter plates, trunking cables and best in class cable management features. Whilst density is maximised in this demonstration, ease of use is also highlighted, with unmatched access to connectivity at the front and rear of fully installed enclosures. According to Siemon, this video is equally relevant to end users, data centre designers, consultants and installers. It seeks to introduce the high performance, high density fibre system in a clear and straightforward style whilst stressing the benefits in a realistic data centre application.

Accessibility and ease of use is demonstrated, with modules and adapters being easily removed and inserted in a fully stacked enclosure, both from the front and

rear. Cable management features are also highlighted, such as the swivel cable tie-down points on the rear of the LightStack enclosure, designed to maintain proper bend radius, and the enclosure's magnetic door is demonstrated, showing how it avoids pinch points that can damage fibres.

“As today’s high-density data centres migrate from 10 to 40 and 100 Gigabit speeds, they require low-loss fibre connectivity to support multiple mated connections for flexible patching options, whilst remaining within link loss budgets. At the same time, these connections need to be easily accessed and managed to quickly and effectively make changes. With superior best-in-class features, our new LightStack ultra high density fibre system is uniquely positioned to overcome current and future fibre connectivity challenges and this video shows clearly how it achieves that.”

Charlie Maynard, Product Manager, Siemon

[EXPLORE](#)

Killer App Alert! IEEE 802.11ac 5 GHz Wireless Update and Structured Cabling Implications

Killer app alert! The newly published IEEE 802.11ac Very High Throughput wireless LAN standard has far reaching implications with respect to cabling infrastructure design.

Users can expect their current wireless speeds to appreciably increase by switching to 802.11ac gear with 1.3 Gb/s data rate capability that is available today. And, 256-QAM modulation, 160 MHz channel bandwidth, and a maximum of eight spatial streams can theoretically deliver 6.93 Gb/s in the future! For the first time, the specification of high performance cabling supporting access layer switches and uplink connections is critical to achieving multi-Gigabit throughput and fully supporting the capacity of next generation wireless access points.

- Specifying Category 6A or higher performing horizontal cabling in combination with link aggregation to ensure immediate support of the 1.3 Gb/s theoretically achievable data rate deliverable by 802.11ac 3-stream wireless access points (WAPs) and routers available today
- Installing a minimum of 10 Gb/s capable balanced twisted-pair copper or Multimode optical fibre backbone to support increased 802.11ac uplink capacity
- Utilising a grid-based zone cabling architecture to accommodate additional WAP deployments, allow for rapid reconfiguration of coverage areas, and provide redundant and future-proof connections.

[DOWNLOAD THE FULL WHITE PAPER](#)

WEBINAR CATCH-UP: View our recent Webinar on IEEE 802.11ac 5Ghz Wireless Update.

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SIEMON'S
Ruggedized
▶▶ Connectivity

Siemon is well-known for its industry leading, high performance connectivity. The same high performance copper and fiber products are available with our patented Ruggedized MAX® & Z-MAX® housings. Ruggedized outlets and modular patch cords provide an IP68/IP67-rated seal, protecting plug and outlet contacts from dust, moisture, industrial cleaning chemicals and vibration. These solutions are ideal for protecting valuable connections in laboratories, hospitals, food processing plants and other harsh environments.

For more information on Siemon's line of Ruggedized products visit: www.siemon.com/ruggedized



Siemon webinar explains value of low loss multifibre connectivity in the data centre



Siemon recently held a webinar to explain how low loss versions of its fibre connectivity can help data centre managers contend with today's shrinking optical loss budgets, whilst supporting multiple mated pairs, for flexible high-speed fibre channels.

WEBINAR CATCH-UP:

View our recent low-loss Multifibre Connectivity Webinar



EXPLORE

This latest webinar in Siemon's educational series, entitled 'The Need for Low Loss Multifibre Connectivity in Today's Data Centre', was presented by Carrie Higbie, Siemon's global director of data centre solutions and services.

Optical insertion loss budgets have become one of the top concerns for data centre managers, especially in today's large virtualized server environments. New switch fabric architectures are a significant factor, as are higher speeds, resulting in longer-distance fibre backbone channels using MPO connectivity for networking and storage area network (SAN) applications.

With these more stringent insertion loss requirements, standard loss MPO connectors significantly limit the number of mated connections that can be deployed in a fibre channel. This has created the need for low loss fibre connectivity that can support multiple mated connections, to provide flexibility and manageability over a wide range of distances and configurations,

whilst delivering sufficient loss headroom for deployment of the latest high-speed fibre applications.

“There are many trends in the data centre environment, such as higher speeds, new non-blocking designs and software defined networking, that benefit from the use of cross connects,”

Carrie Higbie, Global Director of Data Centre Solutions and Services, Siemon

“With cross connects requiring more passive connection points within a channel, low loss fibre connectivity is the key to staying within loss budgets - especially in higher speed Ethernet and Fibre Channel applications that have more stringent loss requirements than ever before.”

EXPLORE

Siemon is well-known for its industry leading, high performance connectivity

The same high performance copper and fibre products are available with our patented Ruggedised MAX® & Z-MAX® housings. Ruggedised outlets and modular patch cords provide an IP66/IP67-rated seal, protecting plug and outlet

contacts from dust, moisture, industrial cleaning chemicals and vibration. These solutions are ideal for protecting valuable connections in laboratories, hospitals, food processing plants and other harsh environments.

EXPLORE

New free Visio stencils for Siemon network infrastructure and data centre products

Did you know Siemon regularly updates its free Visio stencil library so you can create great network diagrams quickly and easily?

The Siemon network infrastructure and data centre products recently added to our

Visio library as Visio stencils include new Siemon LightStack™ High Density Plug and Play products, Universal Modular Furniture Adapter, enhanced VersaPOD® and V600 cabinets and accessories, new V800 cabinet, and many more.

EXPLORE

Lyle Menard give tips on using Siemon VersaPOD data centre cabinets

In this new video, Siemon data centre expert Lyle Menard, RCDD/NTS, provides tips on how to benefit from the unique features of the Siemon VersaPOD data centre solution when planning data centre installations.

VersaPOD offers the density, scalability and efficiency you need to design the ideal infrastructure for your data centre environment...

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Success relies on the ability to see what your competitors miss and create advantages where others fail to think beyond the status quo.

Our clients started small but dreamed bigger. With more than 130 locations across 11 countries and four continents, the most ambitious organizations in the world partner with Digital Realty. And we help them find their data advantage and achieve their biggest goals.

Data Center Solutions

When it comes to our client's data center, there is no one-size-fits-all. Our team of technology experts know how to listen, adapt and quickly craft the right solution for our clients.



Colocation Services

Racks, cages and services adjusted to your evolving needs.



Data Center Suites

Dedicated or shared infrastructure with resiliency options and a range of densities.



Powered Shells

Fit-out ready and fully permitted buildings on power and fiber-provisioned sites.



Custom Solutions

Tailored design, engineering and construction specific to fit your needs.



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Data Center Storage Evolution

An Update on Storage Network Technologies including DAS, NAS, SAN, SAN over IP, Fiber Channel and More

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. The SANs operate behind the servers to provide a common path between



WEBINAR CATCH-UP:

Watch our recent Webinar on the
Data Center Storage evolution



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servers and storage devices. Unlike server-based Direct Attached Storage (DAS) and file-oriented Network Attached Storage (NAS) solutions, SANs provide block level or file level access to data that is shared among computing and personnel resources. The predominant SAN technology is implemented in a Fibre Channel (FC) configuration, although new configurations are becoming popular including iSCSI and Fibre Channel over Ethernet (FCoE). The media on which the data is stored is also changing.

With the growth of SANs and the worldwide domination of Internet Protocol (IP), using IP networks to transport storage traffic is in the forefront of technical development. IP networks provide increasing levels of manageability, interoperability and cost-effectiveness. By converging the storage with the existing IP networks (LANs/MANs/WANs) immediate benefits are seen through storage consolidation, virtualization, mirroring, backup, and management. The convergence also provides increased capacities, flexibility, expandability and scalability. The two main standards utilizing the IP protocol are FCoE (Fibre

Channel over Ethernet), and iSCSI (ip Small Computer System Interface). Both carry either Fibre Channel or SCSI commands incorporated into an IP datagram. FCoE is different in that Fibre Channel commands are encapsulated into IP traffic, but this requires a converged network adapter (CNA) that is capable of speaking both Fibre Channel and Ethernet for encapsulation. iSCSI operates over standard Ethernet networks and standard Ethernet adapters at the edge device called the initiator.

Today, 10Gigabit Ethernet is becoming increasingly popular as the horizontal application of choice in corporate data centers. Gaining a competitive edge from deploying 10 Gigabit Ethernet in the enterprise requires a robust IT infrastructure. Increasingly, 10GBASE-T and 10Gb SFP+ applications provide a reliable foundation for data centers' networking components and SAN networking. With a structured cabling system capable of 10GBASE-T, users are provided with an open and industry standards-based infrastructure that can support multiple converged applications.

DOWNLOAD THE WHITE PAPER

Siemon IcePack™ cooling chosen by Genesis Oil & Gas

Genesis means ‘the beginning or origin of anything’ and this is a fitting title for the global oil and gas consultancy that recently created its landmark new headquarters, including its own data centre, overlooking St Paul’s Cathedral in London.

Described as ‘the beginning of the future’ for this 25-year-old energy industry specialist, these iconic offices will lead operations for its 16 sites around the world and provide the benchmark for its technical standard. For the upstream oil and gas industry, Genesis provides early phase engineering consultancy, full-lifecycle subsea engineering services and design of onshore and offshore projects. It helps its clients to maximise the financial return from their hydrocarbon assets and, whilst multi-national, the company works as one team from sites that span the globe. With a demanding set of requirements

for its IT investment to deliver, the first consideration for Genesis was selection of suitable systems and suppliers. Siemon came highly recommended and, thanks to its complete, high performance end-to-end offering, it won the competitive tender to supply the complete network infrastructure for Genesis.

The Genesis building is organised over six floors and so its network plan included five server rooms and one data centre/communications room, connected by Siemon’s high quality OM3 fibre optic cable in the backbone.



“Siemon offered a complete, best-in-class infrastructure, from the backbone to the desktop, with the best data centre products, including an exciting innovation in cooling. With network design experts ready to support us and a comprehensive 20 year warranty, it was clear that the value offered by Siemon went far beyond the superior performance of our chosen system.”

Stephen Golliker, Global IT Director, Genesis

Given the challenging installation schedule, the fibre selected for the data centre was MTP Plug and Play, which guarantees maximum channel throughput and offers 75 per cent faster installation than on-site termination. With the requirement to support 10Gb/s, Siemon's Z-MAX® category 6A FUTP copper system was chosen.

This system combines consistent best-in-class performance, unparalleled usability and speed of termination, with security and robust noise immunity. It provides the highest margins on all performance requirements for Category 6A/Class EA, including critical alien crosstalk parameters. For its data centre Genesis ordered four thermally efficient VersaPOD® cabinets,

which uniquely offer zero-U patching capability to optimise space usage and air flow. As a company that innovates and embraces innovation, it chose to equip each VersaPOD with Siemon's new IcePack™ cooling doors. These rear door heat exchangers use passive liquid cooling technology can deliver a cooling capacity of up to 33kW per cabinet.

The close-coupled cooling system uses a specialised fin-and-tube coil which absorbs and cools heat exhaust from network equipment and dramatically reduces the requirement for other, more energy hungry, air cooling methods. The energy consumption of the IcePack system can reduce the cost of cooling requirements by up to 80 per cent over traditional CRAC systems. Compared to most air-based cooling systems, they reduce noise levels as well.

For Genesis lower capacity IcePack doors were chosen to deliver a cooling capacity of up to 12kW per cabinet and operate unsupported in most instances. The data centre therefore has minimal air conditioning provisioned which is set to kick-in only if room temperature rises to 24 degrees Celsius (as yet unseen). The air conditioning is therefore currently only turned on for a short time once a week, under the control of the BMS, to confirm its availability in case it is required rather than to manage temperature...

[VIEW THE FULL CASE STUDY](#)



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