DATA CENTER INSIGHTS

Edition 3

FICOLO

An interview with Kim Gunnelius: "We needed a solution combining highest quality with maximum flexibility"

BELGIUM MINISTRY OF DEFENSE

The Ministry of Defense tools up on cybersecurity. Legrand equips the HQ site in Evere.

DATABALANCE

Databalance becomes first Dutch IT solutions provider to use Keor MOD UPS

LU-CIX

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DTIX

Legrand's personalized service enhances the value of the new Nexpand cabinets in the DTiX data center

IOMART

Cloud-centric future for leading UK colocation & managed services provider Iomart

APRR

Nexpand cabinets customized to meet APRR's (Autoroute Paris-Rhin-Rhône) specific requirements

CREATING INTELLIGENT DATA CENTERS

legrand®

COLOPHON

CONTENTS

a SUSTAINABLE STRATEGY for SUCCESS

Ralf Ploenes, Vice President Legrand Data Center Solutions Europe

Ralf Ploenes's journey to become the Vice President of the Legrand Data Center Solutions Europe organisation is a great example of just why the company has had so much success in the data center space.

Ralf's electrical industry background led him from the aerospace industry into datacoms sales and then, 20 years ago, he first came across data centers at a time when, rather as during the current pandemic, they were, in Ralf's words, 'eating up supplies'.

Working for Raritan when it was acquired by Legrand, Ralf's expertise was recognised and rewarded - when Legrand subsequently acquired Server Technology, he was asked to head-up the joint Raritan/ServerTech organisation in Europe. And, as of the 1st of January this year, Ralf took charge of the newly created Legrand Data Center Solutions Europe.

STRATEGIC ACQUISITIONS

So, Legrand values the individuality and expertise of its strategic acquisitions – both the technology and the people. Add into the mix comprehensive, continuous customer feedback, and it's not difficult to understand how the company has made its presence felt in the global data center market, from a standing start just nine years ago, when it acquired Minkels. This was the start of the plan to acquire companies with specialist data center technologies; companies who also have a high profile in at least one of Legrand Data Center Solutions's defined four data center markets: hyperscale, colocation, corporate and SME.

The recent Starline acquisition is a great example of this successful approach. Legrand already had a comprehensive critical power portfolio, but no profile in the data center sector. Thanks to Starline coming on board, a $2 billion data center opportunity has opened up. And Ralf hints that similar success awaits Legrand's 'fantastic' fibre offering, just as soon as the right acquisition opportunity arises.

The challenge now, or rather one senses that Ralf views it as a huge opportunity, is to leverage these specialist segments, to make the whole company greater than the sum of its parts. Ralf explains: "We want to develop interoperability to exploit the synergies of these different fields of expertise. On their own, each brand has a strong profile in a particular data center sector and our task is to make our many single brand customers aware of our other brands. And we need to achieve this while maintaining the relative strengths and expertise of the different organisations we've acquired – their independence is a major strength."

FOCUS ON SUSTAINABILITY

The end goal is to achieve the number one or two market share position in every one of Legrand Data Center Solutions's chosen data center technologies. In part, this will be achieved thanks to the excellence of the technology solutions themselves. However, Ralf is also aware that, right now, data center customers have a major focus on sustainability, and he sees this as a complimentary way to grow the Legrand Data Center Solutions business.

Customers want help to improve the energy efficiency and sustainability of their own data centers. Increasingly, they also want to be confident that their suppliers are committed to sustainable practices within their own organisations.

As practical evidence of such a commitment, Legrand recently joined the Sustainable Digital Infrastructure Alliance (SDIA), whose mission is to drive collaboration across the value chain to promote a sustainable digital economy.

Ralf explains: "We believe that we have to bring innovative and sustainable products to market, and this is why were are committed to delivering eco passports with our products, for example, and driving eco design."

PARTNER APPROACH

Additionally, Legrand sees great value in collaboration throughout the supply chain – energy suppliers, software and hardware vendors, data center infrastructure suppliers, and customers – to test, improve and bring to market sustainable data center solutions. Such interaction is something which the SDIA exists to facilitate.

These partnerships are not just restricted to sustainability projects and outcomes. Ralf hints that Legrand Data Center Solutions could well take a similar approach to the massive potential of the 5G/edge data center market (not forgetting the acquisition route!). Certainly, he wants to see the company play a full role in this space.

As for the other current IT industry obsession – security – Ralf is confident that, thanks to Raritan's expertise when it comes to the remote monitoring and management of server hardware, Legrand Data Center Solutions is taking an industry-leading role. He explains: "The highest levels of security are key to our out-of-band management solutions, so we have a strong focus on cybersecurity. They may not always need it to the same level, but our PDUs, for example, have the same level of security. We've created a Cybersecurity Group which looks at both internal and external security threats – we take them very seriously."

Talk of security brings us to two final areas where Ralf believes that a partnering approach pays dividends. Firstly, the pandemic has caused unprecedented strain on global supply chain security. In order to minimise this impact, Ralf urges customers to work with Legrand Data Center Solutions, to share their plans and requirements, so that any potential supply issues can be addressed proactively. As he puts it: "Partners and customers can't over-communicate with us!"

Security of both supply and knowledge is something which he sees as equally important for Legrand Data Center Solutions's channel partners. That's why the company has recently created the Data Center Academy, to be a knowledge base for partners who want to grow their relationship with both Legrand Data Center Solutions and their customers. At a time when the data center industry is facing an acute skills shortage, the opportunity to improve knowledge and expertise is a valuable one. ∎

Li legrand® | DATA CENTER SOLUTIONS

Did you know...

Legrand can provide you a complete data center infrastructure.

The comprehensive and innovative range of products deals with every aspect of the data center; from the cabling systems of Legrand to the data center infrastructure of Minkels and Modulan and the data center power management solutions of Raritan, Server Technology & Starline. Our local team of experts can advise you on the best solution for your business.
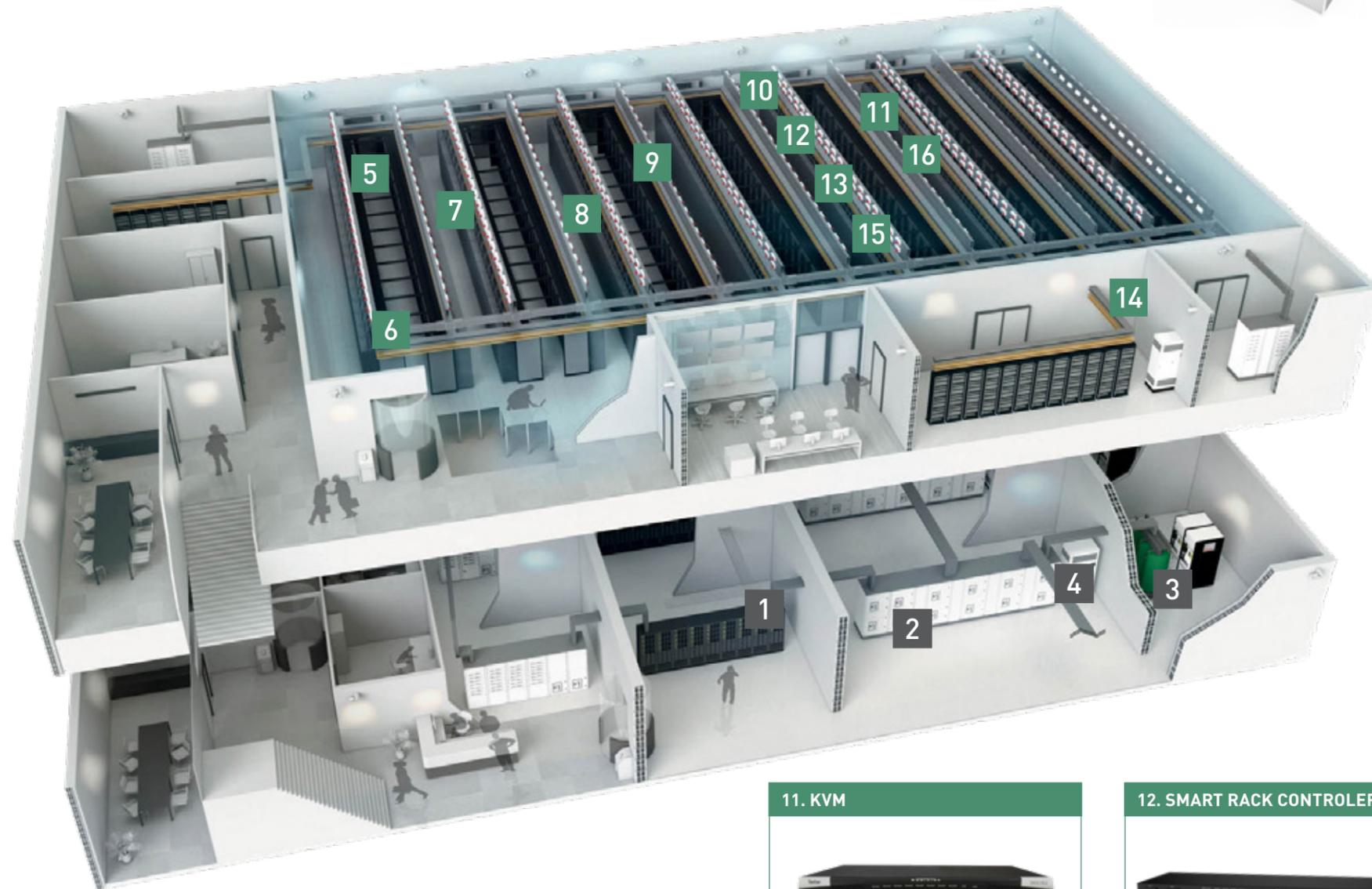
YOUR BENEFITS
- One single point of contact with years' worth of knowledge
- Advice from specialists with specific expertise and a tailored innovative product portfolio for your complete data center request!
- Scale according to your business requirements
- Get the maximum from your existing and future IT equipment
- Enhance your data center reliability

1. UPS

2. POWER DISTRIBUTION BOARDS

3. TRANSFORMERS
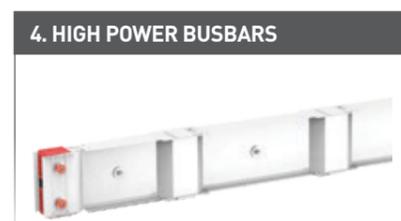
4. HIGH POWER BUSBARS

5. CABINETS & RACKS

6. CAGING

7. PASSIVE & ACTIVE COOLING

8. DCIM

9. BUSWAYS

10. PDU'S

11. KVM

12. SMART RACK CONTROLER

13. ENVIRONMENTAL MONITORING

14. FIBER DUCT & WIREMESH CABLE TRAYS
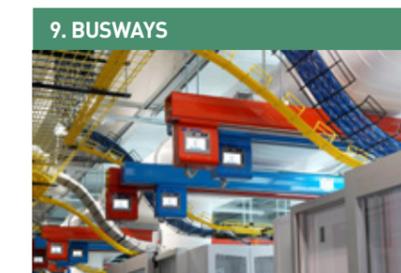
15. E-LOCKING

16. STRUCTURED CABLING SYSTEMS (FIBER & COPPER)

Acquisitions
COMPOSE & CHAMPION ONE

CHAMPION ONE AND COMPOSE STRENGTHEN LEGRAND'S POSITIONS IN DIGITAL BUILDING INFRASTRUCTURES

The Legrand Group continued its growth in digital infrastructures by acquiring Champion ONE (C1) and Compose. Both are well-known players in solutions and services for fiber-optic networks, designed in particular for data centers and Internet service providers. The news marks the latest move by Legrand to support data center and mission-critical IT's ever-growing need for reliable, highly available, and scalable power and connectivity solutions.

The Champion ONE (C1) family of brands, which include Approved Networks, Champion ONE, and U.S. Critical, are best-in-class providers of optical networking components and solutions, offering benchmark products in both universal and customized configurations. Moving forward, the acquisition will strengthen and help the C1 family of brands grow its sales and channel relationships as its vendor-agnostic transceivers are introduced to Legrand's extensive IT industry partners.

"Legrand is a visionary that combines best-of-breed technologies to uniquely engineer world-renowned solutions for mission-critical facilities," said Michael Rapp, CEO, C1 family of brands. "We are excited to work closely with their engineering, marketing, and sales teams to broaden our reach in support of today's evolving data center requirements."

Compose Advanced Solutions is a Dutch specialist in fiber-optic connectivity – incorporating patch panels and patch cords – and helps clients configure their digital infrastructures through audits, design, risk assessment, certification and more.

These two acquisitions perfectly complement the existing Legrand Data Center Solutions product portfolio, which includes cable trays, power distribution units (PDUs), busbars, UPS systems, transformers, switchgear, cabinet & containment and cooling

Ronny De Backer, CEO Legrand Benelux: "The addition of Compose and Champion One to our product range emphasize our ambition to offer our customers, specifically in the applications of data centers and telecom, the most complete product range and expand our leading position in these markets." ■
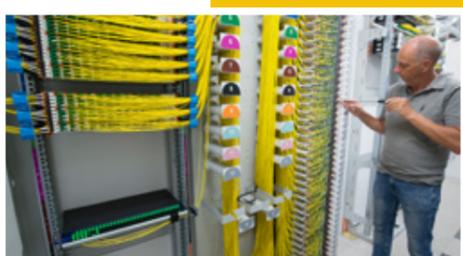
MORE INFORMATION
www.composeadvancedsolutions.eu/en
www.championone.com

NEWS

SERVER TECHNOLOGY WINS DATA CENTER PDU INNOVATION OF THE YEAR AWARD

Server Technology, a brand of Legrand and a leading provider of intelligent rack power distribution units (PDUs), announced that the PRO3X line of PDUs has been selected as Data Center Solutions (DCS) Data Center PDU Innovation of the Year 2020.

Judges were impressed by the PDU's power density, uptime, capacity planning, and remote power management capabilities as well as its versatility to meet the needs of any size data center, edge compute locations, and dense IT cabinets, offering multiple innovative features combined into the smallest form factor.

For three consecutive years, Server Technology's PDUs have been chosen by the DCS Awards judges as among the best power devices in the data center industry. The PRO3X PDU was selected due to its unique features such as its 2-in-1 HDOT Cx outlets which standardize a single PDU for multiple applications due to its ability to act like a C13 or C19 outlet, its RamLock outlet retention mechanism, built to secure the broadest range of C14 and C20 plugs, and its firmware powered by the Xerus™ Technology Platform that delivers unsurpassed security and visibility into the power chain.

In addition to the award for the PRO3X line of PDUs, the Legrand Data Center Solutions portfolio of brands also secured a ground-breaking finalist position in six award categories. ■
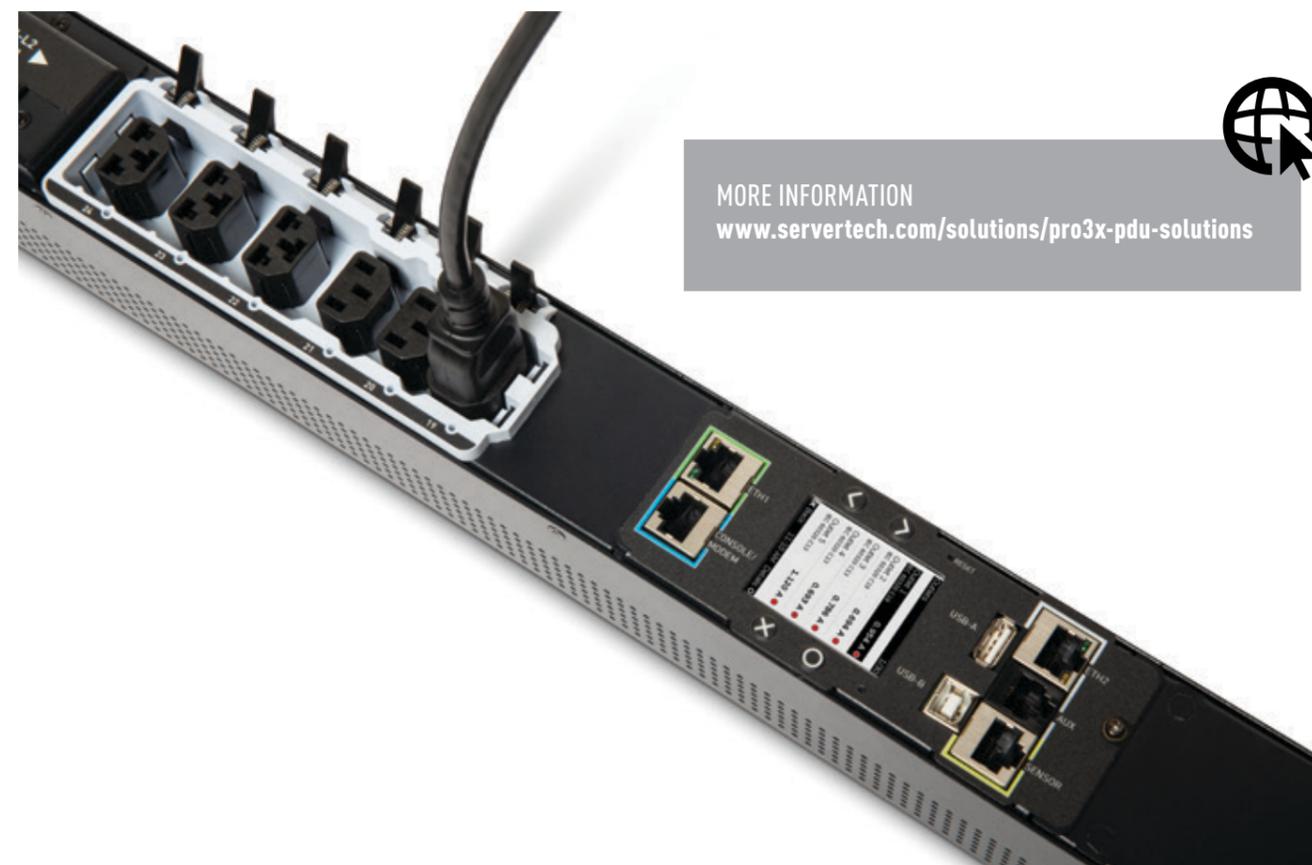
MORE INFORMATION
www.servertech.com/solutions/pro3x-pdu-solutions

In order to deliver quality, flexibility and speed, a data center company must be able to rely on stable partners who understand the challenges they face in their business. Ficolo found Legrand as a trusted supplier, when it came to setting up their new data center 'The Air' in Helsinki.

'WE NEEDED A SOLUTION COMBINING HIGHEST QUALITY WITH MAXIMUM FLEXIBILITY'

KIM GUNNELIUS, FICOLO'S CHIEF COMMERCIAL OFFICER AND CO-FOUNDER

Kim Gunnelius, Chief Commercial Officer and Co-founder of Ficolo

CUSTOMERCASE

Ficolo Ltd is a Finnish based data center company with three owned data centers and a connectivity hub. Ficolo's customers are mostly IT service providers and software companies but also include companies from the energy and financial sectors. For Fujitsu for example – the world-known provider of IT solutions – Ficolo did a sale and leaseback on their main data center in the Nordics.

Kim Gunnelius, Ficolo's chief commercial officer and co-founder says: "We offer colocation for enterprise, HPC (High-Performance Computing) and hyperscale as well as platforms, private and public clouds all under a single management system with additional security and safety services."

FULL CONTROL. FULL FLEXIBILITY
Kim: "Many of our customers don't want to have to focus on the data center, due to a lack of time, a lack of knowledge and the difficulty of finding the right people. So they choose for flexibility, for not having to do big investments. We offer them colocation, lease-back (Ficolo buys the customer's data center and leases it back to them), and we provide hardware as a service. Our customers just get to choose and pick what they want; we offer them full control and full flexibility."

ACT FASTER
"Our USP is a very strong focus on the customer. We do everything in our power to make them happy. 'Fast, flexible and reliable' is our promise. And although the competition of big data companies is fierce, we beat them on speed. Also, we are extremely climate-friendly, the only

data center with a Dark Green rating from a climate research institute (for a Green Bond). For instance, our excess heat is fed back into the district heating grid. We are also a fully certified Climate Neutral Company. Most companies have targets for climate neutrality in 2025 - 2030, we are very proud that we already have reached that goal."

A DIFFERENTIATING SOLUTION

Ficolo owns state-of-the-art data and cloud delivery centers in Helsinki, Pori and Tampere, with a capacity of 10MW, 12MW and 1MW respectively. The fourth pillar of Ficolo's business is Ficolo-IX, which is the main connectivity hub in Finland. The Air data park in Helsinki can grow to 50MW. Kim: "In this particular space, we needed a differentiating solution. The highest quality, combined with a maximum of flexibility. There's where Legrand came in. We already knew the company and already used some of their products, such as PDU's, so we knew what quality we could expect."

For this data center, Ficolo chose the Modulan 62U racks and containment. "The 62U racks offer far more space than the traditional 42U ones, which was a decisive purchase reason for us. These racks deliver 20-40 kW per rack, or more if needed. For our clients, we price them the same as the 42U racks, while they get 50% more server space. This is interesting for quite some of our customers, for now or for the future."

SMOOTH IMPLEMENTATION

The implementation process with Legrand and Enkom Active Oy was smooth, Kim adds. "The cooperation went really well, and Legrand and Enkom Active Oy provided good support when we needed to make some changes for a particular customer who requested a special design in the racks. We were able to meet his demands well and rapidly. The client was really happy, and thus so were we. We did a good job together in this whole journey. It was an example of flexibility, reliability and speed, just like we promise our customers."

ONGOING TOPIC: SPEED!

Just a few weeks ago, another containment of racks was installed. "We do not invest ahead, but buy new racks as we sell more server space. We opened The Air in Q2 of 2020, and there is plenty of room to fill. I can imagine Legrand will be our preferred supplier for this. And if I had to name one thing that could be improved? It would not so much be Legrand related, but rather the general issue in our business: speed! It is an ongoing topic that all DC's have to cope with: every day that can be deducted from the delivery time, would make us even more competitive." ■

ABOUT FICOLO

Ficolo was founded in 2011 on the West coast of Finland in a time where remote locations were popular for data storage. Ficolo first used former defence force tunnels, later built their own DC's and became the first remote colocation center in Finland.

www.ficolo.com

ABOUT ENKOM ACTIVE OY

Enkom Active Oy is a value-adding distributor of high knowledge demand products for industrial manufacturers, ICT service providers and electrical contractors. Their business foundation is based on excellent products and smooth logistics. However, the true value-add is coming from understanding customer operations, product knowledge and from close partnership between customers and suppliers.

Enkom Active is part of Lagercrantz Group, a B2B value-creating technology group in the areas of electronics, electricity, communication and related technologies. The Group consists of about 50 companies and is active in eight countries in Europe and in China and the US. Lagercrantz has more than 1,300 employees and revenue of approx. SEK 4 billion. The shares are listed on Nasdaq Stockholm since 2001.
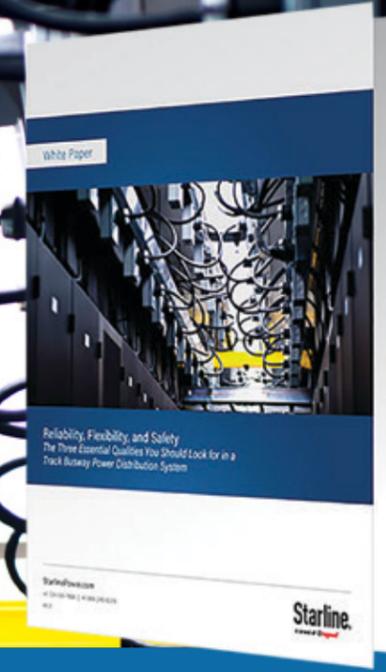
Learn how to evaluate a busway for reliability, flexibility, and safety

Starline.
A brand of legrand

Improved circuit management, the ability to change components without a disruption of power, and improved cooling are some of the many benefits of busways. However, despite the commonalities between different busway systems, there are critical areas where busway design can support the ongoing, long-term power needs of a data center.

AN EFFECTIVE BUSWAY SYSTEM OFFERS THREE QUALITIES:
■ Reliable and efficient power distribution that helps ensure continuous uptime
■ Flexible options for design, layout, and scalable power delivery
■ Safety features that protect workers, IT equipment, and facilities

Learn how to evaluate a busway system for reliability, flexibility, and safety in this white paper. ■

DOWNLOAD THE WHITE PAPER
www.starlinepower.com/how-to-evaluate-busway-reliability-flexibility-safety
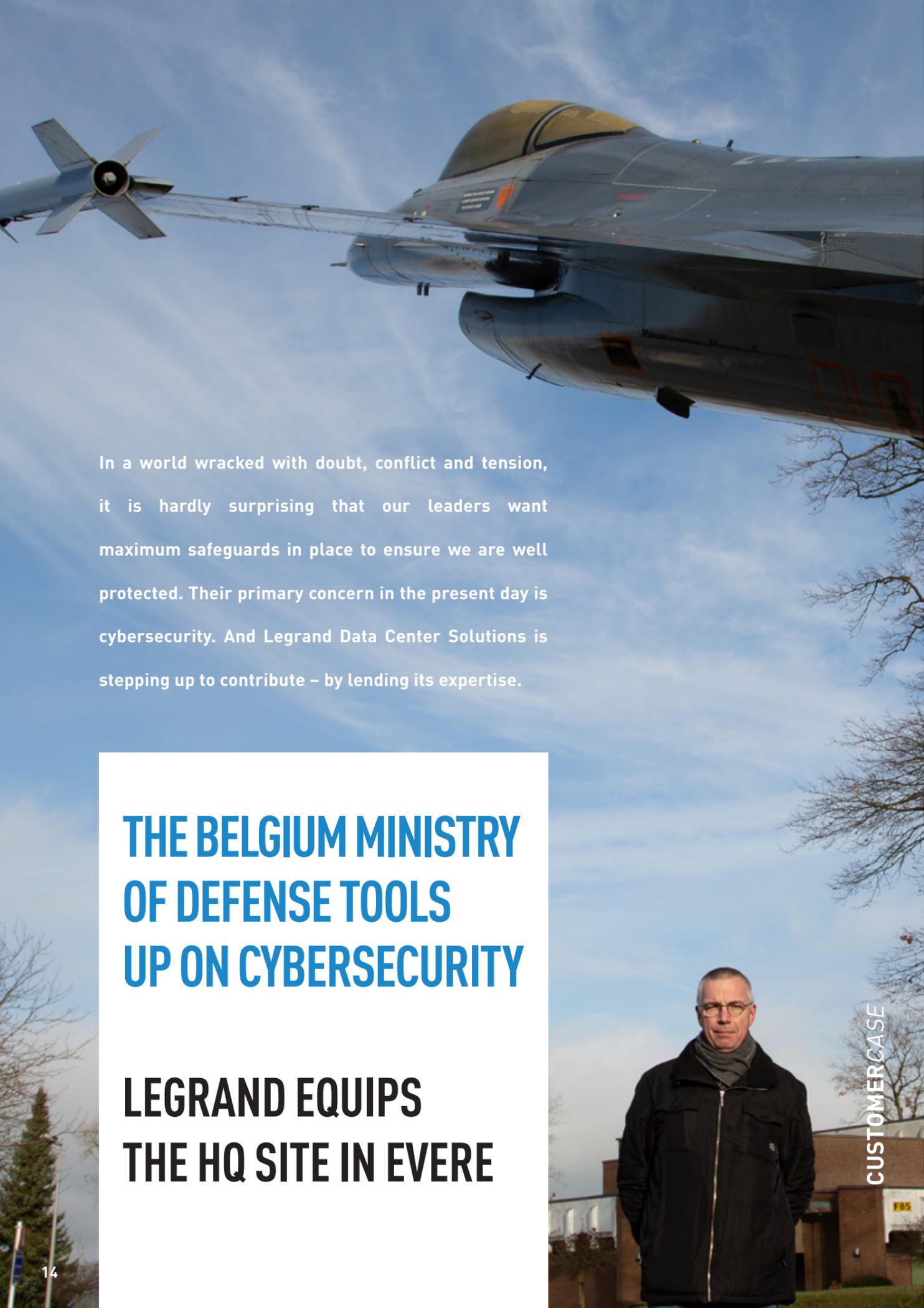
In a world wracked with doubt, conflict and tension, it is hardly surprising that our leaders want maximum safeguards in place to ensure we are well protected. Their primary concern in the present day is cybersecurity. And Legrand Data Center Solutions is stepping up to contribute – by lending its expertise.

THE BELGIUM MINISTRY OF DEFENSE TOOLS UP ON CYBERSECURITY

LEGRAND EQUIPS THE HQ SITE IN EVERE

ON THE FRONT LINE

For those who have historically dubbed the Belgian military as "the great mute", it's time for a change of stance. It may well be a sensitive topic, but the MoD headquarters has something to say when it comes to discussions about its future plans for data centers and cybersecurity tools. We met with Philippe Renard, an experienced engineer within the Infrastructure Competence Center of the Belgian Ministry of Defense, also in charge of "Special Techniques".

Cybersecurity requirements demand that the Belgian government deploys and commits various financial, material and human resources. The federal authorities – with proven competence in this field – decided to step up rather than adopt a passive response. The MoD in particular has an active involvement here, which is why the intra-defense department, in charge of security, has developed a multi-year infrastructure program. The new data center project is a key milestone in the program. It was entrusted to the department led by Philippe Renard, which took control of the project in December 2019.

ADAPT AND INNOVATE

"The location of the racks (ten 8 kW racks in total) posed a major constraint at the outset", he relates. "We had to install them in a room of around 30 m2 located on the ground floor of a rather unsuitable existing building. It was necessary to upgrade the existing power supply but, more significantly, to undertake structural engineering works in order to distribute the hardware load across the existing floor. An additional factor being that the racks were equipped with an integrated UPS. That was no mean feat...

"We decided to install two rows of HDPE (high-density polyethylene) load distribution panels and to place the server racks in the center of them. By force of circumstance, these ended up being quite far apart from each other. A rather unusual configuration, to say the least. "

Philippe Renard goes on to explain, "This meant we had to find an aisle confinement system that firstly could be adapted for this particular configuration and secondly was modular. We carried out some research and it quickly became apparent that very few potential suppliers were even able to meet all the criteria! These included Legrand, a reputable name that we'd long been familiar with. We reached out to Thierry Mossay, Key Account Manager of Legrand Belgium, to talk through our project.

"The initial discussions between us and Legrand Data Center Solutions were very much focused on listening. We were able to set out our requirements in some detail, before going on to discuss different possibilities to fulfill them. Both parties were able to bring their own experiences to the table in an amicable and constructive way. It was only later that we turned our attentions to the actual products. And then – bingo! Legrand had recently bought out Modulan, a German manufacturer of aisle containment solutions specializing in custom-made solutions. Thierry Mossay set out his proposals to us in July 2019, submitted a tender the following week... and Modulan was awarded the contract. We were then ready to proceed to the next phase."

"In addition to the solid reputation of Legrand and the high quality of its modular products, I have really valued the responsiveness, ability to listen and customer-oriented approach it has brought to every stage of the project."

Philippe Renard, Engineer within the Infrastructure Competence Center of the Belgian Ministry of Defense, also in charge of "Special Techniques"

MILLIMETER ACCURACY

In the weeks that followed, close attention was given to developing the installation project. The versatility of Modulan's aluminum profiles relies on highly precise measurements. "An engineer came out from Modulan's head office in Hessen, Germany, to take measurements with millimeter accuracy, before producing a 3D model of the entire installation," recounts Philippe Renard.

"We took into consideration the ventilation system based on warm aisle technology. A choice made by the MoD's own IT department, steered not only by the relatively remote location of the CRAC units, but also by a desire to be more energy efficient and to ensure an even temperature between the top and bottom of the racks.

"In mid-March 2020, working alongside the company managing the HVAC installation, the Modulan team came to add the profiles to the racks, servers, CRACs and other equipment already in place. The setup was then adjusted in situ and the new server room was operational the following September."

HUMAN TOUCH

Feedback from the ground only affirms that the MoD was right to choose Legrand. That comes as no surprise to Philippe Renard. "In addition to the solid reputation of the Legrand Group and the high quality of its modular products, I have really valued the responsiveness, ability to listen and customer-oriented approach it has brought to every stage of the project. I really couldn't find fault!"

www.modulan.de/en-gb ■

DATABALANCE BECOMES FIRST DUTCH IT SOLUTIONS PROVIDER TO USE KEOR MOD UPS

'JOINING FORCES TO INNOVATE TOGETHER'

IT solutions provider Databalance is the first company in the Netherlands to use Legrand's Keor MOD UPS. Here, Databalance's technical expert Bart Blom and CEO Nordi Malih explain their decision for that solution.

Databalance's customer base is made up of companies in the mid-size and corporate segment for whom IT is a major lifeline. The IT solutions provider based in the Dutch town of Nieuwkuijk supports their business continuity, transition, growth and innovation, such as by offering customized solutions based on standard building blocks. It is a very diverse portfolio of businesses spanning manufacturing, e-commerce, retail and more. "We strive for maximum quality, and we love working with customers who do the same and who regard innovation as an important pillar. That's when there's a cultural fit," states CEO Nordi Malih.

"Our customers are at different stages of transition and IT maturity, so they also have different questions and challenges. But continuity is always an important issue," adds Malih. "The rapid pace of technological advancement is creating more dynamism in the IT world, and that brings opportunities but also more complexity and potential risks. Security, privacy and compliance are basic requirements that must be 100% watertight. We are an IT partner who our customers can brainstorm with and who enjoys getting actively involved with a view to the long term. We can draw on over 20 years of knowledge and experience and are continuously further improving our advice and service to customers."

CUSTOMER CASE

THE BEST RATHER THAN THE BIGGEST
Databalance's data centers form the backbone of the company's services. It has two data centers of its own and also uses external data centers. Bart Blom, the technical expert who is ultimately responsible for the data center solutions, explains the Databalance vision: "We'd rather be the best than the biggest. In terms of size, our own data centers are relatively small, but we offer just the same facilities as mega data centers. So we can compete with 'the big guys' in terms of state-of-the-art technology, quality and uptime, but we also offer a very personal approach."

LATEST STANDARDS
This is illustrated by the company's most recent expansion project, explains Bart: "In 2005 a new building was constructed for us in Nieuwkuijk, including a data center. The data center met all the applicable standards, but we wanted maximum efficiency and quality. So I developed a plan to add a second data center inside the same building, constructed to the very highest standards. The existing data center was converted to the latest standards too."

STRIVING FOR PERFECTION
Databalance likes to see high quality standards and a cultural fit with not only its customers but also its suppliers, and Legrand offered just what the company was looking for. Bart: "We'd seen Minkels' cabinets at a co-located data center. They looked really good, were finished amazingly neatly and were optimally airtight. We soon started talking to them and recognized a shared desire for perfection."

Minkels built the first corridors for Databalance. "When we came up against space limitations in the new data center, we started looking for UPSs that we could integrate into the cabinets since that would save us a lot of floor space. We just didn't think there were any flexible and small-footprint UPSs that could deliver the power we needed. It was a tricky challenge, until we sat down with Legrand again."
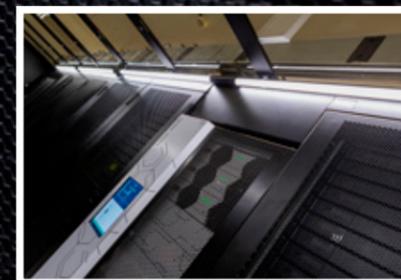
In the first phase in 2017, Legrand supplied cabinets and corridors, including Raritan PDUs.

Bart: "They do a great job too – they look neat and can be monitored. It's nice to be able to control your power consumption per feed and cabinet."

In 2019, the expansion included Keor MOD three-phase modular UPSs and a Minkels hot/cold corridor. Legrand also supplied busbar trunking systems and PDUs.

ups.legrand.com/en/ products/keor-mod

www.databalance.nl/

From left to right: Bart Blom, Technical Expert of Databalance and Nordi Malih, CEO of Databalance
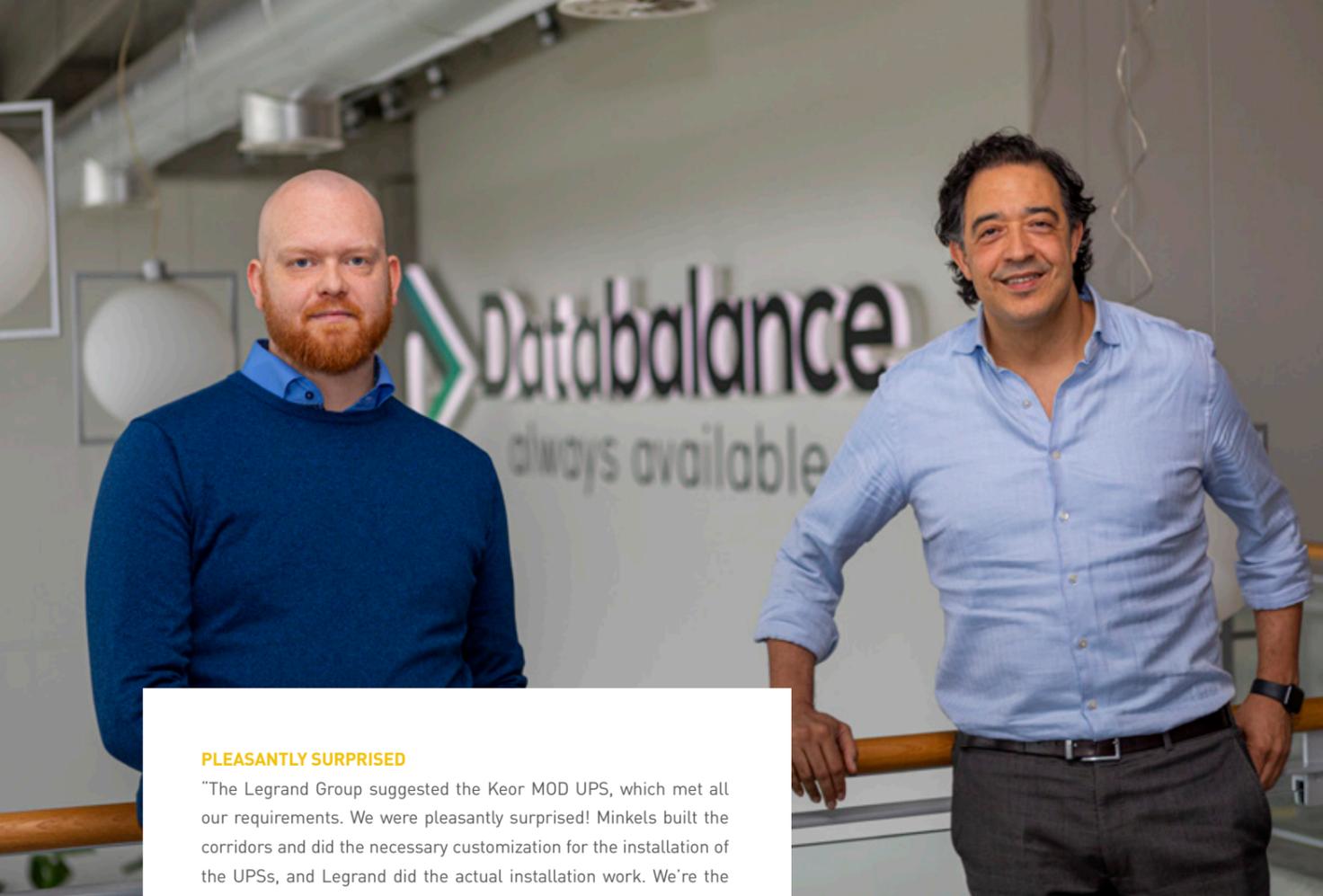
PLEASANTLY SURPRISED

"The Legrand Group suggested the Keor MOD UPS, which met all our requirements. We were pleasantly surprised! Minkels built the corridors and did the necessary customization for the installation of the UPSs, and Legrand did the actual installation work. We're the first company in the Netherlands to be using them."

TECHNICAL ACHIEVEMENT

"It was a complex project. A huge number of components had to be integrated in the data center and the small spaces were a particular challenge. Legrand took a proactive, problem-solving approach every step of the way and sat down with us every week. They offered customization on all fronts and pulled off an impressive technical achievement with a special hot corridor with in-row cooling. It's clear that they love a technical challenge at Legrand and they pull out all the stops to get the job done."

"That's why we were willing to give the Keor a try. Being the first user is a little daunting but it is also a great opportunity to innovate together. We mitigate any risks through thorough analysis and preparation. It helps if your partner strives for the same quality as you do. If something goes wrong – which hasn't happened, by the way – you solve it as a team. That's how we do things with our clients too. We were so enthusiastic that we replaced the existing UPSs with the Keor earlier than planned."

PROUD

"The end result has enabled us to make significant savings in terms of floor space and energy costs. Thanks to the UPSs, the whole data center is a lot more efficient and it also looks great! It's a data center to be proud of, and our customers are welcome to come and take a look." ■

*CUSTOMER*CASE

GENESIS OF THE SMART RACK CONTROLLER

Raritan®
A brand of **legrand**

First conceived as a complement to the PX® line of intelligent data center power distribution units (PDUs) from Raritan, the Smart Rack Controller (SRC) leverage the knowledge and design expertise that come from working for over twenty years in the data center market. The idea for the SRC is to provide intelligence in the IT cabinet or remote enclosure for those installations where remotely managed PDUs were not implemented (legacy installations) or not desirable.

Raritan's SRC is an intelligent sensor management solution that serves as a central connection point for environmental monitoring, asset location, physical access, and other monitoring and security sensors. It addresses the gaps in instrumenting a facility or data center by providing an all-in-one stand-alone intelligent device that collects and delivers real-time actionable data about your facility without needing to change the configuration of existing power distribution or IT infrastructure.

The SRC family of products delivers a myriad of additional data points for the data center operator beyond the standard temperature and humidity at the rack level. Sensors are available to measure differential air pressure, floor moisture (leak sensor), vibration, proximity (through PIR), the status of dry contact closures, and perform asset tracking. In addition, the SRC supports the interface of smoke detectors via dry contact closure interface, Logitech USB cameras, and remote IT door lock card readers for access control. ■

FEATURES OF THE SRC FAMILY

- ■ Xerus Technology Platform
- ■ API access to the sensor data provided by the controller
- ■ Works with all major DCIM tools
- ■ LUA Scripting support
- ■ SNMP v3, TLS 1.2
- ■ Built-in multi-color LCD display
- ■ USB for Wi-Fi dongle
- ■ 10/100/1000 Ethernet
- ■ RS-232/RS-485
- ■ Local configuration through USB key, USB-attached cell phone, or locally attached PC
- ■ Remote configuration and update via TFTP or DCIM tool
- ■ Daisy-chain support of Raritan and Legrand sensors via standard Cat5/Cat6
- ■ SNMP traps and alerts based on sensor readings
- ■ Multiple power options — 208VAC 1-phase, 48VDC, 120VAC (US markets)
- ■ Dual power inputs going into dual power supplies for uptime and redundancy
- ■ 19" rack mountable, with easy installation in 1U or 0U

www.raritan.com/products/power/rack-management/intelligent-sensor

*PRODUCT*CASE

DECARBONIZING THE GLOBAL DIGITAL ECONOMY

Founded in late-2019, the SDIA represents the interests of 60 member organizations who are committed to the SDIA's Roadmap and building a sustainable digital economy. The Alliance was established as an independent association, assembling stakeholders working across the digital ecosystem – from energy and resource suppliers and data center operators to fiber-optic network providers and software designers – with a mission to decarbonize the global digital economy. Every member has committed to executing the Roadmap to a Sustainable Digital Infrastructure by 2030.

While drawing attention to the growth of the global digital infrastructure sector, whose carbon emissions rival that of the aviation industry, the not-for-profit organization seeks to drive collaboration across the value chain to promote a sustainable digital economy - from an environmental, economic, and social perspective. Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their needs. The addition of Legrand to the Alliance will help the SDIA as it strives for greater intra-industry collaboration towards an ecologically and economically sustainable digital world.

Ralf Ploenes, Vice President Legrand Data Center Solutions Europe

also with developers, energy suppliers, start-ups, and customers in order to test, improve and bring to market solutions to operate data centers that will have a positive impact on the sustainability of data centers. This is one of the main reasons why Legrand decided to partner with SDIA".

Legrand is fully committed to sustainable development. "We recognize that sustainability is a responsibility and opportunity shared across our organization. By choosing a 'best of breed strategy' Legrand's recent rapid growth in the data center market was built through excellence in various product categories - among them PDUs, busbars, containment systems, and UPS systems. We strongly believe that in terms of sustainability significant progress can be made if we optimise the way these products interoperate".

"We are very excited to welcome Legrand to the Alliance," commented Max Schulze, Executive Chairman of the SDIA. **"Legrand has enormous knowledge in the fields of data centers and digital infrastructure. We very much look forward to working with Legrand on existing and new research and innovation projects."**

IMPROVING ENVIRONMENTAL PERFORMANCE

"Legrand strongly believes in the mission of SDIA. That's why we are supporting SDIA not only through our membership but more importantly by actively participating in the steering groups and contributing with R&D teams in lab projects", explains Ralf Ploenes, Vice President Legrand Data Center Solutions Europe. "We believe that we, as Legrand, have to bring innovative and sustainable products to market. This is why we are committed to delivering eco passports with our products, for example, driving eco-design and transparency on the use of our products".

Adds Ralf Ploenes: "On top of this, we strongly believe that our products are part of a much bigger ecosystem. As a physical infrastructure vendor, we see the need for alignment in the value chain for the provision of digital services, this can span all the way to software vendors on the application side to optimize the way hardware and software interact. The only way to do this efficiently is through a consortium like SDIA. We are convinced that there is a big opportunity in working together with other manufacturers but

ACTION AND COLLABORATION

SDIA and Legrand share a common vision when it comes to sustainability and the digital infrastructure. Max Schulze explains: "Action and collaboration will make a big difference in increasing sustainability and reducing the burden on the planet. The digital economy is transforming modern life in so many different ways. It is important that this industry takes a leadership role that is focused on impacts over rhetoric. We look forward to working with our members on quantifiable sustainability goals as we have described in our roadmap. Working together in this committed way, we are excited to be working with Legrand on this common goal toward actual, achievable outcomes". ∎

Legrand has signed up to the Sustainable Digital Infrastructure Alliance (SDIA), whose mission is to move the global digital sector towards zero emissions.

LEGRAND JOINS PARTNERSHIP WITH THE

SUSTAINABLE DIGITAL INFRASTRUCTURE ALLIANCE SDIA

Max Schulze, Executive Chairman of the SDIA

"IT'S MORE THAN JUST A PRODUCT THAT HAS BROUGHT US TOGETHER."

When Luxembourg's national Internet Exchange Point LU-CIX needed a new rack infrastructure at the start of 2020 to respond to the increase in activities, it quickly turned to Legrand Data Center Solutions and the new Nexpand range from the brand Minkels. An interview with Michel Lanners, CIO of LU-CIX.

A DRIVE FOR CHANGE

Riding the information superhighway, LU-CIX has been successfully blazing its own trail for over ten years. Thanks to its 264 Gb/s bandwidth speeds, an ever-increasing number of members, and recognition from authorities for its importance to Luxembourg's economy, the LU-CIX platform is now a major stakeholder in the country's IT infrastructure. More than 80% of Luxembourg's online traffic is routed through the LU-CIX national network, connecting almost all of country's Internet providers!

The platform's reputation is even higher amongst industry professionals with LU-CIX organising the Luxembourg Internet Days, an event held over several days in November every year. This major event takes place throughout Greater Luxembourg, allowing businesses to show off their innovative products and solutions and giving well-known personalities a chance to share their experiences and vision as part of conferences and round-table meetings in a pragmatic and technical approach.

In order to respond to demand and maintain a premium quality of service, LU-CIX's six Points of Presence (PoPs) in Luxembourg must adapt. At the start of this year, the organisation's Executive Board decided to reinforce the Battembourg data center's capacities by scheduling the installation of a private cage. All that was left to do was choose the right partner for the job.

"We had obviously heard of Legrand Data Center Solutions and Minkels before," explains Michel Lanners, CIO of LU-CIX. "Their products have an excellent reputation amongst our members and Luxembourg's IT community. Legrand Data Center Solutions also regularly take part in the Luxembourg Internet Days to show off their new solutions, so we've been in relatively close contact with them for a while. Naturally, we contacted them for our expansion project."

ONE STEP AT A TIME

Michel Lanners continues: "When it comes to choosing equipment, we weren't just going to go off a catalogue or a website, however well put together they were. You could say that's somewhat of a paradox for an organisation that works in digital technology. Wrong! It was crucial to see the cabinet, to touch it, handle it, get an idea of the volume, the mass, the material, the quality ...

LU-CIX

Before making our decision, we arranged a configuration session at Legrand in February 2020. Lasting more than four hours, we met with their experts, who presented the Nexpand cabinets and their numerous options. We were able to hold a discussion, exchange ideas and challenge these ideas to ultimately determine the solution that would fit us best. We inspected everything in great detail: the resistance of the shelves, the opening and closing of the doors, the adjustment of the vertical supports ... If needed, a cabinet must be able to be reconfigured easily.

Finally, we narrowed it down to two cabinet configurations which would allow us to take advantage of the "factory pre-assembled" service. This was a huge plus that would allow us to significantly reduce installation time and avoid any potential labour or adjustment surcharges as part of on-site assembly.

This meeting was a key moment, a real turning point. Leaving the showroom, we felt confident that we had been heard and understood, and we were sure that we had the solution we needed."

SUSTAINABILITY OR NOTHING

This visit was just one of the many steps in the selection process. In an age where we are often reminded about the pollution generated by data center activity, the question of sustainability is becoming more and more important. "That's right. There were two deciding elements when it came to sustainability," explains Michel Lanners. "The first is the recommendation of Legrand to go for a closed cold-aisle infrastructure; a configuration which consumes less energy. This suggestion allowed us to focus our search towards a certain type of cabinet and confirm our choice of provider. The second element is linked to our desire to favour European production. The social (employment-related support) and environmental (shorter channels) aspects of local production were extremely important to us. Legrand provided us with all the relevant guarantees in this regard."

THE IMPACT OF THE PANDEMIC

The equipment was ordered in the middle of March, just as Luxembourg was entering lockdown. This was an uncertain period, but it did not prevent all those involved from coordinating and planning the execution of the project as best they could. "I must commend the perfect cohesion between Legrand, the installer CEL and distributor, Kannegieter in particular. Luck was on our side as the installation coincided exactly with the first phase of lockdown lifting, making things easier," explains Michel Lanners. "Now that everything is up and running, the results are positive across the board. We are completely satisfied with the equipment, but, beyond that, I've also made a quality relationship.

It's more than just a product that has brought us together." ■

Michel Lanners, CIO of LU-CIX

Legrand's personalized service enhances the value of the **NEW NEXPAND CABINETS IN THE DTIX DATA CENTER**

Jean-Michel Lefaure, head of DTiX

In the small world of data centers, customer relationships are key to building trust and ensuring that equipment is tailored to operators' needs. By choosing the new Minkels Nexpand racks from Legrand Data Center Solutions, DTiX has found a suitable, personalized response to its expectations.

DTiX ITcenter has just opened its doors in Dijon. This medium-sized shared data center has an IT surface area of 450 m², with three rooms where 120 computer racks will be hosted in all. DTiX is characteristic of the regional data centers that are flourishing in areas that the shared giant hosts have forgotten. It hosts local customers who need to outsource their information system, larger and more remote customers who are looking for redundancy to secure their data, as well as outsourcing providers.

CUSTOMERCASE

www.dtix.fr

The DTiX model is based on quality and safety. This begins with the very high availability of a Tier III-equivalent design architecture from the Uptime Institute that guarantees a high availability rate (over 99.98%) and interruption-free maintenance of the electrical and climatic chains. DTiX also offers a secure and standardized environment (ISO 27001), optimized energy use (ISO 14001) and a commitment to the European Union's Code of Conduct for Energy Efficiency in Data Centers. These certifications are important for the company because they are the basis of the good

practices that the company requires of itself. They are important for customers, for whom the certifications respond to their criticality needs. Finally, to conclude the interview, DTiX is targeting a PUE (Power Usage Effectiveness) of 1.5. This indicator measures the energy efficiency of the data center, which produces N+1 cooling via three integrated free-cooling units. By managing its infrastructure's energy use in a virtuous way, DTiX respects the Code of Conduct. But the approach goes even further and underlines the willingness of its founders to commit to a responsible approach.

NEXPAND CABINETS ENHANCE THE MODULARITY OF THE DTIX OFFERING
The data center wanted to offer its customers a modular infrastructure by the cabinet, half-rack, or even private suites (a secure space inside a room) from 6 cabinets (12 m²) and in a cold-corridor that supports free-cooling. Its designers found a customized solution that fit their needs in Legrand Data Center Solutions and its Nexpand cabinets. The manufacturer's teams were involved in the upstream design of the rooms from the very beginning of the project to design a cold-corridor architecture with a cold aisle in front of two rows of 47u (600x1200) cabinets.

The choice of cabinets and their design in the rooms was an essential step in the design of the DTiX offering. In order to meet its objectives of high availability and security of the IT infrastructures that will be installed in the rooms, a customized cabinet was created to match the needs for hosting. Legrand was involved in designing the data center by setting up the cabinets, which include accessories that helped the offering stand out:

■ an electric door for the containment corridor with a badge reader,
■ a secure cabinet door with a keycode-based lock system,
■ electrical equipment for the cabinets with simple or manageable Raritan PDUs, with 2 PDUs per cabinet for a redundant power supply, each channel assigned a color (A red and B blue),
■ full-height cable guides between the 19" rails and the cabinet door for easy routing,
■ a passage in the ceiling for the power supply and interconnection cables, with double conveyance possible via two meet-me rooms, depending on the carriers' offerings,
■ accessories for optimizing airflow in the cabinets (which go all the way to the floor) to meet energy efficiency requirements.

Jean-Michel Lefaure, head of DTiX, intends to continue his successful partnership with Legrand Data Center Solutions. First of all, the partnership will continue at the pace that new customers occupy the rooms, thanks to the modularity of Minkels' Nexpand cabinets. Then, a second, remote data center will be established in the near future for data backup and disaster recovery for the solutions running in the cabinets. Finally, there will most certainly be a third data center if the success continues!

Jean-Michel Lefaure, head of DTiX

One key detail made a big difference for DTiX: the Nexpand cabinets are white, which stands out from the traditional black and improves the overall brightness of the room. As a result, Nexpand cabinets add a sense of calm and cleanliness that benefits a modern, efficient data center. ■

Cloud-Centric Future for Leading UK Colocation & Managed Services Provider Iomart

Reece Donovan, the new CEO of iomart Group plc, is excited by the opportunities to help customers on their journey to the cloud. As the organisation looks to evolve its traditional product focused approach to one where expert advice and service take a more prominent role.

"Our core expertise is around our data centers and around our services"

Iomart might just be one of the UK's colocation and managed services market's best kept secrets. That's not to say that the company hasn't already established a major presence. Nine data center locations, with 14 data halls, totalling more than 10,000 square feet, a 28MVA capacity, and a 2000km private fibre network running around the UK are strong evidence that iomart is already a major player in the UK colocation and rapidly developing managed services space. However, where previously the company enjoyed keeping its profile somewhat under the radar, Reece Donovan is keen to take a more open approach. Raising the company's profile is seen as a major objective.

Reece believes that this objective will best be achieved by a combination of factors. These include shifting the company's focus from selling products to more of a consultative, service-oriented, or trusted partner approach. Growing Iomart's large enterprise customer base and ensuring that the company's data center and connectivity infrastructure continues to be a customer enabler. And perhaps above all, working with partners and customers to develop the cloud solutions which are becoming increasingly important to all in a pandemic impacted business world.

Currently, iomart offers a comprehensive range of managed cloud and security services, as well as colocation space. The company's portfolio includes: public, private and hybrid cloud solutions; virtual desktop; e-commerce hosting; backup and disaster recover as a service; connectivity solutions, including managed SD-WAN; managed security; and consultancy. ❯

> **To address this enterprise space, we're going to broaden our portfolio, make it more applicable. We'll do that either through acquisition or we may partner.**

Reece Donovan, CEO of iomart Group plc

iomart's customer base is split into three main segments. Right now, the sweet spot is in providing a whole variety of solutions for thousands of companies in the SME space. Alongside this market, iomart also has a vibrant channel partner programme, enabling partners to resell its managed services. And the third customer focus, and the area targeted for growth, is the lower end of the larger enterprise user space.

"Our core expertise is around our data centers and around our services," says Reece. "To address this enterprise space, we're going to broaden our portfolio, make it more applicable. We'll do that either through acquisition or we may partner."

DATA CENTER FOCUS

In order to ensure that iomart can continue to both support and expand its existing services portfolio and customer base, the company operates a continuous data center improvement programme. For example, there's a big project in the London data center right now which is upgrading all the cooling equipment. And, like the rest of the data center industry, iomart is also addressing sustainability issues. Power usage, renewables, overall carbon footprint are all in the spotlight, as Reece explains: "There are some short term actions we can take and, once we've implemented these, we need to have an understanding of what the residual carbon footprint is and what our options are to deal with that." Key to the success of this approach is having confidence in the technology partners who provide the data center critical plant.

For the past eight years, iomart has had one such partnership with physical IT infrastructure specialist, Kinetic IT. Kinetic IT supports iomart nationally with fibre optic and copper structured cabling; design, implementation and secure physical IT relocation; as well as migration and asset disposal services.

Reece explains: "Whether we are kitting out a new space or upgrading, we have a repeatable footprint. So, we have the same cabinets, the same power bars, the same approach to the cabling and the switching. It's highly repeatable and we try to look for that consistency so we know we can rely on the infrastructure that's been installed and we know how it works. For that reason, we don't have an incredibly heterogeneous supply base, that's complicated to support."

Neil Johnston, iomart's Data Center Director, expands on the importance of such partnerships, outlining how Legrand Data Center Solutions was identified as a key supplier: "We met the Legrand Data Center Solutions team at Data Center World and the relationship grew from there. Once we'd tried the Server Technology PDUs in our rack system, we got the bar down to a size we could fit in the recess of the rack. This meant that power from the server could do a 180 degree turn, with locking power cables, so there would be no impediment a the back of the rack when technicians were working on them."

Neil adds: "PDUs can sometimes be mistaken as 'just a power plug socket', but this could not be further from the truth. The PDUs in our data centers are the main arteries, delivering applications to our customers to maintain the heartbeat of their businesses. We use multiple SKUs, dependent on the required technology and port count. Legrand has over 12,000 SKUs in its range, so we know they can always meet our requirements." The main Server Technology PDUs used by Kinetic IT/iomart are the STV 4540K/STV4541K models. More recently, ServerTech's HDOT and horizontal PDUs have also been deployed.

> **"The lead times, support and customer service of Server Technology, through Kinetic IT, are first-class. As for the PDUs themselves – they just work!**

There are good warranties and no quibble replacement. We have not had any PDU failures and, moving forward, many of our customers are asking for three phase supplies for higher power density."

CUSTOMER CASE

Tom Cella, Managing Director of Kinetic IT

Reece continues: "What are we looking for? The companies we can rely on to understand data center technology and to provide us with the capabilities we need. We look to create true partnerships, because the data center infrastructure is mission critical. And if we understand what our partners are good at, we can align them with what we are going to do in a highly repeatable way."

FIT FOR THE FUTURE

As businesses begin to make more long-term, permanent decisions in response to the major disruption of the past year, iomart is confident that it has a key role to play. The new world of work places great emphasis on flexible working, software-as-a-service, security and, perhaps above all else, the importance of fast, reliable connectivity. Reece is confident that iomart's technology portfolio, built on a strong data center and network foundation, will win it many new customers.

He concludes: "We've got a wonderful business. We are highly resilient, and we are moving to build on what we've got, to make us much more business centric so that we take away that complexity for customers. We want to be that helping hand and give them the opportunity to unleash the value that's in their business. And we will do this by taking care of their IT infrastructure and services, allowing them to focus on their core business." ■

THE KINETIC IT CONNECTION

Kinetic IT supports iomart's technological requirements especially around large integration projects. For example, when the company makes an acquisition and needs to bring the infrastructure into one of the iomart data centers. One such project involved the migration of a suite of hardware from a data center located in Birmingham to iomart's own Maidenhead data center. The active hardware consisted of 384 servers and associated networking equipment. This hardware had to be relocated, reinstalled and commissioned within a 14 hour window to minimise the downtime of critical services. This tight migration window needed to account for the disconnecting and de-racking of equipment, and the packing and transportation to Maidenhead. At the target location, the equipment had to be offloaded to the correction position, installed, cabled and powered on so that phased testing could take place.

The successful execution of this project, and the many regular interactions between iomart and Kinetic IT is a testament to the partnership between the two organisations. As Tom Cella, Managing Director of Kinetic IT, summarises: "iomart's technology and operational teams are truly world class. It is a pleasure to work with them on a daily basis to provide a trusted and flawless service, through the use of technology solutions such as the Server Technology products and services, to their prestigious customer base."

Kinetic IT realised that Server Technology could not just be relied upon, but was also something of a PDU technology pioneer. Tom comments: 'We believe that we are very much a pioneer when it comes to innovation in the data center industry, and it was great to find a global partner that had a similarly positive approach to technology innovation."

Tom continues: "The other thing that struck us was that Legrand is the right company for us to deal with. Regardless of the size of the organisation and the global presence of Legrand, they still have that local teams and personal approach. We're not just a number to them."

Tom finishes: "I can't over emphasise that, whether it's dealing with iomart as a client, or Legrand as a supplier, the blend of personal relationships, trust, loyalty and integrity which we've built up over many years is something very special."

Optimizing 400G+ Link Margin with High Performance Fiber Connectivity Solutions

The "Quantum" Effect

BANDWIDTH APPETITES CONTINUE TO GROW

Growing demand for bandwidth consumption continues to challenge the data communications industry on a global level. As 400G transceiver shipments scale to significant volumes in 2021 and beyond, 800G optics are already slated to hit the market in 2022. This accelerated turnover of port speeds, along with reduced link budgets, results in constant pressure on semiconductor and optoelectronic players to deliver reliable technologies at highly competitive prices. In a space dominated by the balance between cost and performance, the quality of optical fiber installations is critical.

LINK MARGINS YIELD COST SAVINGS

The transition from 100G to 400G+ ecosystems has introduced new complexities. Modern datacom optics produce high bit error rates by design, meaning that FEC (Forward Error Correction) encoding schemes are necessary to sustain stable connections1. Optical loss budgets are also lower than ever due to advanced modulation techniques like PAM4 imposing stricter requirements on optical component performance. Network operators must hence look towards high-performance fiber solutions like the Legrand Quantum fiber solution to leverage as much optical headroom as possible. With a superior fiber infrastructure in place, users can pursue more cost-effective transceivers tailored to their network environments. This has paved the way for relaxed-performance, competitively priced standards like DR-Lite and more.

> ■ THERE IS AN INEVITABLE CORRELATION BETWEEN MAXIMIZING OPTICAL PERFORMANCE MARGINS (OPTICAL HEADROOM) AND OPTIMIZING OVERALL COSTS FROM BOTH AN OPERATIONAL AND PROCUREMENT PERSPECTIVE

OPTIMIZING NETWORK EXPENDITURES

Ensuring that a high-capacity network runs efficiently is already a costly and complex operation without the threat of link failures. Most failures can be tied to contaminated connector end faces and ports, transceiver laser degradation, or fiber bends/stress (thus leading to trouble tickets). The previously mentioned failure modes will benefit from high performance fiber, as this will boost link lifetimes and reduce expensive operator trouble-tickets. Consequently, there is an inevitable correlation between maximizing optical performance margins (optical headroom) and optimizing overall costs from both an operational and procurement perspective.

FLEXIBILITY AND FUTUREPROOFING

Cost-effective standards at 400G, followed by cutting edge solutions at 800G+, will soon be available in the optical transceiver market. As system integrators continue to navigate the challenge of scaling network capacity and balancing cost, fiber selection can just as easily be an inhibitor or enabler. Investment in superior fiber infrastructure yields improved optical headroom and physical layer performance, subsequently unlocking greater flexibility in pursuing competitively priced pluggables. Upon reducing the rate of link failures and associated trouble tickets, network managers can rest assured that the migration to Quantum fiber solutions will be compatible with upcoming generations of optoelectronic technologies. ■

KNOWLEDGECASE

IN FOCUS: PHYSICAL LAYER PERFORMANCE

The below description is a summary of a physical layer experiment, demonstrating the benefits of adopting Quantum fiber for network buildouts.
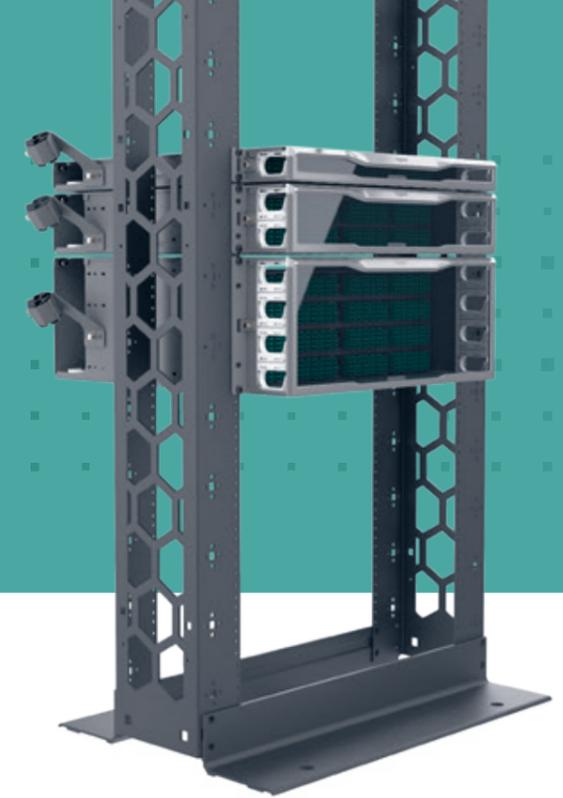
EXPERIMENT OVERVIEW

400GBASE-DR4 transceiver link performance was measured with an industry-standard fiber connectivity solution in comparison to Legrand's Quantum high-performance solution, made possible via the MultiLane ML4054B 400G transceiver test platform.
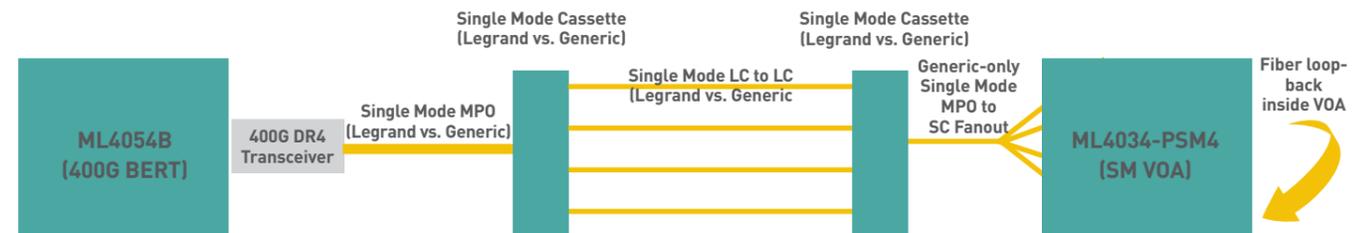
TEST SETUP

The 400G transceiver was populated into the QSFP-DD host port of the MultiLane BERT (bit error rate tester). After connecting the fiber assembly under test to the MPO port of the transceiver, a variable optical attenuator (VOA) and fiber loopback are connected at the remote end. The VOA was included to emulate real-life impairments like span loss, transceiver laser degradation, contaminated insertion points, and fiber bends typical to a data center environment.

RESULTS

Upon driving traffic through the transceiver and fiber topologies, Quantum fiber demonstrated a 1 dB improvement in span loss, a significant BER improvement, and a notable reduction of corrected FEC codewords.

	INDUSTRY STANDARD PRE-TERMINATED SOLUTION	INFINIUM QUANTUM SOLUTION	QUANTUM IMPROVEMENT
Bit Error Rate (errors over time)	2.35E-07	6.52E-08	3.6 x
Total Link Loss (dB)	7.20 dB	6.16 dB	1.04 dB
FEC Corrections (codewords)	5.93E+05	3.36E+05	1.77 x

Fiber performance comparison

www.legrand.us/solutions/fiber-optic/infinium-quantum-fiber

[1] The Bit Error Rate (BER) of a system is the total number of errored bits (a '1' interpreted as a '0' or vice versa) divided by the total number of transmitted bits. This metric is tied directly to FEC, which is an encoding scheme that appends information bits with additional parity bits. The FEC mechanism employed by most modern optics can correct an error rate of up to 2.4E-04 (IEEE802.3bj Clause 91).

Freeway manager APRR has equipped its new data center with Nexpand cabinets from Legrand Data Center Solutions. A strategic choice for the design of its IT room, as Valéry-Pierre Chalimon, Deputy CIO at APRR, showed us.

APRR, Autoroutes Paris - Rhin - Rhône, is a subsidiary of Eiffage, which maintains and manages 2,323 km of freeways and toll roads granted to it by the French government. Its IT is strategic; it hosts and manages the freeways' daily tools such as real-time displays and toll payments, not to mention the service to more than 3,500 employees.

The group has several data centers, but they needed a data center close to the freeways in order to meet performance objectives. DTiX, a Dijon-based company that had a project to build a data center, was the ideal partner to support APRR in this deployment.

The DTiX ITcenter was built in close cooperation between APRR and DTiX. Of the three rooms in the 700 m² datacenter, the company has a private room with a capacity of 20 cabinets.

THE CABINET DESIGN IS STRATEGIC

Valéry-Pierre Chalimon, deputy CIO at APRR, told us how strategic the design of the new datacenter's cabinets is, both to have quality, efficient and secure equipment and to limit the need for servicing and technicians. After meeting with four equipment manufacturers, the choice for the design of the APRR IT room was the Nexpand range of cabinets from Legrand Data Center Solutions. For the CIO, the solution offers ease of implementation, flexibility, and a number of accessories that allow for customization of the cabinet's design.

CUSTOMER CASE

Legrand - Autoroutes Paris Rhin Rhone

Nexpand cabinets customized to meet APRR's specific requirements

Valéry-Pierre Chalimon, Deputy CIO at APRR

The APRR and Legrand Data Center Solutions teams met several times in the manufacturer's showroom to see Legrand's data center equipment, including Nexpand cabinets. These meetings allowed APRR to understand how to use cabinets and accessories. With the support of LDCS, APRR also configured the cabinets to think ahead on how to design their data center.

TAKE CARE OF THE CABLE ROUTING

APRR chose 800 mm-wide cabinets to leave more space between the 19" rails and the sidewall to facilitate cabinet cabling. The 19-inch rails have also been moved back to allow for a perfect bend radius.

Nexpand cabinets offer integrated cable trays on top of the cabinet. They are routed through the openings in the cabinet roof, which limits the bending of the cables and the risk of data loss. Routing cables on the roof saves money, eliminates the need to install ceiling cable trays, and allows for clean, efficient cabling with top entry and cable channels over the entire height of the cabinet.

The cabinets' design is a strategic choice of the IT department for the most efficient management, in particular to spend less time on cabling. Thus, both paths of power to the cabinets enter from the top to manageable Raritan PDUs on the same side. The two PDUs are easily identified by the color codes, red A lane, blue B lane. For Valéry-Pierre Chalimon, "structured and personalized cabling is a guarantee of reliability and efficiency".

ENERGY EFFICIENCY

APRR and its partner DTiX are committed to energy efficiency. This can be seen even in the Nexpand cabinets. The walls and doors of the cabinets go all the way to the floor to avoid gaps that disturb and divert cold air flows. To channel the airflow, side skirts have been installed with brushes to facilitate the passage of front and rear cables. Even the doors have full-height rubber insulation.

CABINET SECURITY

Security is also an extremely important aspect of the project. APRR operates some of the Nexpand accessories, including the installation of mechanical code locks on cabinet doors. Some of them have a specific treatment with electronic handles with badges that record who has accessed them. These secure-handle doors are for APRR's PCI-DSS solution contained in a cabinet, which handles financial transactions such as toll payments.

Valéry-Pierre Chalimon expressed his satisfaction with the partnership and support from Legrand Data Center Solutions throughout the project, which proved to be strategic for the design of the room, the performance of the teams in charge of the cabling, and the security of the IT equipment in the racks. ■

MINKELS
A brand of legrand

NEXPAND CONTAINMENT
Optimised for sustainability

Bas Jacobs, Head of Product Management at Minkels, explains: "Almost 15 years ago, we were one of the first companies to commercialise climate solutions and over the years we've developed more and more sustainable solutions. Sustainability is one of the company's core values. With the roll-out of our new Nexpand Cabinet & Containment portfolio we again raised the bar providing solutions that contribute to more energy efficient data centers. Very soon we will add an active cooling portfolio following the same philosophy."

Bas Jacobs, Head of Product Management at Minkels

Bas continues: "More and more customers are asking us how we can help them become more sustainable – how we can help them with energy efficient solutions. And they are also looking at our supply chain, how we select our suppliers, how Minkels itself contributes to a more sustainable environment."

On page 20 you can read about the company's decision to become a member of the Sustainable Digital Infrastructure Alliance (SDIA), which is a practical demonstration of its sustainability commitment.

Other features of the Nexpand corridor containment solution include the ease with which both temperature and humidity sensors can be integrated; the ability to incorporate both sprinkler and gaseous fire suppression solutions – the roof panels can be glass (which helps the natural light level) or a plastic, drop away panels (which 'fall away' in heat and allow water ingress if the sprinklers are outside the containment); the white colour of the containment components (again, helping to reduce the need for artificial lighting) and the ability to incorporate LED lighting as required within the roof panels. ∎

The new Nexpand aisle containment solutions are available in both standard and free-standing configurations and are designed to provide the combination of modularity and flexibility required by data center owners and operators. Thanks to the close attention paid to ensuring that both the roof and door systems are completely airtight, these solutions can ensure the optimisation of data center cooling and energy efficiency through the separation of hot and cold air flows as required.

Hot aisle containment

Cold aisle containment

PRODUCTCASE

The standard corridor design provides the most cost-effective containment solution, where roof and door systems are fitted to the existing IT cabinets – with any necessary blanking panels added to ensure that the hot and cold airflows are separated effectively.

The Free Standing Containment provides maximum flexibility for a dynamic data center environment, where the cabinet layout is being adapted regularly as the IT workload changes. It can also prove useful where there are a variety of different cabinet sizes to be contained.

The Nexpand Aisle Containment system works alongside Minkels' existing cabinet-focused efficiency solutions to provide a truly sustainable data center environment. These cabinet solutions include airtight panels which seal from cabinet to floor, whatever the size of the gap, and cabinet to cabinet sealing by means of a rubber strip.

Want to know more? Watch the animation
www.minkels.com/videos/aisle-containment

legrand®