panorama

KÜS, Losheim:

Data centre planning
WITH EXPERTISE

ESA-ESRIN, Frascati:

ESA-ESRIN and Datwyler celebrate
**"SILVER WEDDING
ANNIVERSARY"**

Know-how:

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QUO VADIS?

DÄTWYLER

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KEY ASSET FOR THE FUTURE

Dear Readers,

We live in an exciting world – alas not only in the positive sense. It is one increasingly characterised by volatility, uncertainty, complexity and ambiguity. This "VUCA World", as it is called, has a lot to offer, and it presents a formidable challenge to you, dear Business Partners, as well as to manufacturers and suppliers of IT infrastructure solutions like us. How are you supposed to make serious plans when everything is changing so fast and hardly anything lasts for long?

The way I see it, agility is what is needed – at all levels and in all operations. The important thing is to keep a close watch on the environment and on trends, to be proactive and react promptly, to learn from your mistakes, and to implement the appropriate improvements swiftly.

A positive attitude, entrepreneurial spirit, curiosity and a touch of healthy openness to risk also help in finding your way around the "VUCA World".

On the technical side – despite the trends mentioned – one thing is abundantly clear: Only with a high-performance, modular and flexibly expandable IT infrastructure can one cope with the future exponential increase in data and continue to run one's core business competitively.

In 2018 the exponential growth in data will only just get going: IoT, 5G, autonomous driving, high-resolution streaming, artificial intelligence and many other factors will transform our world to an unprecedented degree.

Given these challenges, dear Business Partners, we see our role as giving you expert support in the planning, upgrading and operation of your IT infrastructures. We want you to feel assured that not only do you benefit from first-class solutions, products and services, but that at all times and in every sense you are in good hands with Datwyler. Come what may...

In this spirit I wish you a good read

Johannes Müller
CEO
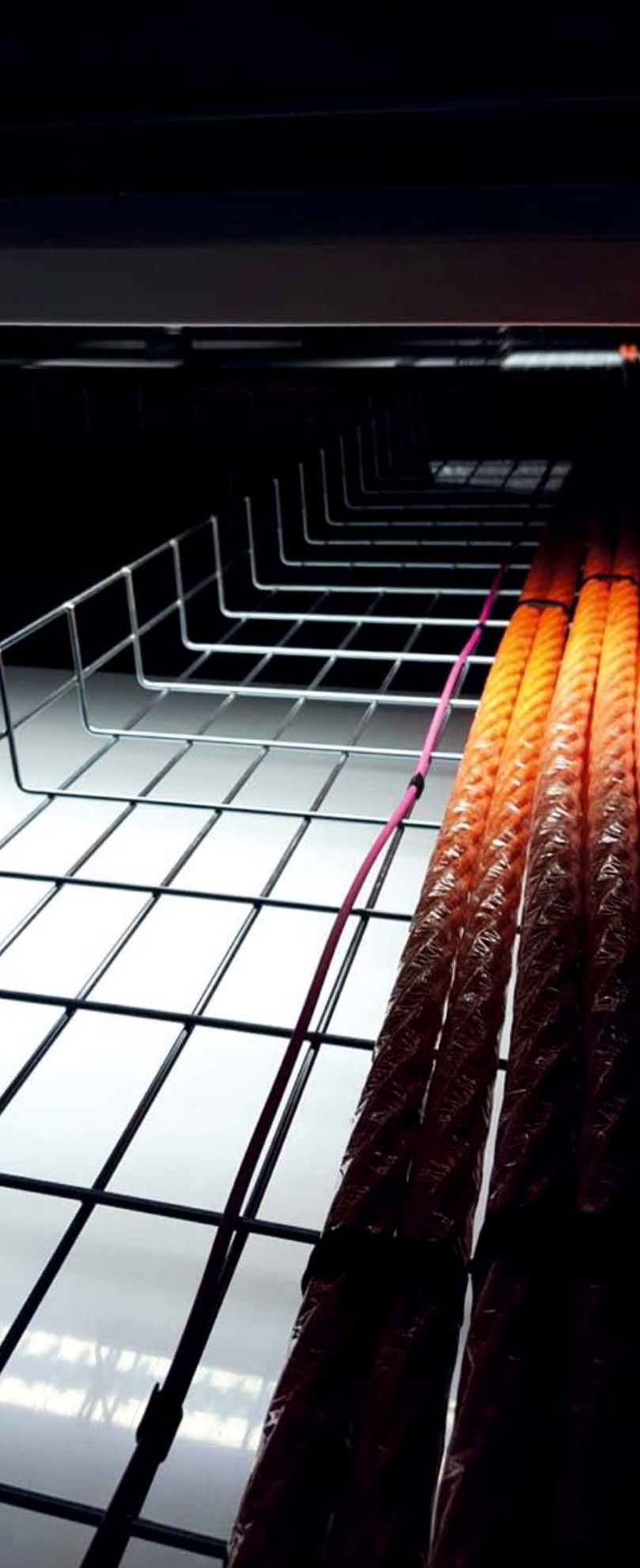
All the cable links were implemented with preassembled and measured multiple cables (trunks).

The motor vehicle monitoring organization of freelance automotive experts, KÜS, was established in 1980. In 1991 it went into official vehicle inspection as a test organisation. KÜS is now one of the major national vehicle monitoring organisations in Germany. After opening various branches KÜS developed into a complete service provider for road users and automotive businesses.

Since late 2016 KÜS DATA GmbH has been operating a new high-performance and high-security data centre. This enables the group to stay abreast of rapidly increasing digitisation, especially in the automotive world.

Standard-compliant design

Planning for the greenfield data centre began in autumn 2015. At the same time the organisation faced the challenge of developing its own cabling concept. After the basic construction phase this would facilitate fast and flexible installation for tenant outfitting – while current operations continued. The KÜS DATA computer centre was, moreover, the first of its kind to be designed to comply in full with the new European Data Centre Standard EN 50600. So even the cabling had to meet the auditors' stringent requirements.

In order to guarantee high data centre standards, KÜS brought Datwyler on board as an expert partner to further expand the existing infrastructure. Among other things this included a high-density wire manager (HDWD manager) for the network and server cabinets, to ensure an unrestricted flow of cool air over the entire cabinet height and the reliability of data transmission.

KÜS, Losheim:

Data centre planning
WITH EXPERTISE

At short notice KÜS, the motor vehicle monitoring organisation, found in Datwyler an expert planning partner for a flexible, future-proof cabling infrastructure for their new data centre.

Fast, space-saving installation

The cabling solution installed in the KÜS DATA computer centre comprises a modular "Datwyler Data Centre Solution" which includes not only all the fibre optic cabling but the copper cabling as well. All the cable links were implemented with factory preassembled and measured multiple cables (trunks).

Datwyler's new 45 degree-angled type "KS-TA" RJ45 modules were used in the racks. In the fibre optic patch panels all the outgoing lines are also angled to left and right, allowing neat space-saving cable management at the front.

In this installation Datwyler worked closely with solution partner Media Secure, the staff of which were given a training course beforehand. 2,100 links were implemented and 90 racks connected in the first expansion stage. 50 fibre optic and 75 copper trunks were only some of the items installed by Media Secure.

During installation some unexpected problems were solved at short notice. These included not only a concept for cable rack management, but also involved replanning the cables already laid so as to fine tune the installation to the customer's requirements. Thanks to these last-minute solutions it was possible to complete installation within 14 days, and the first extension stage of the data centre came into operation in September 2016.

Flexible expansion

The cabling concept implemented at KÜS allows flexible expansion for tenant outfitting, and its modularity makes it very future-proof.

Since commissioning KÜS has also benefited from ordered structures in the racks and runs, from simple, clearly understandable documentation, low energy costs and the possibility of being able to undertake installations itself. No wonder, therefore, that KÜS is very satisfied and has decided on Datwyler for the next three expansion stages. (*hk/er*)

The cabling solution comprises a modular "Datwyler Data Centre Solution".
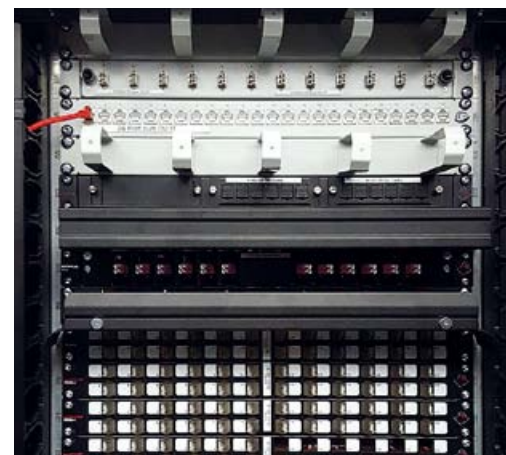
BRICS Summit, Xiamen:

FOR A BETTER FUTURE

With the cabling system for the BRICS summit in China Datwyler made a contribution to the success of the conference.
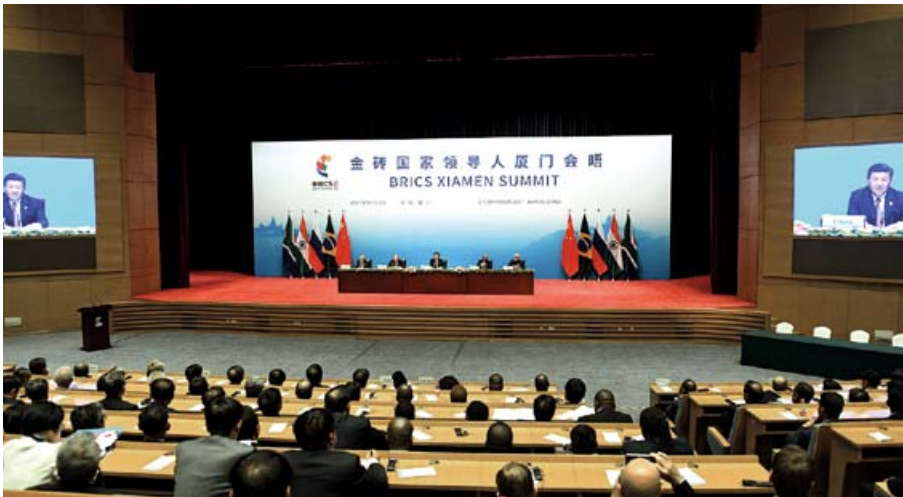
The summit conference of the BRICS states Brazil, Russia, India, China and South Africa was held in September 2017 under the slogan "A closer partnership for a better future". As China held the presidency, the guests from five countries and economic organisations met in Xiamen in the Chinese province of Fujian. At the summit the heads of state of the five major emerging economies exchanged their fundamental views on their cooperation, global governance, mutual benefit, institutional building and improvement of the cooperation platform.

The main venue for the summit was Xiamen's International Conference and Exhibition Centre. The Centre has a floor space of 470,000 square metres, which include three exhibition halls and a 4-star exhibition and business hotel with 210 guest rooms. Altogether 15 galleries with exhibition areas ranging from 2,000 to 9,000 square metres are available in the three exhibition halls. These galleries can be used flexibly for events of different sizes. In the past, for example, the International Investment and Trade Fair (CIFIT), the International Marathon of Xiamen, and many other events have been held here.

To meet the requirements of a major conference like the BRICS summit it is vital to build intelligent automated event venues. Only such buildings make it possible to share the internal resources of the event, to implement uniform monitoring and scheduling, and to meet the safety and ecological requirements – for example in terms of energy saving and environmental protection.

None of this can happen without the help of an IT network and a structured cabling system.

The main venue: the International Conference and Exhibition Centre of Xiamen.

Trusted partner

As a world leading cable and system manufacturer who has already equipped numerous exhibitions and event arenas with electrical and IT infrastructures, Datwyler had the honour of installing the structured cabling system for the BRICS summit. Among other things Datwyler supplied 10G single-mode and multimode fibre optic cables as well as shielded and unshielded Category 6 copper cables – all low-smoke and halogen free.

These systems ensured that the conference's ICT equipment would run in a safe, reliable and, if required, extendible environment. That was Datwyler's contribution to the success of the BRICS summit in Xiamen. *(nz)* ∎

Mamsha Al Saadiyat, Abu Dhabi:

Best location,
BEST INFRASTRUCTURE

An integrated data network from Datwyler will in future provide the residents of the luxury residential quarter Mamsha Al Saadiyat with high-speed connections.

Mamsha Al Saadiyat: one of the first residential areas of the "Cultural Quarter" built on the beachfront.

The 27 square kilometre Saadiyat Island – "The Fortunate" in English – is known mainly because its centrepiece, the "Cultural Quarter", will house world famous museums including the official offshoots of the Louvre and Guggenheim museums as well as the Zayed National Museum.

Mamsha Al Saadiyat is one of the first residential areas of the cultural quarter to be built on the beachfront. Following completion the 1.2 kilometre stretch will be lined with apartment blocks, businesses and catering establishments.

Because of its beach location and its closeness to "The District", the modern shopping quarter, Mamsha Al Saadiyat is ideally placed to become one of the most vibrant, cosmopolitan and inspirational addresses in Abu Dhabi.

The project developers wanted to equip the residential quarter with a reliable, high-performance and cost-effective structured cabling solution to match its prime location. They opted for a comprehensive cabling infrastructure from Datwyler which could provide future residents, businesses and re-tailers with a powerful network allowing high speed connections.

Datwyler's structured cabling systems were proposed by Tornado Technology Services LLC and in July 2017 were approved by the Tourism Development & Investment Company (TDIC).

Among other things the end-to-end solution for over 500 residential and commercial units includes around 4,500 data connection points, 125 kilometres of Category 6_A copper data cable, a further 100 kilometres of Category 6 cable and over 35 kilometres of fibre optic cable in a wide variety of versions. *(ak)*

QSC AG, Nuremberg:

ADDED VALUE
for customers

For its data centre in Nuremberg QSC decided on a modular system solution from Datwyler to provide high future viability in terms of bandwidth and attenuation.

The "Datwyler Data Centre Solution" met all the requirements of QSC.

QSC in Nuremberg has been using Datwyler cables and components for almost ten years.

QSC AG sees itself as "Digitizer for the German SME sector". With decades of experience and expertise in Cloud, the Internet of Things, consulting, telecommunications and colocation, QSC is accompanying its customers safely into the digital age. The cloud-based provision of all services gives them increased speed, flexibility and availability. Its own TÜV and ISO certified data centres in Germany and QSC AG's nationwide All-IP network thus form the basis for ultimate end-to-end quality and security.

In late 2016, in order to be able to securely transmit services and applications beyond 10 Gbit/s in its Nuremberg data centre as well, the local office of QSC AG planned the development and expansion of the redundant cabling system in the Core and Colocation Division. QSC AG were therefore looking for an application-neutral cabling solution, initially for 40G, but which would allow simple rapid migration to 100G in future.

QSC AG's Nuremberg data centre

certified Datwyler partner for the DCS system, but it is also valued by QSC as a dependable service provider for the installation of copper and fibre optic networks.

On cable runs assembled specially for this project the Heffner team installed 47 MTP trunk cables, 20 of which were multimode and 27 single-mode, each comprising 48-fibre cables and delivered preassembled by Datwyler. The trunks were terminated on 136 MTP-to-LC cassettes in 17 subracks.

The installation itself went really smoothly. An advantage here was that Heffner was a Datwyler-trained company with good local knowledge and an experienced installation team familiar with fibre optic products. Through Michael Heffner e.K. QSC finally also got the 25 year Datwyler system warranty.

The new cabling system, which was installed during operation in the summer and autumn of 2017, connects the backbone core router with several aggregation routers and the routers in the colocation and carrier premises. Today the Nuremberg data centre ensures that QSC benefits from a modular solution which provides high future viability in terms of bandwidth and attenuation.

The project managers brought Datwyler on board as a system partner. "We are familiar with Datwyler as a first-class manufacturer whose cables and components we have been using for almost ten years," explained Werner Motz, Divisional Head of Colocation at QSC in Nuremberg. "We also value Datwyler's expert planning support in our projects, their great flexibility in design and execution, and the 25 year system warranty."

Reliable construction
A future-proof fibre optic solution which met all the requirements of QSC was quickly found in the "Datwyler Data Centre Solution" (DCS). "It's a sound solution with an excellent price-performance ratio," says Motz.

Datwyler is collaborating in the construction work with Michael Heffner e.K. in Nuremberg. Not only is this company a

Simple migration
Right after the cabling QSC AG was able to migrate various applications to the current 40 Gbit/s. "In the switch to 100 Gbit/s the fibre optic network itself will remain unaffected. All we have to do is replace the LC cassettes plug-and-play with MTP front panels. This means that we can save ourselves laborious splicing work," explained Anton Schultheiß of the local QSC Engineering and Network team.

His colleague Klaus Kasimirek is also very happy with the outcome: "With this installation we have achieved all our planned objectives. It means that we obtain increased bandwidth in our multi-redundant system and hence added value for our customers." *(tb)*

ESA-ESRIN and Datwyler celebrate

"SILVER WEDDING ANNIVERSARY"

For 25 years the passive cabling infrastructure of ESRIN, the European Space Research Institute, has been based on the Swiss manufacturer's system solutions.

" Investment in Datwyler solutions has always proved future-proof.

Roberto Franciosi, Head of Facility Management, ESA-ESRIN
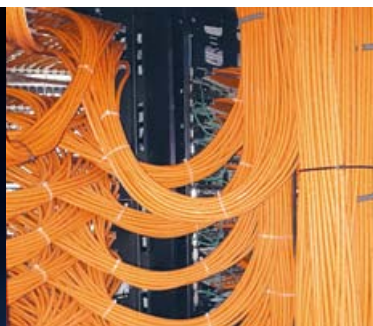
At ESRIN the cabling in both data centres and the IT infrastructure in the whole building complex is based on Datwyler technology.

The Institute gathers, stores and distributes satellite data on climatic and environmental change.

The European Space Research Institute (ESRIN) in Italy is one of the European Space Organisation's (ESA) eight worldwide institutes. It was established in 1966 and is based in Frascati, where ESRIN employs over 400 staff.

Since 2004 ESRIN has been operating as ESA European head office for earth observation missions. The Institute's main task is to gather, store and distribute to the ESA partners satellite data on climatic and environmental change. ESRIN also oversees the "Vega" launcher program and deals with the IT applications and associated infrastructures of the space organisation.

Dependable data traffic

The building complex in Frascati houses not only the ESA IT department but also two data centres: one for earth observation, the other for the agency's business activities.

The Institute had high requirements even 25 years ago, when ESRIN was faced with designing and building the two data centres: A passive cabling infrastructure was needed with which to support reliable and uninterruptible data traffic.

"When we had to decide on a solution for constructing the initial infrastructure of the two data centres, we carried out a market survey. We wanted a single, dependable European supplier who understood our requirements and could cover them

fully. Many years ago that was the birth of our partnership with Datwyler," says Roberto Franciosi, Head of Facility Management at ESA-ESRIN.

Over time the original requirements have multiplied – up to today's challenging task of guaranteeing the management of large amounts of data which continue to grow exponentially in response to technological progress.

Solutions from Datwyler

Even today the cabling in both data centres and the IT infrastructure in the whole building complex is based on Datwyler technology. The usable floor space in the data centre is 400 square metres, one quarter of which is reserved for the racks, of which there are approximately 90. All the components in the passive infrastructure – cables, connectors, patch cables and patch panels in copper and optic fibre technology – come from the Swiss manufacturer.

Years ago ESA-ESRIN had already standardised the use of 10-gigabit compatible cabling comprising Category 7 and 7_A cables as well as Category 6_A and 7_A connectors for all the installations. It is almost impossible to quantify the amounts of product supplied by Datwyler over such a long period. Including extensions, refurbishments and maintenance, certainly many thousands of links have been installed.

Quality and future viability

ESA-ESRIN was always only interested in cutting-edge ultra-high-performance technologies. "For our structured cabling we have all along opted for solutions which meet both our current and future requirements," explained Roberto Franciosi. "In all conscience we can say that investment in Datwyler solutions has definitely always proved future-proof." In fact systems which were installed in the Frascati institute in the early 1990s are still in use today.

Franciosi also wants to continue the good relationship after the "silver wedding anniversary": "The huge amounts of information produced every day by the satellites, and the development projects we are working on, will soon make ESA into one of the world's top 10 data producers. Technological progress ensures that the passive infrastructure will continue to gain value in future. We must be prepared to manage and distribute our data in the best possible way. That is why we will continue to maintain our partnership with Datwyler." *(ldg)*

Roberto Franciosi believes that ESA will soon be one of the world's top 10 data producers.
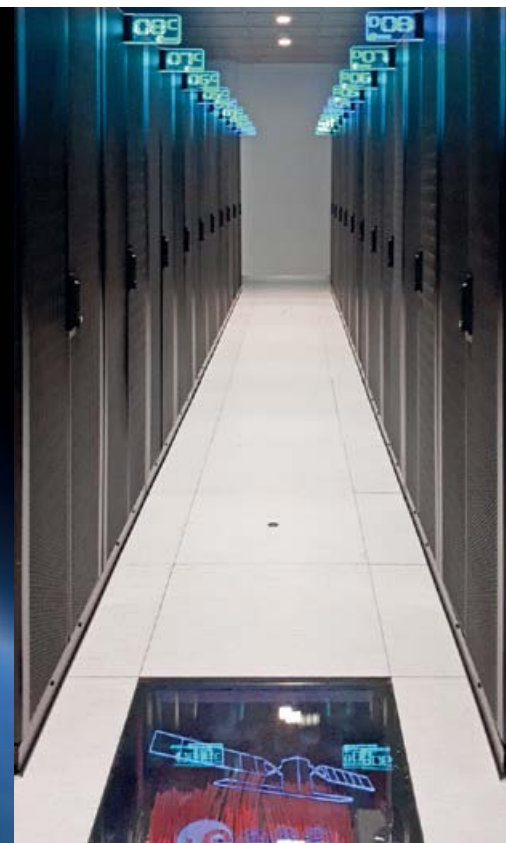
Omniturm, Frankfurt:

DIGITAL MOBILITY
in high-rise buildings

> Schindler is equipping the Omniturm with high-performance lifts, a transit management system and a digital mobility solution. Tailor-made flatform cables from Datwyler play an important role in reliable data communication as well as safety throughout the elevator system.

The Schindler Group, established in 1874, is one of the world's leading suppliers of elevators, escalators and associated services. Every day Schindler's mobility solutions move billions of people throughout the world. This success is backed by more than 60,000 employees in over 100 countries.

The 190 metre high Omniturm currently being constructed in the Frankfurt banking district is another high-rise building which will be equipped with high-performance elevators by Schindler. Project developer Tishman Speyer will complete the 45-storey building by 2019. It will be the first genuine mixed-use high-rise building in Germany to simultaneously house office space, 147 apartments and public areas. This places particularly high demands on vertical access.

Traffic management and access control

Schindler's remit includes not only the lifts, but also a transit management system by the name of "Port". What is more, the high-rise building will be the first commercial building in Germany to be equipped with the Schindler "myPort" solution: When authorised building users identify themselves at the entrance via smartphone or chip card they are told the best way through the building to the floor they want.

Residents can, for example, use a stationary "Port" terminal in the apartment or the "myPort" app on their smartphone to communicate by video chat with visitors at the entrance. By simply clicking on the invitation button they open the door for the guest and at the same time provide the lift to take the visitor automatically to the right floor.

The visitor management of office tenants will also take place via this app. Via instant messaging visitors are given a temporary access code which they can use at the entrance to the underground car part and for the route to the floor they want.

The intelligent linking of traffic management and access control is extremely efficient and meets the requirements of the individual user groups in the building.

Secure data communication

The great amounts of data thereby created have to be transmitted securely and without interruption. Here Datwyler plays an important role in the high-rise and mid-rise sector with its tailor-made flatform cables.

The travelling cables manufactured for Schindler, which combine power and data cables, meet both the company's most stringent requirements on precision as well as the requisite load profile resulting from mechanical stress.

Datwyler and Schindler are traditional Swiss companies which have formed an enduring partnership over the past 40 years. Together the companies are meeting the challenges of lift industry digitization, the "Internet of Elevators and Escalators". *(rd)*

Egypt:

New market
IN FOCUS

Sami Said Hasan, Managing Director of Connect Information Technology (l), and Asem Shadid.

In Egypt Datwyler is concentrating on a high service level for customers and the protection of partner projects.

In the Middle East and Africa Datwyler has for some time now been pursuing a strategy which focuses on customer benefit. In early 2018 Datwyler implemented this strategy in Egypt as well.

"We wanted a structure with which we could substantially improve the service level for our customers and effectively protect the plans and projects of our partners," explained Managing Director Asem Shadid, responsible for the Middle East and Africa region. "On the basis of the business results we have been able to achieve in other countries of the region, we are convinced that we will be successful with this strategy in Egypt as well."

In February Datwyler appointed Connect Information Technology as the official distributor of IT infrastructure and fire safety products in Egypt as the first step. The Cairo-based company is a new start-up, but its management has more than 25 years' experience in the ICT and electrical industry and has outstanding contacts all over the region. In Egypt Connect is a premium contact for end customers, consultants and system integrators.

The second step was the appointment of Sherif Ibrahim as Sales Manager for Egypt. Ibrahim has over 14 years of professional and management experience in the electrical and IT infrastructure sector, and in addition to knowledge, experience and innovative methods has excellent contacts on the Egyptian market. He will supervise projects for Datwyler on the Egyptian market and ensure that all customer and partner requirements are met. *(shs)*

Group photo of Datwyler Middle East and Bright Wires on the occasion of Alaa Al Shabab's award.

Saudi Arabia:

FRUITFUL PARTNERSHIP

After a successful year in 2017 Datwyler and Bright Wires strengthened their cooperation.

The partnership between Datwyler Middle East and the distributor Bright Wires, which has been selling Datwyler's structured cabling systems in the Kingdom of Saudi Arabia since the end of 2016, has proved a great success. Thanks to effective sales strategies and market analysis both partners achieved their self-imposed targets in 2017 and now want to introduce new products in the region.

In recognition of the distributor's good work, on 9th January Datwyler Middle East presented Alaa Al Shabab, Senior Account Manager at Bright Wires, with an award for achieving the highest sales figures for Datwyler products in the region.

Bright Wires was present in Dubai with a whole delegation under the leadership of Sales & Business Development Manager Ahmad Fattal.

In the following two days the team took a product and sales training course designed to help keep pace with technical development.

Taking account of positive business development in Saudi Arabia, Datwyler recently appointed an experienced sales manager, Soubhi Al-Aliwi, to provide even better support to partners and customers in the kingdom. He is a proven expert in IT infrastructure and NSP/LV systems and has over seven years' experience in product, sales and project management. *(as)*

Germany/Austria:
TRAINING COURSES ON THE CPR

Special Datwyler seminars answer all the questions on European customers' minds.

In addition to the certification training courses on data network technology, EU 305/2011 – the European Construction Products Regulation (CPR) – is an important topic in the training courses offered by Datwyler in Europe. A great deal of clarification is still needed with regard to the fire safety requirements for building cabling.

In 2018 Datwyler Cabling Solutions is again providing several training courses on this important subject in Germany and Austria. The first event, held in Vienna in January (see image on top), was well attended. It took place on Campus21, the location of Datwyler's Austrian office. *(ak)*

Kuwait:
NEW DISTRIBUTOR

Fawaz has been distributing Datwyler fire safety products in Kuwait since February.

In Fawaz Trading and Engineering Service Co. W.L.L. Datwyler has gained an experienced distributor for its fire safety products in Kuwait. An agreement to this effect was signed in February 2018. Customers in Kuwait benefit from having a qualified distributor locally, one with its own storage capacity and able to supply the requisite products at short notice.

Over the past 40 years Fawaz has earned a fine reputation as a supplier of cooling and climate control technology, fire protection, fire alarm, smoke extraction, pumping and other safety systems, and is one of Kuwait's leading suppliers in these sectors. Fawaz supplies customers with innovative solutions including electromechanical, contracting and installation services. The company meets the highest standards and also has excellent references in monitoring and servicing major projects in the commercial, private, public and industrial sector. *(sk)*

Singapore:
ONLINE COURSES FOR INSTALLERS

Since the beginning of this year installers in the Asian-Pacific area can be certified online.

In January the Datwyler office in Singapore started its first online certification training course. This means that installers from the Asian-Pacific area (except for China) can be certified for the installation of Datwyler's structured cabling systems by means of web-based training courses, i.e. without face-to-face training. In addition to the cabling solutions themselves, the main focus of the course is on current standards, correct installation methods and the test report requirements relevant for issue of the Datwyler System Warranty.

Online training allows participants to work in their own time. They just have to complete the training course within three months.

Further information on applying and registering can be found on the Datwyler website. *(sh)*

China:

NEW YEAR CELEBRATION

in Taicang

On 24th January Datwyler (Suzhou) Cabling Solutions Co. held its annual New Year reception.

Johannes Müller (l) presents the "Sales Star Award" to Jeff Lin (r)

A prize was also awarded to the Sales Team South

The best team: the Maintenance & EHS department

New Year addresses from Managing Director Xia Xubing

Chris Huang (r) accepts
the Managing Director's prize
from Xia Xubing (l)

The 5-years Service Awards

This year Datwyler celebrated the Chinese New Year in the Jiale Restaurant in Taicang City near Suzhou. Johannes Müller, CEO of Datwyler Cabling Solutions, was also present at the evening event, where the motto was "Keep going and make your dream come true".

After the opening dance "Gong Xi Fa Cai" both Johannes Müller and Xia Xubing, Managing Director of Datwyler in China, took the stage. They highlighted the challenges and resounding success of the past year, thanked the staff for their contribution, and encouraged them to look forward with optimism to the projects in 2018.

In order to honour outstanding individual performance and teamwork the management made, among others, the following awards: Jeff Lin was singled out as the "Sales Star", Chris Huang received the Managing Director's prize and Liuyuan Yang the award for best production manager. The "Best Team Awards" went to the Maintenance & EHS (Environment, Health & Safety) department and the Sales Group South.

On the stage the staff then performed songs and dances with a great deal of energy and enthusiasm as an expression of their solidarity with the company. The reception, and hence 2017, ended with a song from the organisation team. (wg)

Shaheer Shaaban, Head of Technical and Project Management at Datwyler Middle East, talks to the seminar participants.

Saudi Arabia:

TECHNICAL SEMINAR IN RIYADH

Qualified partners are an important prerequisite for satisfied end customers.

At the end of February the Datwyler Middle East team held a technical seminar in the Mövenpick Hotel in Riyadh for its business partners in Saudi Arabia. There were over 20 participants. Datwyler's training programme is designed to speed the market launch of new products and to certify new partners. With events like these the Company is not only meeting the requirements of the local business partners themselves, but making an important long-term contribution to the satisfaction of end customers in the kingdom. *(shs)* ∎

United Arab Emirates:

Five years of
TEAMWORK

Datwyler has been cooperating with Scientechnic LLC since 2013. 2018 will give new impetus to the working relationship

At the beginning of this year Datwyler Middle East put collaboration with Scientechnic, its authorised distributor for fire safety products in the United Arab Emirates, on a new footing. The aim of the restructured working relationship is to create a stronger market presence.

Scientechnic and Datwyler have been working together since 2013. Both companies are united in their intention to forge a sustainable partnership and provide customers with unique and comprehensive services. From 2018 onwards both companies want to improve their business model and step up efforts to stimulate further growth. *(shs)* ∎

from l to r: Mubeen Abdul Haleem, Senior Sales Engineer, and Stewart Panichiyil, Divisional Manager, both Scientechnic, as well as Shaheer Shaaban and Ahmed Krayem, Sales Manager, both Datwyler Middle East

Philippines/Thailand:

BICSI CONFERENCES

in South East Asia

Datwyler recently introduced its high-speed and high-density cabling solutions to the Philippines and Thailand.

Two conferences of the IT association BICSI were held in Manila and Bangkok at the end of November 2017. The events focused on the issue of data centre and ICT infrastructures.

There was a good turnout at the conference with over 420 participants. Most of those attending came from the Philippines and Thailand, but there were also interested parties from Singapore and other Asian countries: from data centre colocation, telecommunications, business, construction, installation, system integration and local authority sectors.

At the events Datwyler presented its latest copper Class I links, which comprise Cat.8 cables and RJ45 components and with which up to 40 Gbit/s can be transmitted.

Visitors to the Datwyler stand were able to test the new high-speed copper links for themselves.

Senjaya Halim, the data centre expert at Datwyler in Singapore, also introduced the solution as part of the relevant conference programme.

While on the Datwyler stand at both events, visitors took the opportunity of finding out about many other product solutions. The greatest interest was expressed in the new "High Density Patch Solution" (HDPS) for up to 144 fibres on one rack unit, the "General Patch Panel" for copper-fibre optic mixed layouts, Category 6 and 6$_A$ AWG28 patch cables, intelligent PDUs, an environmental monitoring system for data centres, and Datwyler's GPON solutions. *(vw)*

Germany:

Solutions for
SMART BUILDINGS

> Datwyler showcased the latest developments for smart buildings,
> data centres and FTTx networks on its exhibition stand at light+building
> 2018 in Frankfurt.

The increasing use of cloud services, streaming and virtual reality within the home and ever more challenging networking inside buildings call for pioneering infrastructure solutions: for the construction and expansion of data centres, the connection of businesses and residential blocks, and for smart building technologies.

In server rooms and data centres there is a demand for ever greater packing densities of connectors as well as for high availability and fail-safe performance. With its high-density cabling solutions – including the new "HDPS" – Datwyler demonstrated innovative cost-benefit efficiency-boosting concepts to the stand's international visitors.

Another key topic is currently the networked use of smart building technologies. On the Datwyler stand it was shown how nowadays sensor-based LED lights can be switched and controlled by power supplied via the data cabling (Power over Ethernet, PoE). This technology is replacing traditional electrical connections and complex bus systems: Temperature, brightness and presence can

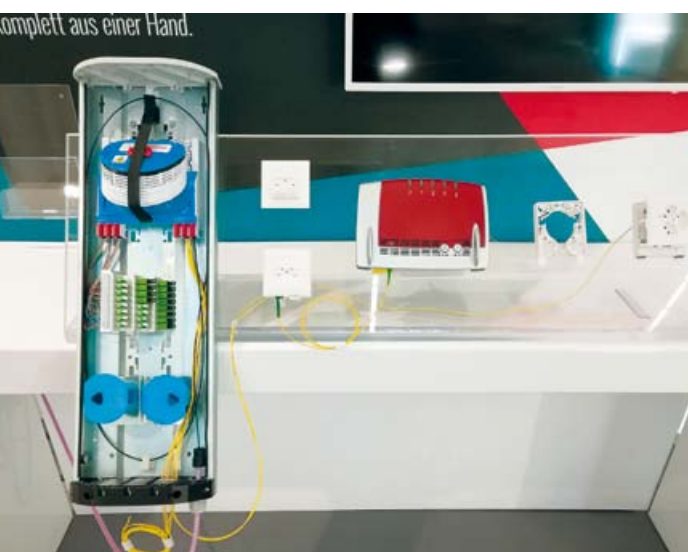*High-density cabling solutions boost the cost-benefit efficiency.*

Innovative "hands-on" FTTx solutions

Oman:
IN THE CUSTOMER'S INTEREST

Datwyler trained staff of the Omani Ministry of Health in late 2017.

The Ministry of Health (MOH) is one of Datwyler's most important customers in Oman. In November 2017 Datwyler Middle East organised a technical seminar for its staff in the Grand Millennium Muscat Hotel. The participants came from all the MOH offices, from Nizwa, Sohar, Salalah, IBRA and Buraimi as well as Muscat.

Datwyler ran the seminar jointly with IMTAC LLC, its local Solution Partner. The participants were given an overview of Datwyler product solutions, their special features, quality and performance. There was also a lively exchange on the requirements and possible execution of future MOH projects in the sultanate.

In that sense both sides learned something from the training course, for a better understanding of their customers' practical requirements also helps Datwyler improve customer satisfaction in the region. *(sk)*

Technical seminar for end customers in the Grand Millenium Muscat: Suresh Kumar, Sales Manager at Datwyler Middle East, talks to Health Ministry staff.

be registered by intelligent sensors, which in turn supply real-time data for the energy-saving use of smart buildings.

Last year EU 305/2011, the European Construction Products Regulation (CPR), stipulated the fire safety requirements for power, control and communication cables. Many exhibition visitors took the opportunity of putting their questions about the current status of the fire safety requirements for building cabling to the Datwyler experts on the spot. *(rf)*

United Arab Emirates:

AT GITEX
in Dubai

Visitors took three things from Datwyler's exhibition stand: discoveries, innovations and plenty of suggestions for improving their IT infrastructure.

The Seminar in Riyadh attracted over 100 partners from a wide range of industries.

Saudi Arabia:
WELL ATTENDED PARTNER SEMINAR

In mid-February over 100 partners from various industries attended the Partner Seminar held jointly by Datwyler Middle East and Bright Wires in Riyadh. The event in the Mövenpick Hotel served not only to foster public relations, but also afforded the company's strategic partners a comprehensive overview of Datwyler's product innovations as well as its new solutions and services. *(shs)* ■

GITEX Technology Week is one of Dubai's major events. This year Ihab Gazawi, Head of Datwyler Data Centre Experts, demonstrated a wide-ranging vision of modern data centre technology to the visitors on the Datwyler stand. Shaheer Shaaban, Head of Technical and Project Management, also explained the basic principles of structured cabling.

Datwyler was able to show interested parties a broad spectrum of the company's innovative products and solutions in use throughout the world, thus supporting users in keeping pace with technical transformation processes and at the same time complying with the requirements of the most stringent international standards.

The compact data centre erected on the stand was a real "eye-catcher", with intelligent hot aisle containment, in-row cooling and dual power distribution units in each rack.

from l to r: Carl A. Ziegler, CEO of T-LINK Management AG,
Vincent Pasquier, Deputy Head of Mission, Embassy of Switzerland
in the United Arab Emirates, and Asem Shadid

Ihab Gazawi explains the advantages of a Datwyler data centre solution to visitors.

Productive meeting on the stand (from l to r): Asem Shadid, Xia Xubing and representatives of Datwyler partners in Iran

The high-density infrastructure complied with the Tier III Standard of the Uptime Institute, the main characteristic of which is zero-downtime future expansion.

Leon Xiang, in charge of worldwide purchasing at Datwyler, and Xia Xubing, Managing Director of Datwyler in China, were there to support the Middle East team. In addition to the representatives of many Datwyler partners from the region, the guests also included Vincent Pasquier, Deputy Head of Mission, Embassy of Switzerland in the United Arab Emirates, and Carl A. Ziegler, CEO of T-LINK Management AG.

"We will definitely have a larger stand area at the next GITEX. For we are confident that we will open up new potential for growth in the region," explained Asem Shadid, Managing Director of Datwyler Middle East. *(shs)*

The Datwyler team with distributors, including Mahmoud Hassan, Area Manager at Hasoub (UAE), Hossein Tofigh, Managing Director of Optimum Trading (UAE), Sadegh Moghadam, General Manager at Toseeh Fanavari Datam (Iran), and Ahmad Fattal, Sales and Business Development Manager at Bright Wires (Saudi Arabia)

IT cabling in data centres:

QUO VADIS?

Designing data centres and server rooms to be future-proof
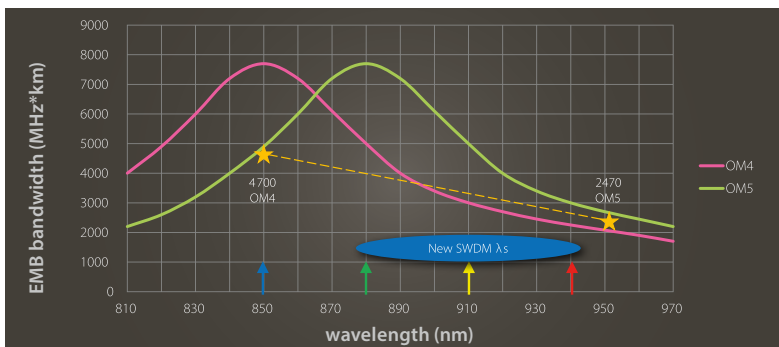is no easy undertaking. The same applies to IT cabling.

Fig 1: Bandwidth progression depending on the wavelengt

New technologies and applications mean that the demands made on IT cabling systems are constantly growing. Not only are transmission rates increasing, but new applications – standardised or proprietary – are always being developed. This means that there is often a choice of several solutions for the same transmission rate. The decision-maker faces major challenges in keeping the big picture in mind and choosing the "right" way to the future.

200G and 400G Ethernet
In December 2017 approval was given to fibre optic Standard IEEE 802.3bs for Ethernet networks with transmission rates of 200 and 400 Gbit/s. The new standard is the first to deal with such high speeds. It therefore gives important pointers to data centre planners and IT

Fig 2: SWDM transmission with four wavelengths in multimode fibre

managers who are creating a migration strategy incorporating a multi-technology upgrade.

Standard IEEE 802.3bs includes a series of variants for transmitting 200 and 400 Gbit/s via single-mode fibres with duplex or parallel options. It also includes a multimode variant, although it is assumed that this will not find widespread application. The anticipated industry-wide switch to single-mode for higher speeds will probably skip this technology.

In September 2018 Standard IEEE 802.3cd will appear, also including a 200 Gbit/s variant via multimode fibres (200GBASE-SR4) in parallel optics. In future it will be possible to migrate existing 100G-SR4 links to 200G with this variant without adapting the cabling.

Multimode vs. single-mode
Multimode fibres and VCSEL transceivers play a central role in today's data centres and are by far the most widespread transmission medium when fibre optic technology is required. Nothing here will change at transmission speeds up to 100 Gbit/s. From 100 Gbit/s onwards, however, the problem of range is exacerbated. No more than 100 metres are possible with standard transceivers – even with the best multimode fibres.

Until now single-mode fibres have only been used to a limited extent in the data centre environment because of exorbitantly high transceiver prices. There are several reasons why this will change in future: single-mode transceivers for the data centre environment are available with ranges from 500 to 2,000 metres and are considerably cheaper than single-mode transceivers for MAN/WAN networks. With parallel optics they are also cheaper than WDM transceivers. Even at 400 Gbit/s

Fig 3: Overview SWDM applications and transmission media

Application Matrix

Table I: Comparison of attenuation specifications and EMB specifications
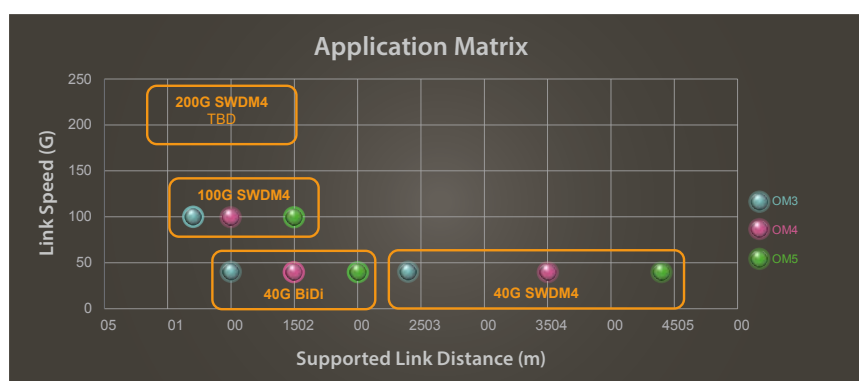
Criterion	Wavelength [nm]	OM4	OM5 WBMMF
Fibre attenuation [dB/km]	850	< 2.5	< 2.5
	953	n/s	< 1.8
	1,300	< 0.8	< 0.8
EMB bandwidth [MHz*km]	850	≥ 4,700	≥ 4,700
	953	n/s	≥ 2,470
	1,300	≥ 500	≥ 500

Upgrade paths up to 400 Gbit/s?

Single-mode applications in the data centre environment are specified via duplex or parallel options with eight fibres up to 400 Gbit/s, thus making possible a clear migration path by way of both these options.

In multimode applications the duplex options at the moment extend to 100 Gbit/s, the eight-fibre parallel options in the near future to 200 Gbit/s. Whether the recently specified 32-fibre 400 Gbit/s version will gain acceptance in the market is at least doubtful. It remains to be seen whether multimode applications beyond 100 Gbit/s can become established on the market.

these transceivers need no more than eight fibres. And, last but not least, single-mode applications solve the range problem of multimode applications existing from 100 Gbit/s upwards.

These are the driving factors for the industry-wide switch to single mode at transmission rates of 100 Gbit/s and over.

Parallel optics even with single-mode transceivers

Parallel optic technology in multimode applications has been known for years. Now it is also being used with single-mode transceivers – four fibres being connected in parallel for 100 Gbit/s transmissions – over a distance of at least 500 metres.

Ethernet Standard IEEE 802.3bs supports this technology. If parallel optic transceivers will also be obtainable with 200 and 400 Gbit/s in future, however, the lower price compared with WDM duplex transceivers will not be the only advantage. There is the additional possibility of operating the transceivers in a port breakout configuration. This brings many other advantages to the aggregation/disaggregation of links at high speed.

Conclusion

Irrespective of the type and size of data centre, IT managers are looking for cabling systems which can cope with several generations of technology and speed upgrades with minimal interruption and change. Datwyler's single-mode and multimode cabling systems for the data centre environment not only comply with all current bandwidth requirements, but also provide the flexibility and reserves needed for future network requirements – including 200G, 400G and over. *(pa)*

Energy management:

Far **MORE** than a **SOCKET STRIP**

> Intelligent PDUs are a key element in a well-designed data centre infrastructure.

A reliable power supply and energy savings are among the most important challenges in the data centre environment. Normal PDUs cannot meet these requirements. "Intelligent" PDUs are needed to create a dependable and stable power supply system which gives users the opportunity of capacity planning, energy saving and environment monitoring.

Now Datwyler can provide its customers with a new family of intelligent PDUs. This comprises four series, which meet every requirement from entry class to high-end solution.

The new PDUs are of modular design: they have socket and switch inserts as well as control and outlet modules in a metal housing. This design allows flexible adjust-

ments to individual customer requirements in respect of type, number and combination of sockets as well as installation method.

Hot-swap design

The Datwyler PDUs feature a unique "hot-swap" design. Should something break down despite the stringent load testing designed to ensure trouble-free operation throughout their service life, users can simply exchange the control and output module while the PDU remains in operation. If there is a problem with a single relay there is no need to remove the whole strip – and hence cut the power for the complete rack.

Thanks to its modular "hot-swappable" design an intelligent PDU from Datwyler can also simply be upgraded by replacing the

	Measurement	Measurement single socket	Measurement & switching single socket	Measurement single socket & switching single socket
MAIN FUNCTIONS	Output (kW)	Output (kW)	Output (kW)	Output (kW)
	Voltage (V)	Voltage (V)	Voltage (V)	Voltage (V)
	Current (A)	Current (A)	Current (A)	Current (A)
	Power factor monitoring	Power factor monitoring	Power factor monitoring	Power factor monitoring
	Power consumption (kWh)	Power consumption (kWh)	Power consumption (kWh)	Power consumption (kWh)
	Temp./Humidity monitoring	Temp./Humidity monitoring	Temp./Humidity monitoring	Temp./Humidity monitoring
		Measurement on single socket	On/off single socket	On/off single socket
				Measurement on single socket

Patch cables:

Patching in the
TIGHTEST SPACE

control module or outlet module, thus adapting the PDU to new requirements, for example changed load monitoring.

Defined limit values

Power monitoring enables users to set defined limits in order to protect a PDU from overloading and to allow the safe connection of new devices. Power monitoring at single socket level makes it possible for users to plan capacity in real time or by using logs, and to identify devices not operating at full capacity, for example unused servers, which in turn can result in energy savings. In the event of an alert, freely definable limit values contribute towards the early identification of emerging problems such as overloading, thereby avoiding power failures and downtime.

The switching of individual sockets makes it possible to remove servers or other devices from the network during maintenance and servicing, even remotely. A smart start-up delay in each socket helps avoid load spikes when switching on again.

Last but not least, the Datwyler PDUs support sensors for the monitoring of temperature and atmospheric humidity. This means that users are warned of overheating or – conversely – of over-cooling in areas where there is scope for energy savings.

To guarantee secure communication and allow integration in all the data infrastructure management platforms (DCIM systems), the new PDUs support a wide variety of protocols including HTTP, SSL, DHCP, SNMP V1(V3), Modbus, Telnet, SMTP and NTP. *(sz)* ■

> Datwyler has developed ultra-thin
> LC Uniboot patch cables for high-density cabling
> in data centres.

The rapid spread of Cloud computing, Big Data, the Internet of Things and other new technologies go hand in hand with increasing demands in data centres. The requirement for ever higher data rates and port densities can, however, no longer be met by traditional cabling systems. It is therefore a top priority for manufacturers like Datwyler to find solutions for the effective configuration and management of high-density applications in data centres.

Now Datwyler is offering a new series of 2-fibre LC Uniboot patch cables designed so that users can install even more cable in the most confined space and work flexibly with it. The new patch cables are only 2 millimetres "thick" and use colour-coded bend-optimised fibres. An optional push-pull rod of adjustable length simplifies connector maintenance and insertion in very tight spaces – for example in "High Density Patch Solution" (HDPS) cassettes. If required, an integrated quick release latch allows the user to reverse the polarity quickly on the spot. *(bs)* ■
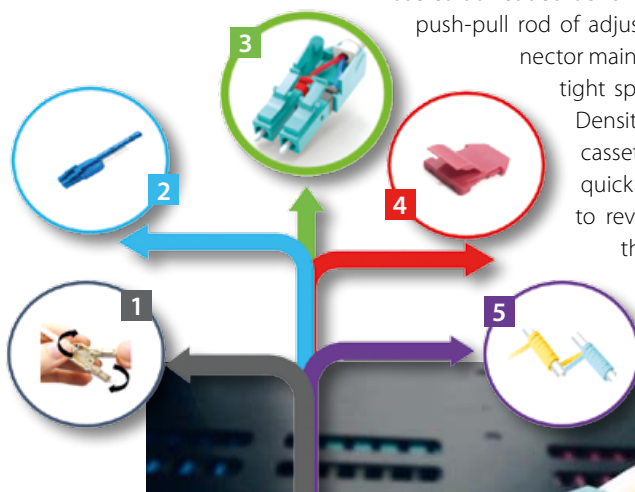
1. Fast polarity reversal
2. Push-pull rod
3. 2 fibres in 1 tube
4. Quick-release latch
5. Bend-optimised fibres

Copper data technology:

Up to **40 GBIT/S** via **RJ45**

Datwyler is expanding its high-speed cabling solutions by the addition of the new "KS-T8 Class I" RJ45 module.

The demands on transmission speed are constantly increasing in the data processing industry. For reasons inherent in the system, data transfer rates in the data centre environment are subject to the most exacting requirements. At speeds of over 10 gigabits per second a Twinax (3 to 5 metres) or a fibre optic cabling system is used, depending on architecture – the latter being relatively susceptible to dirt.

In the office environment the next generation of access points makes it necessary to think of solutions transcending 10GBase-T. Planners and end customers expect a passive network to have a service life of up to 20 or even 25 years. With this in mind, today it is already worth investing in the next stage of innovation for horizontal cabling.

The standardisation of Twisted Pair for 25- and 40GBase-T by IEEE and of the Channel configuration by ISO/IEC and CENELEC makes it possible to provide a robust and easy-to-use solution based on twisted pair cables for high data transfer rates.

Complete copper links

Back in 2013 Datwyler had already introduced a 40GBase-T Channel solution based on the PS-TERA 4-compartment connector. Since then IEEE – as proprietor of the Ethernet standard – decided to specify not technically the best solution, but the most widely used connector for 25/40GBase-T: RJ45.

With the new keystone-compatible "KS-T8 Class I" RJ45 module Datwyler now provides a robust and easy-to-install connection system for data centres and the exacting office environment with a bandwidth of maximum 2,000 megahertz. In combina-

tion with tried and tested "CU 8203 4P" Category 8 data cable and the appropriate patch cables based on "CU 8206 4P flex", this allows the creation of complete copper links which easily meet all Class I requirements (Channel and Permanent Link). The new Datwyler module is backward-compatible with Category 6_A and is also compatible with PoE+.

Easy to install

At 34 x 15 x 21 mm (inclusive of shielding) the "KS-T8 Class I" RJ45 module is very compact and can be installed in 24 port 1U as well as 48 port 1U patch panels. Strain relief and shielding are effected by means of an integrated self-locking mechanism which substantially reduces the cost of installation by comparison with classic "cable tie solutions".

The module can safely be connected with AWG 26 to AWG 22 size conductors (stranded and solid wire). The wire manager is colour coded for configurations conforming to ANSI/TIA 568 A and B. *(wa)*

NEW PRODUCT GUIDE

Short catalogue gives overview of Datwyler data network solutions.

Datwyler's "Data Solutions Product Guide" provides customers with a handy short catalogue which supersedes the old "ICT Networks" catalogue. In addition to tried and tested items its 76 pages feature many new products and solutions for copper and fibre optic networks.

Furthermore, the new short catalogue provides recommended links for copper data networks with transmission speeds of 1 Gbit/s, 10 Gbit/s and more – i.e. for all applications in office environments and data centres. Customers can choose between especially future-proof "high-end" and "premium" solutions as well as cables and components which are very popular with customers due to their cost-effectiveness or optimum price-performance ratio.

DATWYLER SYSTEM WARRANTY

There have been new application forms since the beginning of 2018.

In common with certified installers Datwyler gives a long-term system warranty – 25 years as a rule – on the cabling installed. The new application forms, valid from 2018 onwards, are available now as a ZIP file in the download area of the Datwyler website.

CERTIFIED QUALITY

Datwyler renews LPCB and BASEC certificates for fire alarm cables.

Datwyler recently renewed the certificates for British Standard-compliant Standard and Enhanced fire alarm cables. Now customers can not only find the documents issued by BASEC and LPCB in the download area, but also directly in the product data sheets on the Datwyler website.

SWITZERLAND

Dätwyler Cabling Solutions AG
Gotthardstrasse 31
6460 Altdorf
T +41 41 875-1268
F +41 41 875-1986
info.cabling.ch@datwyler.com
www.cabling.datwyler.com

GERMANY

Dätwyler Cables GmbH
Auf der Roos 4-12
65795 Hattersheim
T +49 6190 8880-0
F +49 6190 8880-80
info.cabling.de@datwyler.com
www.cabling.datwyler.com

Dätwyler Cables GmbH
Lilienthalstraße 17
85399 Hallbergmoos
T +49 811 998633-0
F +49 811 998633-30
info.cabling.de@datwyler.com
www.cabling.datwyler.com

AUSTRIA

Dätwyler Cables GmbH
Niederlassung Österreich
Liebermannstraße A02 403
2345 Brunn am Gebirge
T +43 1 8101641-0
F +43 1 8101641-35
info.cabling.at@datwyler.com
www.cabling.datwyler.com

CHINA

Datwyler (Suzhou)
Cabling Solutions Co., Ltd
No. 218, East Beijing Road
Taicang Economic Development Zone
Jiangsu Province, 215413
T +86 512 3306-8066
F +86 512 3306-8049
info.cabling.cn@datwyler.com
www.cabling.datwyler.cn

UNITED ARAB EMIRATES

Datwyler Middle East FZE
Jabel Ali Free Zone
LB 15, Second Floor, Room #10 & 11
P. O. Box 263480
Dubai
T +971 4 4228129
F +971 4 4228096
info.cabling.ae@datwyler.com
www.cabling.datwyler.com

Datwyler Cabling Solutions LLC
Unit 1004 & 1005, 10th Floor, IB Tower
Business Bay
Dubai
T +971 4 4228129
F +971 4 4228096
info.cabling.ae@datwyler.com
www.cabling.datwyler.com

SINGAPORE

Datwyler (Thelma)
Cables+Systems Pte Ltd
30 Toh Guan Road #01-01A
608840 Singapore
T +65 68631166
F +65 68978885
info.cabling.sg@datwyler.com
www.cabling.datwyler.com