

Newsletter



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December Newsletter 2020

Welcome to the December 2020 edition of the OPTOKON newsletter, which comes at the end of what has been a turbulent year for everyone. The Christmas and New Year holiday season is now on us and with this in mind, there is the traditional holiday message in the newsletter from the General Director of OPTOKON, Jiří Štefl, which focuses on the global pandemic and its future consequences for the business world.

This edition contains articles on recent innovations at OPTOKON, OPTOKON Kable and the new Vysočina Data Center at OptoNet in Jihlava. You can also find our usual features on the current situation with getting OPTOKON Products on view at exhibitions plus our new product releases.

The management and staff of the OPTOKON Group wish all our partners, customers and distributors happy holidays at this time of the year and thank all those who contributed to the OPTOKON newsletter in 2020.



New products:

LMUPS-80-24V
Ruggedized Uninterruptible
Power Supply



LMIPT-45
High-class Rugged IP Video Phone
Integrated Video Communications
Solution IP Videophone for
Android™



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Recent Exhibitions

HEMUS 2020

30.9.2020 - 3.10.2020, International Fair Plovdiv, Plovdiv, Bulgaria



OPTOKON Forthcoming Exhibitions

ECOC 2020

7 to - 9 December 2020

Brussels Expo

Brussels, Belgium

Due to the Coronavirus pandemic, the exhibition was moved online in the form of a virtual event, which showcased the OPTOKON range of products including new products launched on the market.

ARMS AND SECURITY 2021

27 to 30 April 2021

International Exhibition Centre

Kiev, Ukraine

OPTOKON Stand: 3-F23

IDEX | International Defence Exhibition & Conference

21 to 25 February 2021

Abu Dhabi National Exhibition Centre (ADNEC), UAE

OPTOKON Stand: 09 - B23

IDEF 2021

International Defence Industry Fair

25 to 28 May 2021

Tüyap Fair Convention and Congress Center

Büyüçekmece, Istanbul.

OPTOKON Stand: 2151



Company News

A New Year Message from the General Director of the OPTOKON Group

Although the pandemic has changed us, we need to be optimistic for 2021

The COVID-19 pandemic has generated a time in our lives that is a major setback for many of us, and unfortunately, a tragic time with the loss of so many lives. With the recent vaccine breakthrough, it is hoped that the world will be able to put the pandemic behind and start to move ahead by spring 2021.

Although the pandemic has impacted the lives of many, in terms of the business world it has meant that businesses have to redesign to better meet the needs of the customers they serve. The need for change was due to the need to adapt to changing market conditions as the world slowed down. In addition, change was needed to better accommodate the shift in consumers' behavior with their evolving needs and wishes.

Businesses that are emerging more strongly from this pandemic crisis than others are those that are evolving faster to better respond to consumer change. Big and bold decisions are needed in business models to reflect a new era of agility. We need to be closer to reality. The world will change because of this lengthy pandemic. Success is limited to those who work profitably and even potentially increase their market share. Those who are successful are those who set the pace adapted to the new world. In OPTOKON, we cannot just wait for things to get back to "normal".

For the OPTOKON technology company, our customers lead us to take advantage of this new reality – we need to accept change, instead of being afraid of that change. The time has come for our company to innovate more, not less, and the focal point of these innovations has been our technology, which allows us to do this.

It is only fitting that we thank each one of you – our valued customers, distributors and partners – for your patience and steadfast support of our products in this difficult time and I sincerely wish that 2021 will provide you all with much health and happiness.

ing. Jiří Štefl
CEO & Chairman

Christmas and New Year holidays

Please note that OPTOKON will be closed from 24.12.20 to 3.1.2021 and will reopen for business as usual on 4.1.2021.

OPTOKON video conferencing

In these difficult times, when we cannot meet at exhibitions and fairs, go to business meetings and conduct technical training, we try our best to use the latest technology to not only keep in touch with our partners and customers but also to provide complete technical training for them. With this in mind, OPTOKON has a fully equipped conference room containing state-of-the-art technologies to ensure seamless video and voice transmission. If you would like to arrange technical training for your staff, then please do not hesitate to contact the OPTOKON sales department to discuss your requirements.



Company News

OPTOKON EMC Chamber

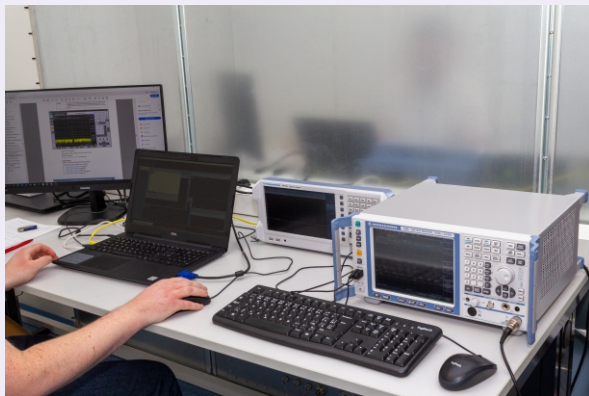
It is now possible to measure the EMC characteristics of active electronic devices at OPTOKON headquarters in Jihlava. The measurement takes place in the EMC chamber supplied by ETS Lindgren, one of the largest suppliers on the market. The OPTOKON EMC chamber is a non-reflective shielded room, which creates an environment free of any interfering high-frequency signals (mobile network, Wi-Fi, electronics, etc.). This created environment is used to measure the radiation of the equipment we manufacture.

The chamber is equipped with devices from Rohde & Schwarz, Schwarzbeck and others, which enables to take measurements according to military standards RE102 (radiated emissions) and CE102 (guided emissions) as specified in the MIL-STD-461F standard. Frequencies that are usually in the range of 2 MHz to 18 GHz are measured where the device must comply with the emission intensity limits laid down by international standards. Measurements in the EMC chamber verify compliance with these limits. Equipment that meets the measurement conditions are suitable for operation, i.e. the device will not interfere with the operation of the surrounding equipment.

The device is placed in the EMC chamber for testing and started. The EMC chamber is closed and the radiation from the device is sensed by the antennas located inside the chamber. The sensed signal is routed via shielded coaxial cables to the analyzer, which is located outside the chamber and connected to a PC via a LAN cable. The measured data is then processed on this PC.

The result of the measurement is a protocol indicating the degree of radiation in $\text{dB}\cdot\mu\text{V}\cdot\text{m}^{-1}$ (electric field strength) using clear graphs. It is possible to measure any device in the chamber, which is supplied with alternating current with a voltage of 230 V and with a direct current with a voltage of up to 80 V. The only limitations are the dimensions of the device, which must not exceed the dimensions of the chamber door.

Ing. Jiří Kuthan
EMC testing operator



OPTOKON Testing Laboratory

As part of its continuous development in 2019, OPTOKON completed the construction of a testing laboratory for performing mechanical and climatic tests on optical cables.

After a year of preparations and considerable effort, the OPTOKON Testing Laboratory successfully completed the assessment process by the Czech Institute for Accreditation, o.p.s. (CIA). The company obtained a Certificate of Accreditation according to the standard ČSN EN ISO / IEC 17025: 2018 and was assigned testing laboratory number 1755. By fulfilling all the requirements of this standard, OPTOKON proves that the newly built and accredited testing laboratory meets the specified requirements and that the company is professionally and technically qualified in its testing activities, which are performed objectively and independently.

The OPTOKON testing laboratory is equipped with special testing and measuring devices for performing a whole range of mechanical (tension, pressure, impact, bending and climatic tests on optical cables. At present, we have accredited thirteen test procedures, and in cooperation with our customers, we are constantly introducing new test procedures to fulfil as many of their requirements as possible.

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List of test methods:

Ordinal number	Test procedure / method	Method identification	Accredited method
1	Tensile performance test	ČSN EN 60794-1-21 method E1	YES
2	Abrasion resistance test of optical fiber cable sheaths	ČSN EN 60794-1-21 method E2A	YES
3	Abrasion resistance test of optical fiber cable markings	ČSN EN 60794-1-21 method E2B	YES
4	Crush test	ČSN EN 60794-1-21 method E3A	YES
5	Impact test	ČSN EN 60794-1-21 method E4	YES
6	Repeated bending test	ČSN EN 60794-1-21 method E6	YES
7	Torsion test	ČSN EN 60794-1-21 method E7	YES
8	Flexing test	ČSN EN 60794-1-21 method E8	YES
9	Kink test	ČSN EN 60794-1-21 method E10	YES
10	Bend test	ČSN EN 60794-1-21 method E11A	YES
11	Temperature cycling test	ČSN EN 60794-1-22 method F1	YES
12	Ageing test	ČSN EN 60794-1-21 method F9	YES
13	Cable external freezing test	ČSN EN 60794-1-21 method F15	YES
14	Bending stiffness (three-point bend)	ČSN EN 60794-1-21 method E17A	NO
15	Sheath pull-off force for optical fiber cable for use in patch cords	ČSN EN 60794-1-21 method E21	NO
16	Buffered fiber movement under compression in optical fiber cables for use in patch cords	ČSN EN 60794-1-21 method E22	NO
17	Water penetration test	ČSN EN 60794-1-22 method F5B, method F5C	NO
18	Cable shrinkage test (fiber protrusion)	ČSN EN 60794-1-22 method F17	NO

Bc. Josef Nepraš
Head of Mechanical and temperature testing laboratory

Company News

OPTOKON Kable products and datasheets now available on the OPTOKON website

A new presentation of the optical cable portfolio is now available on the OPTOKON website. All necessary documents are available and include technical specifications, declarations of performance and other important information related to optical cables.

If a customer requires a bespoke cable construction, which is not part of the standard production, this can be designed and manufactured after sending the required parameters. The properties of all our cables are tested in our development and testing center located in the premises of OPTOKON Kable Co., Ltd., s.r.o. This ensures that every customer receives a quality product that meets all the declared parameters.

The screenshot shows the OPTOKON website interface. At the top, there is a navigation bar with the OPTOKON logo and the text 'FIBER OPTIC TECHNOLOGY CALIBRATION LABORATORY'. Below the navigation bar, there are several menu items: HOME, PRODUCTS & SERVICES, TESTING DIVISION, DISTRIBUTORS, MANUFACTURING, NEWS, ABOUT US, CONTACT. The main content area displays a breadcrumb trail: 'Optical Cables & Fibers > Universal multitube cables'. Below this, there are several buttons for different cable types: Indoor and universal tight buffered cables, Drop cables, Microcables for air blowing, Central loose tube outdoor cables, Self supporting cables, Special cables, CLT universal cables, Armoured cables, Tactical cables, Universal multitube cables (highlighted), and Optical fibers. The main product section features two cable types: 'Universal Multitube Cable 12F (SC)' and 'Universal Multitube Cable 24F (SC)'. Each cable type has a cross-sectional diagram and a list of components: Outer jacket, Peripheral strength members, Loose Tube, Filling compound, Optical fibers, Central Strength member, Water-swellaable yarn, Filler, Core wrapping, and Ripcord. The 'Universal Multitube Cable 12F (SC)' section also includes the revision 'Rev. 0030-20/23' and the description 'Indoor/Outdoor fiber optic cable for installation onto grids or into ducts.' The 'Universal Multitube Cable 24F (SC)' section includes the revision 'Rev. 0110-20/23' and the description 'Indoor/Outdoor fiber optic cable for installation onto grids or into ducts.'

<https://www.optokon.com/optical-cables-and-fibres>

The screenshot shows the OPTOKON website interface for the 'Ruggedized Mobile Cable' product page. At the top, there is a navigation bar with the OPTOKON logo and the text 'FIBER OPTIC TECHNOLOGY CALIBRATION LABORATORY'. Below the navigation bar, there are several menu items: HOME, PRODUCTS & SERVICES, TESTING DIVISION, DISTRIBUTORS, MANUFACTURING, NEWS, ABOUT US, CONTACT. The main content area displays a breadcrumb trail: 'Optical Cables & Fibers > Tactical cables'. Below this, there are several buttons for different cable types: Optical fibers, Indoor and universal tight buffered cables, Drop cables, Microcables for air blowing, Central loose tube outdoor cables, Self supporting cables, Special cables, CLT universal cables, Armoured cables, Tactical cables (highlighted), and Universal multitube cables. The main product section features 'Ruggedized Mobile Cable'. It includes a cross-sectional diagram and a list of components: Outer jacket, Secondary Coating (Buffer), Optical fiber, and Strength Members. The 'Ruggedized Mobile Cable' section also includes the revision 'Rev. 0198-20/32' and the description 'Cable is highly resistant to abrasion and cutting, suitable for harsh environment.' Below the product information, there is a table with three columns: Specifications, Ordering code, and Documents. The 'Specifications' column lists: Fibre count (2, 4), Fibre Type (G.657.A1, G.657.A2, OM1, OM2, OM2+, OM3, OM4, OM5), Fibre colour (Natural), Buffer diameter (0.9 mm), Buffer material (UV curable resin), Buffers colour (Blue, Orange, Green, Brown), and Strength members (Water-swellaable Aramid yarns).

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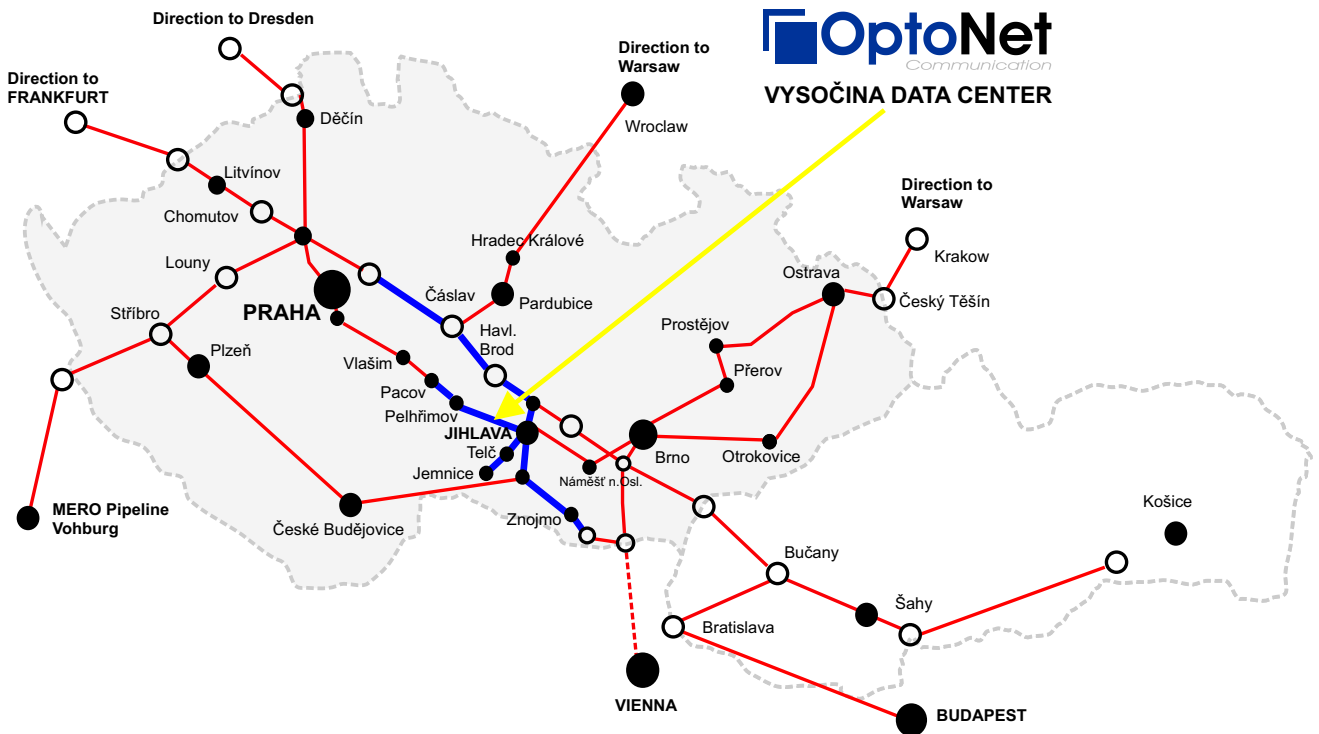
Vysočina Data Center

The phenomenon of today is the process of digitization, which we encounter today and every day. This gradual process brings with it the need to back up all data in digitized form. The most modern method of secure and durable data storage is external storage in a data center, which is a device with unparalleled storage capacity and is used for massive data storage. A data center provides many guarantees regarding the security and durability of the data stored in it and utilizes both digital and mechanical security methods to ensure its defense against corruption, loss of data, and theft.

The new Vysočina Data Center is a modern complex containing state-of-the-art technology. Its architecture is designed to withstand the most serious technical incidents and leave customers feeling secure about the availability of its services.

OptoNet Communication, spol. s r.o., a member of the "OPTOKON Group", has operated a data center since 2003 in Jihlava. The company is now building a new data center in line with the strictest international standards for data centers – the TIER 3+ level standard. The TIER standard defines the levels of performance, and therefore the availability, of a data center infrastructure and is a parameter for the level of operability and security. The project also includes requirements for power supply systems and data connections of national and international networks, which are ensured by a continuous backup. "Concurrent management" is proposed in the facility, which means that any maintenance in the center can take place without disrupting the activities of the center and full functionality is ensured throughout the operation.

- █ Backbone ("PAN European" a "Viking Network")
- █ Vysočina Data Center Optical Network



Company News

The Vysočina Data Center will use state-of-the-art technology, be secured against fire and other disasters, and offer space for the location of the most critical applications with availability of not less than 99.982%. Everything from power supply systems and cooling to data connections will be backed up. Fire is prevented by reducing the effective volume of oxygen by permanent inertization in the technological rooms. The principle of this unique modern fire safety technology uses a reduction in the oxygen ratio in the atmosphere below 17%. The added value of permanent inertization is that due to the reduced oxygen level, chemical processes that result in the aging of IT technologies located in such secured technological rooms are slowed down.

As such, the Vysočina Data Center is uniquely designed and offers excellent energy efficiency, where half of the area built in the first stage of construction will be divided into two technological rooms. The halls have an area of 226 m² and a clear height of 350 cm and their microclimate is in accordance with the standards required for the construction of the most modern data centers not only domestically but globally. From a technical point of view, it is worth noting that the power density of one rack can reach up to 5 kW.

The data center building is energetically connected on a common high-voltage cable, which based on a circular typology, provides power from two independent sources and two backup generators with a fully autonomous operation for at least 30 hours from the operating tanks. Due to the high heat consumption, the entire data center equipment must be cooled. Ecological indirect "air face cooling" technology will be used to maintain a suitable temperature of the equipment and the cooling of technologies takes place in the form of cold and warm alleys. Within this cooling system, the cooling units are located outside the technology halls, which ensures easier servicing while providing greater safety.

In terms of safety, the device is divided into safety zones with controlled movement of people and material. In addition, the safe operation of the equipment will be supervised by continuous, local and remote monitoring of the operating conditions of all supporting technologies. The integrity of the data center will be ensured by the right of entry, where access will be via an electronic access control system including biometric elements, electronic alarm security, an emergency system and camera surveillance system with an archiving period of at least 30 days. All these safeguards will be supplemented by the continuous physical security of the entire building 24x7x365.

The Vysočina Data Center is a unique project in the Czech Republic. It is built on a strategic point where Telia's main optical routes - "Viking Network" and "PAN - European Network" pass. In addition, the Vysočina Data Center is located directly on the main "backbone" network of the Czech Republic and lies close to the D1 motorway. The basis of our optical network is sixteen and eleven protection routes connecting all the key cities in the Vysočina Region.

ing. Jiří Štefl
CEO & Chairman

New Products

MES7048 Data center switch

The MES7048 switch provides full Layer 2 and Layer 3 functionality allowing use as aggregation switches and in data centers. The switch software is optimized to scale and improves data center performance. The switch is a high-performance device with 10GBASE-R and 40GBASE-SR4/LR4 / 100GBASE-SR4/LR4 interfaces that can be used as aggregation or transport switches in carrier networks and as Top-of-Rack or End-of-Row switches for data centers.

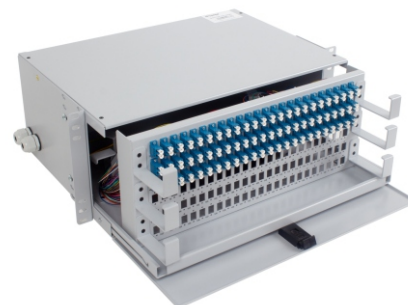


[Datasheet can be downloaded here](#)

New Products

OFDU-TS4-310 Rack Mount Splice and Termination Cabinet

The OFDU-TS4-310 cabinet is based on universal optical distribution frames. The rack-mount Fiber Optic Distribution Frame provides splicing and termination within one convenient housing unit and terminates up to 288 fibers in a 4U distribution frame. The slide-out and drop-down shelf enable unrestricted front, rear and top access to the splicing area and termination panels. The cable is fixed in the rear side of the panel so does not move when opening the drawer, making for a secure and reliable connection. The frame is ideal for indoor fiber optic cable connection storage, distribution and management.



[Datasheet can be downloaded here](#)

LMUPS-80-24V Ruggedized Uninterruptible Power Supply

Input: 22 – 29 VDC
Output: 24 VDC, 15 A

The LMUPS-80 Series is a highly efficient, DC power supply and battery charger with sophisticated features in a ruggedized design. The LMUPS-80 regulates the battery charge independently from the DC outputs so the battery will always receive the optimal charging current without the load being affected. Intelligent three-stage charging will bring a battery back to a full charge much faster than trickle or float charging.



For datasheet please contact our sales department
SALES@OPTOKON.COM

LMIPT-45 High-class Rugged IP Video Phone Integrated Video Communications Solution IP Videophone for Android™

The LMIPT-45 is a powerful rugged video phone for use in enterprises. The videophone features a 7" touch screen, advanced megapixel camera for HD video conferencing, built-in Wi-Fi and Bluetooth, Gigabit network speeds and innovative telephony functionalities and runs on Android 7.0 with flexible SDK support for custom apps. The LMIPT-45 is fully interoperable with all major SIP platforms on the market and can be seamlessly integrated with other systems including SIP based security cameras, door systems, IP PBXs, and video conferencing systems and services. The videophone is the perfect choice for users looking for an integrated video communications solution for their desktop.



For datasheet please contact our sales department
SALES@OPTOKON.COM