

Newsletter



OPTOKON, a.s.
Červený Kříž 250, 586 01
Jihlava, Czech Republic
WWW.OPTOKON.COM, OPTOKON@OPTOKON.COM

September Newsletter 2020

Welcome to the September 2020 edition of the OPTOKON newsletter. Did you know that OPTOKON holds not one but two world records? You can find out exactly why and for what later in the newsletter. We also have articles in this edition that cross the full range of fiber optics – from demonstrating the new ruggedized paging system to army generals through to measuring Insertion Loss in patchcords.

Two of our foreign subsidiaries are featured along with news about the optical cable research and development center for optical cables in OPTOKON Kable. There is also news on our latest and updated products including the release of the new tactical military catalogue for 2020. We can also provide some of the rescheduled dates for the forthcoming exhibitions in which OPTOKON will be participating, although these are subject to change due to the global Coronavirus pandemic, so please check with the exhibitor's website to stay updated.

New products:

LMUPS-80-24V
Ruggedized uninterruptible power supply



LMCP-7A
Compact, ultra-durable server



Thirty years of Pelhřimov records in the Wallenstein Garden in Prague
OPTOKON has its own entry in the book for not one but the two smallest fiber optic testers to be produced in the world - the **PM-215 power meter** and the **LS-215 light source**. Read more on page 6.

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OPTOKON Forthcoming Exhibitions

HEMUS 2020

30.9.2020 - 3.10.2020
International Fair Plovdiv
Plovdiv, Bulgaria

The following exhibition has been rescheduled until 2022:

DSA 2020

28.3. - 31.3. 2022
MITEC, Kuala Lumpur, Malaysia

ECOC 2020

7.12.2020 - 9.12.2020
Brussels Expo
Brussels, Belgium

Company News

OPTOKON Tactical Military Catalogue 2020

The OPTOKON Tactical Military Catalogue has recently been updated to reflect the ever-expanding updated and newly developed product range for use in harsh environments. The catalogue includes new switches and routers based on CISCO technology. OPTOKON is entitled to 'design in' Cisco products and software into OPTOKON solutions and is currently the only partner in the Czech Republic.

shaping the future of field optical tactical communications

Connectors and cables for extensive temperature ranging from -40°C to +85°C

TACTICAL OPTICAL NETWORK
The complete solution
OPTOKON - your key supplier for C4ISR command and control centers

ISO 9001 supplier code: 15836

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LMCP-28H-NG

Light Mobile Computing Platform

2x 100/1000Base-X SFPs optics
4x 10/100/1000Base-T switched PoE LAN ports
3x or 6x 10/100/1000Base-T routed WAN ports
4x of them 10GBase-T

The OPTOKON introduces the LMCP-28H-NG new generation of highly scalable mobile computing platform which delivers a powerful and rugged network router, network switch, server and VoIP all-in-one in a single low-profile device. As the result of the mobile data network, it represents an integrated and versatile communications server for military, public safety, C4ISR and other network-centric communication systems.

The system is equipped with power 64 Intel® Pentium® processor which delivers exceptional value and unmatched performance density per watt in an SBC package, high capacity RAM, non-removable storage, SSD and wide range of connection ports, both fiber optic and copper ones. The LMCP is available in rugged boxes to fit all demands on communication system used in harsh environmental conditions. Fiber optic ports are equipped with rugged SMA connectors operated according to Expanded EMI technology, which allows to use all advanced types of high-speed data transmission in field conditions.

Advanced Features:

- Industrial rugged design resistant to harsh environmental conditions and rough handling
- Intel® Pentium® processor D-1500 product family
- Up to 64 GB RAM ECC DDR4 2400 MHz
- Cloud-manageable SD-WAN
- On-board expansion slot for 2x M.2 NVMe PCIe 3.0 or 2x 100/1000Base-T or 2x 10/100/1000Base-T PoE ports
- Up to 10/100/1000Base-T SFPs ports
- 3x 100/1000Base-T ports
- Full-featured PoE management, max. supported power budget 90 W
- On-site services: MIL-STD-20380 series
- Linux-based router solutions supports a multitude of routing protocols
- Wide range power input 20-40 V DC
- Passive fan-less cooling, no-noise/parts

7th Edition

LMPT-41

High-class Rugged IP Phone

Proven Cisco technology
First programmable line keys
Encrypted voice communications
WebScreen VGA backlight color display

The OPTOKON LMPT-41 is a rugged IP phone specially designed for use in harsh environmental conditions. The IP phone delivers the latest technology and achievements in IP telephony based on the Cisco SPA platform and provides communication over the same data network as your computer, allowing you to place and receive phone calls, put calls on hold, transfer calls, make conference calls, etc. The OPTOKON LMPT-41 is built into a fully sealed and vibration proof aluminum chassis.

The LMPT-41 offers programmable line keys. The keys can be configured to support either multiple directory numbers or handling multiple calls for each directory number, using the multi-call feature. Further, "rings" function keys provide one-touch access to applications, answering the directory, as well as regular call features such as hold/transfer, transfer and conference. The background acoustic keys provide flexibility for audio call selection and switching.

LMPT-41 Specifications:

Universal Serial Bus (USB)
Session Description Protocol (SDP) for signaling
Session Description Protocol (SDP) for media
User Configuration Protocol (UCP) (used only for Real-Time Transport Protocol (RTP) streams)
Dynamic Host Configuration Protocol (DHCP) client or static configuration
Domain Name System (DNS)
Trivial File Transfer Protocol (TFTP)
Secure Hypertext Transfer Protocol (SHTTP)
Real-Time Transport Protocol (RTP)
Real-Time Control Protocol (RTCP)
Cisco Peer-to-Peer Distribution Protocol (PPDP)
Cisco Discovery Protocol (CDP)
Link Layer Discovery Protocol (LLDP) (including LLDP-MED)
Switch speed auto-negotiation

Security Features:

- Secure boot
- Device authentication
- Configuration file authentication and encryption
- Image authentication
- Random log generation
- Hardware cryptographic acceleration
- Certificate Authority Proxy Function (CAPF)
- Manufacture-installed Certificates (MIC)
- Locally Significant Certificates (LSC)
- Manufacture SD-WAN application: Knowledge Authentication Protocol (Flexible Authentication via Secure Tunneling (FLEX-AUT) and Extensible Authentication Protocol Transport Layer Security (EAP-TLS)
- Signing authentication and encryption using TLS
- Media authentication and encryption using SRTP
- HTTPS for client and server
- Secure Shell (SSH) Protocol server
- SSL-based VPN client

audio codec support: G.711a law and a-law, G.723, G.729, optional law 68 rate codec (SBC), and internet speech turbo codec (SBC)

Company Website

FIBER OPTIC TECHNOLOGY
CALIBRATION LABORATORY

HOME PRODUCTS & SERVICES TESTING DIVISION DISTRIBUTORS MANUFACTURING NEWS ABOUT US CONTACT

EN | CZ | TR | RU | MS

As mentioned in the last newsletter, OPTOKON has recently revamped the company website, which is also fully optimized for mobile devices. We can now advise that in addition to the Czech and English language versions of the website, Russian, Turkish, Polish and Malay have now all been added.

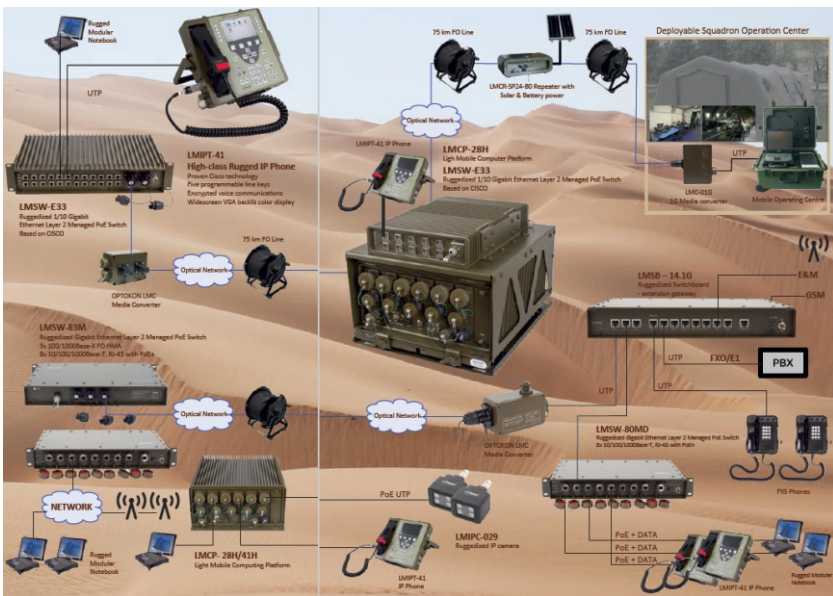
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Company News

Signal Corps 2020

OPTOKON was a Signal Corps 2020 conference partner for the event organized by the Communication and Information Department of the Ministry of Defence of the Czech Republic and the AFCEA Czech chapter. The conference was held over two days in early September at the military training area of the Czech army in Lipnik nad Bečvou in the Czech Republic.

For safety and social distancing reasons, this year's event took place outdoors compared to previous years and was held close to the facilities for joint training of the military, university and private sphere. One of the key topics of the conference was entitled "The way to C2 systems federalization (Technology, People, Security)" for which OPTOKON demonstrated and presented its integrated C2 solution. The presentation was comprised of two parts. The first was dedicated to demonstrating the command and control center in military headquarters and included all key products from the OPTOKON military portfolio (light mobile computing platform, Cisco-based switches and routers, ruggedized phones etc.). The system included a ruggedized paging system. The second part of the presentation demonstrated functional components implemented into a military vehicle. The presentation and live demonstration were attended and appreciated by representatives of the Czech army and the generals of the Czech Republic under the leadership of General Major Ing. Miroslav Hlaváč.



New Business Development Director at OPTOKON Malaysia



The OPTOKON Group is pleased to announce the appointment of Mr. Azeli Azalan as the new Business Development Director at OPTOKON Malaysia.

Mr. Azalan holds a bachelor's degree in Electrical Engineering (Telecommunications) from the University of Technology, Malaysia and has previously worked for various international companies including Marconi and Ericsson. His most recent position was Chief Operating Officer (COO) at ATCO General Trading & Contracting Company, a subsidiary of Kuwait's Sultan Telecom Group. Mr. Azalan is also a partner in OPTOKON Malaysia.

OPTOKON Malaysia is an emerging company providing connectivity and the delivery of comprehensive optical infrastructure solutions. The company focuses on the supply, installation and maintenance of optical infrastructure projects, calibration laboratory services, military solutions and safety and security.

Company News

OPTOKON Egypt Representative Office



Established at the end of 2019 in Cairo, the OPTOKON Egypt representative office is led by Mr. Joseph Nassif who works closely in cooperation with OPTOKON. Mr. Nassif has worked extensively in the telecoms business since 1985 and first began working with OPTOKON as far back as 2002 as the exclusive agent for Egypt. The OPTOKON Egypt representative office began supplying cable for major FTTH projects in 2019 and since then has continued to expand its cable business with OPTOKON products for many of the key organisations in the region.

The vision of the representative office is to have OPTOKON products certified by mid-2021 and a viable option for all the major consulting offices in Egypt. The office also aims to supply OPTOKON products to FTTH networks in compounds and to actively participate in digital transformation projects by supplying passive and active components.

The optical cable research and development center in OPTOKON Kable.

Despite the difficulties that have arisen from the consequences of the ongoing coronavirus crisis, OPTOKON Kable has been able to focus on the development of its research and development center for optical cables. All necessary steps have been taken to obtain accreditation for the optical cable testing center, which is now in the final phase and once obtained, the testing center will be affiliated to the accredited OPTOKON calibration laboratory.

At present, optical cable research and development center are also closely involved in the preparation of a project for the development of new optical cables suitable for use in a radioactive environment. The company is working closely with the Faculty of Electrical Engineering of the Czech Technical University in Prague and with the Institute of Nuclear Research in Řež.

The project should result in new optical cable constructions, suitable for use in the demanding environment of nuclear power plants and in other similar industrial applications.



Company News

Optical Master Patchcords – Measuring Insertion Loss (IL)

Pavel Pospíchal, the Technical Director of OPTOKON provides the latest updates on IL measurement for OPTOKON optical patchcords.

Interconnection modules with optical connectors and optical patchcords are a vital part of all optical networks. Each optical line can include many optical connectors, which means having accurate transmission parameters for the Insertion Loss (IL) and Return Loss (RL) of optical connectors are essential for successful connection set up during installation and operation of optical lines.

Both parameters are automatically measured at the end of the manufacturing process of all optical patchcords in accordance with IEC-61300 standards. IL/RL testing is also required during installation, maintenance, and fault clearance of optical networks.

The testing methods are based on using a test patchcord – a Master patchcord. “A chain is only as strong as its weakest link”, is the popular saying. And when it comes to IL and RL test systems, that weakest link is typically the test patchcord. Even with the best light sources and power meters available, if the test patchcord is poor quality, the IL results will show poor accuracy and repeatability. The core concentricity of the test patchcord is critical to achieving accurate and repeatable IL results—particularly when testing single-mode, as the core is so small (8-9 μm) that any small eccentricity will result in a significant core-offset when mated to the DUT and give erroneous IL measurement values.

Test patchcord ferrules should be of the highest quality and the tightest dimensional tolerances available and should be polished to meet or exceed typical industry standards for geometry and visual appearance. There should be a core eccentricity value of 0.5 μm or less.

OPTOKON Master patchcords are fitted with a master connector according to the specifications in the datasheets. The master connector is marked and specified with a serial number, which ensures traceability of transmission and geometrical parameters. The second connector is a standard type.

For more information, you can download the master patchcord datasheets below.

[CON_01-01_EN-Master FC Patchcord-02](#)

[CON_02-01_EN-Master LC Patchcord-02](#)

[CON_03-01_EN-Master LSH Patchcord-02](#)

[CON_06-01_EN-Master SC Patchcord-02](#)

[CON_07-02_EN-Master Patchcord](#)



M-UPC/UPC-20S7A1



M-NLC/NLC-20S7A1



M-NE2/NE2-20S7A1



M-NSC/NSC-20S7A1



LSH Connector
Various key and boot colors

Company News

Thirty years of Pelhřimov records in the Wallenstein Garden in Prague

Did you know that well over a thousand Czech records have already been set on Pelhřimov Square in the Czech Republic and that the smallest equestrian statue in the world is on display? Would you believe that Karlštejn Castle can be made from bread dough? Have you ever thought that someone can have hair 213 cm long or a moustache with a span of 123 cm? Did you know that the football tournament with the longest tradition (in the history of Czech football) is played in the Vysočina region (the home of OPTOKON) every year? Can you imagine what the largest cake might have looked like when it weighed 1,550 kg? Or a record praline that was over three-quarters of a meter long?

The Czech Book of Records is a publication similar to the famous Guinness Book of World Records but is devoted exclusively to the Czech Republic and was published to commemorate the 100th anniversary of the foundation of the Czechoslovak state. OPTOKON has its own entry in the book for not one but the two smallest fiber optic testers to be produced in the world – the PM-215 power meter and the LS-215 light source.

The Good Day Agency (in Czech: “Agentura Dobrý den”) administers the Czech Book of Records and is based in Pelhřimov, the same town in the Czech Republic where another member of the OPTOKON Group, OPTOKON Kable is located. The company was founded five years ago and has since gone on to produce an ever-expanding range of fiber optic cables with an impressive client base. The Good Day Agency recently opened a large retrospective exhibition in the Wallenstein Garden in Prague, which is also the seat of the Senate of the Czech Republic, together with the President of the Senate Mr. Miloš Vystrčil, the Vice President Mr. Milan Štěch, Albrecht of Wallenstein and a number of record holders.



The photographic cross-section from 1990 – 2020 containing over 300 images capturing unique moments when records were set was created as a reminder of the 30th jubilee of the Pelhřimov International Festival – The City of Records. The exhibition with the topic "Via Pelhřimov to the Czech Book of Records" will run at the seat of the Senate of the Parliament of the Czech Republic until 1 October 2020.



New Products

OFDU-TS4 Rack Mount Splice and Termination Cabinet

The exceptional OFDU-TS4 cabinet is based on universal optical distribution frames. The rack-mount fiber optic distribution frame provides splicing and termination in one convenient housing unit. The OFDU-TS4 terminates up to 288 fibers in a 4U distribution frame. The slide-out and drop-down shelf provides unrestricted front, rear and top access to the splicing area and termination panels. The OFDU-TS4 is ideal for the storage, distribution and management of indoor fiber optic cables.



[Datasheet can be downloaded here](#)

LMUPS-80-24V Ruggedized Uninterruptible Power Supply

Input: AC/DC
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



LMCP-7A Compact, ultra-durable server

8th Generation Intel® Core™ processor i7-8665UE with 4 cores
Dual Channel DDR4-2400 up to 32 GB, onboard eMMC up to 64 GB
2x 1 Gbps Ethernet

The OPTOKON compact ultra-durable LMCP-7A server is equipped with 8th Gen Intel® Core™ CPU, SSD discs and 2x Gigabit Ethernet ports. The LMCP-7A supports up to 64 GB of DDR4 memory, resulting in reduced overall power consumption compared to DDR3-based servers.

The LMCP-7A has military-grade features in a rugged housing, which makes it the ideal platform for applications in harsh and rugged environments where it can operate in a temperature range from -40 to +85 °C.



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SALES@OPTOKON.COM