# Newsletter

## October Newsletter 2022

Welcome to the October 2022 edition of the OPTOKON newsletter. The theme of this edition is the currently hot topic of cyber security, and we feature the FOTAS security system and the associated training seminar in Istanbul. We also have news on the new special rodent-resistant cable produced by OPTOKON Kable designed to make the new generation of data centers even more secure.

Expanding on the theme of cyber security, we have details of the recent Digital Partnership for Cybersecurity and Resilience in Regions conference held in the picturesque historic town of Telč in Vysočina and attended by government ministers from the Czech Republic.

You can also find an article on the OPTOKON testing division regarding Electromagnetic Compatibility (EMC), climatic and mechanical tests.

This is all in addition to our usual features containing details of the forthcoming exhibitions and the ever-expanding new OPTOKON and OPTOKON Kable products section.

**New products:**



**OFT-820-SN Loss Test Set**

Testing of duplex SN connectors
Two functions: Portable power meter and USB probe
Small size, lightweight
High-capacity two-level memory



OPTOKON won 2nd place in the competition IBM Companies of the Year 2022 in Vysočina Region

## In this issue

## Recent Exhibitions

**ECOC 2022**
Congress Center Basel, Messeplatz 21,
CH-4058 Basel, Switzerland 19.9.22 – 21-9.22

**PROPED 2022 Bulgaria**
Our partner Nikolay Nikolov from CSG Trading Bulgaria presents OPTOKON ruggedized products for representatives of the Bulgarian Ministry of Defence, Bulgarian Ministry of Interior and Bulgarian defense industry.









## OPTOKON Forthcoming Exhibitions

**OIL AND GAS AUTOMATION AND DIGITALIZATION CONGRESS 2022**
Hotel UNA Expo Fiera Milano, Milan, Italy
17.10.22-18.10.22
*The OPTOKON and SAMM Teknoloji Alliance is a strong technical partnership emerging on the market with a new generation of security monitoring systems. The two companies will be presenting their products together at this congress.*

**FUTURE FORCES INTERNATIONAL EXHIBITION**
PVA EXPO PRAHA
Beranových 667, 190 00 Prague 9 – Letňany, Czech Republic
19.10.22-21.10.22

**SAHA EXPO DEFENSE AND AEROSPACE EXHIBITION**
Istanbul Exhibition Centre
Istanbul, Turkey
25.10.22-28.10.22

# Company News

## Digital Partnership for Cybersecurity and Resilience in Regions
## 5 – 7 October 2022, Telč, Czech Republic



OPTOKON participated as a partner in the international conference on Cybersecurity and Resilience in Regions held in Telč, Czech Republic from 5 - 7 October. The conference was aimed at sharing experiences among European leaders in the field and representatives from Eastern Partnership countries and regions. The conference featured a debate on the opportunities and risks of the implementation of digital solutions in public administration (eGovernance).

The conference was opened by Vítězslav Schrek, President of the Vysočina Region, and Miloš Vystrčil, President of the Senate of the Czech Parliament. During the conference, OPTOKON presented to the participants the FOTAS sensing system for perimeter security, which included the new special sensing optical cable and new trends in fiber optic technologies.



Director of OPTOKON ICT Division Tomas Müller during conference.

**Conference Patrons:**
**PhDr. Ivan Bartoš, Ph.D, Deputy Prime Minister for Digitisation and Minister of Regional Development (CZ)**
**Doc. PhDr. Mikuláš Bek, Ph. D., Minister for European Affairs (CZ)**
**National Cyber and Information Security Agency (CZ)**

# Company News

## OPTOKON – SAMM Teknoloji - FOTAS Technical Meeting

The recent technical meeting in Istanbul between the two companies provided an in-depth overview of the design and implementation of the FOTAS fiber optic distributed acoustic sensing system. The participants enhanced the skills needed to effectively install and maintain FOTAS.

FOTAS operates on the principle of a distributed fiber sensor and can detect violations and signals caused by mechanical and acoustic affecting of the fiber optic cable. All these signals are transmitted to the control center where they are evaluated on a powerful computer to assess whether they are harmless due to meteorological phenomena, such as wind, rain, or natural interventions caused by animals or if they are a direct disturbance of the monitored object or perimeter.

**Download FOTAS datasheet**
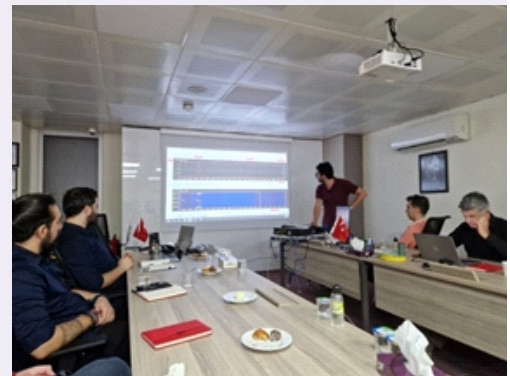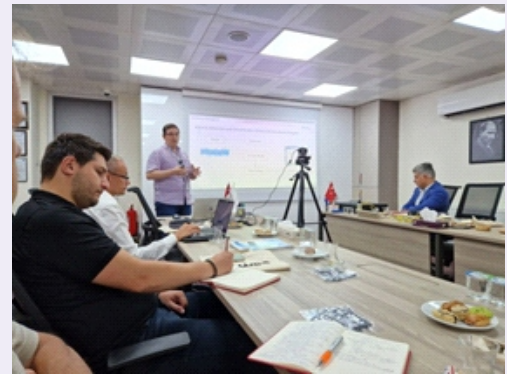






With our partner SAMM Teknoloji, we built on our knowledge of software development, definition and theory of operation, system design, sensor cable deployment planning, correct installation and termination of sensor cables, connection to and configuration of the FOTAS system, and calibration.

At OPTOKON, we have successfully deployed FOTAS software on our high-performance OPTTA server, which is an alternative device for use in harsh environments and directly designed for solving artificial intelligence tasks. A powerful computer platform is required for these and similar applications as large data processing and evaluation, image recognition, and various types of signals are involved. For field use, mobile devices also need to be resistant to various climatic and mechanical influences.

OPTOKON has developed a special cable construction for the FOTAS system, which increases the sensitivity of the entire perimeter protection system. The cable is UV-resistant black HDPE with chemical protection against rodents and termites and is suitable for installation on the fence (see the new product section for further details of this special cable).

**Download OPTOKON Sensitive cable datasheet**

# Company News



We are currently preparing live presentations of the working FOTAS system for our customers. We have installed this system in our OptoNet subsidiary in Jihlava, where we protect and monitor our modern data center "DATOVÉ CENTRUM VYSOČINA".

The August 2022 newsletter features an article outlining the full technical details and benefits of the FOTAS system.

## OPTOKON TESTING DIVISION
## Electromagnetic Compatibility (EMC), climatic and mechanical tests.

The OPTOKON testing division is comprised of two laboratories. One laboratory offers Electromagnetic Compatibility (EMC) tests while the second offers climatic and mechanical tests.



**OPTOKON Testing Division brochure here**

# Company News

The EMC laboratory is equipped with an excellent Lindgren semi-anechoic chamber providing the perfect environment for accurate measurement. The laboratory can currently conduct Electromagnetic Interference (EMI) tests in frequencies from 9.5 kHz to 18 GHz according to the MIL-STD 461 standard for military electronic devices and the EN 55032 standard for consumer electronics. The most precise Schwarzbeck antennas and the Rohde & Schwarz measurement receiver ESR 26 (to 26.5 GHz) are used for EMI measurement.

The mechanical and climatic test laboratory is ideally equipped for mechanical and climatic tests for optical cables and similar components. Some of the measurement equipment can also be used for other electronic devices tested according to MIL standards and ČOS standards. Several mechanical and climatic tests have been accredited and this laboratory has been certified according to the ISO 17025 standard. Test accreditation is valid for tests according to EN 60794-1-21 and EN 60794-1-22 standards.



OPTOKON EMC Chamberand workplace

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OPTOKON Temperature Chamber

You can download the
full OPTOKON Testing Division brochure here

# New Products

## MDC Patchcord

- 3x fiber cabling density over LC connectors
- 216 duplex connectors (432 fibers) within 1 RU
- Push-pull boot for effortless connector insertion and extraction
- Simple polarity reversal with no exposed fibers
- Designed for cables up to 2.0 mm OD

The MDC patchcord uses a Very Small Form Factor (VSFF) duplex optical connector designed for the termination of multimode and single-mode fiber cables up to 2.0 mm in diameter. The MDC connector is manufactured with proven 1.25 mm ferrule technology used in industry-standard LC optical connectors. Individual connector access in the most extremely dense connector environments is easily accomplished using the revolutionary push-pull boot technology.

**The datasheet can be downloaded here.**

## MMC Patchcord

- 3x cabling port density over the MPO format
- DirectConec™ push-pull boot for effortless connector insertion and extraction
- Proven MT-16 mechanical and fiber alignment structure
- Compatible with standard 250-micron OD and pitch optical fibers

The MMC connector is a Very Small Form Factor (VSFF) multi-fiber optical connector designed for the termination of single-mode and multimode fiber cables up to 2.5 mm in diameter. The MMC connector employs novel TMT ferrule technology harmonized with the MT-16 alignment structure. Individual connector access in the most extremely dense connector environments is easily accomplished using the revolutionary DirectConec™ push-pull boot technology.

**The datasheet can be downloaded here.**

## OFT-820-SN Loss Test Set

- Testing of duplex SN connectors
- Two functions: Portable power meter and USB probe
- Small size, lightweight
- High-capacity two-level memory

The OFT-820-SN series optical Loss Test Set is designed for testing optical networks with the new type of duplex SN connectors. The tester combines a light source and power meter in one housing. The optical light source fulfills all the technical requirements for field equipment and is available in various working wavelength combinations of 850, 1300, 1310, 1490, 1550, and 1625 nm. The optical power meter is designed to simultaneously measure absolute or relative optical power in both duplex SN connector fibers.

**The datasheet can be downloaded here.**

### THE COMPLETE RANGE OF OPTOKON TESTERS IS NOW AVAILABLE WITH THE NEW DUPLEX SN CONNECTORS!

# New Products

## DOS – SN-MT16
## DATA CENTER cable system

Due to the ever-increasing volume of data in global networks, Data Centers are becoming increasingly important, and their construction continues at a steady, faster pace. This places ever-increasing demands on the optical infrastructure. Optical cabling must be used to reliably interconnect data center devices, such as servers, and switch data stores. It must also ensure the interconnection of individual data center nodes, connection to the global data network, and connection of customers and users of data center services. This is while ensuring maximum economy during the installation and operation of the data center.
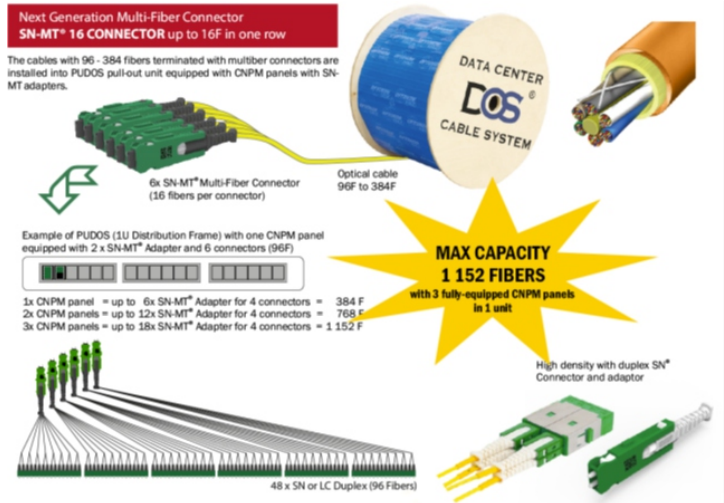


These requirements are met by the modular concept of the OPTOKON DOS cabling system. The system is based on factory-prepared modules and pre-terminated cables, which significantly reduce the volume of installation work during construction and facilitate fault clearance during operation.

The DOS-SN-MT16 cabling system is based on multi-fiber connector technology. The newly developed multi-fiber SN-MT16 connectors are designed to terminate 16 fiber cables. The use of trunk cables with these connectors eliminates the need for splicing in optical cabinets, speeds up installation, and ensures system modularity.

The datasheet can be downloaded here.

## PUDOS – optical distribution frame

The cables with 96 fibers terminated with multifiber connectors are installed into PUDOS optical distribution frames equipped with SN-MT adapters, which are designed for 4 x SN-MT16 connectors. The PUDOS can accommodate 24 SN-MT adapters, meaning that the total capacity of 1U frame is up to 1152 fibers and can serve for future expansion.

The PUDOS is an economical rack mountable patch panel for use with manufactured pigtails and pre-terminated cables. The cables are strain-relieved at the rear of the unit. The pivoting shelf is equipped with bend radius protection which guides, stores, and organizes excess slack. This prevents damage to fibers before routing into couplings. In addition, the pivoting shelf allows full access to the internal fiber connection, easy cleaning, and connection management.

The datasheet can be downloaded here.

# New Products

## FOI-400W   InspectFiber-Wi-Fi
## Fiber Optic Microscope Wi-Fi Version

- Wi-Fi and USB connection to Smartphone and PC
- Android App and iOS (Apple) App
- Pass/Fail Analysis to IEC 61300-3-35
- Available in various connector and adaptor type tips (female/male tip)



The fiber end face inspector is designed for ferrule end face inspection with excellent performance and convenient operability. The object can be magnified 260 to 400 times, making it easier to assess the status of the fiber end face. The compact size makes it the ideal tool for connector end face inspection before and during fiber network installation. The OPTOKON FOI-400W microscope will work for 4 hours with a 3.7 V rechargeable Li-Pol battery.

The datasheet can be downloaded here.

# OPTOKON KABLE new products

## OUTDOOR SENSITIVE STAR DETECTION CABLE
## Rodent and termite resistant

The new outdoor sensitive star detection cable is fully resistant to rodents and termites and is a specially designed optical cable for acoustic sensing systems. The cable is suitable for the installation on fences and directly in the ground. Available in 2 and 4-fiber configurations, the cable is ideal for use in industrial, residential, and commercial sites, and security in military, public and private facilities, airports, railways, and highways.
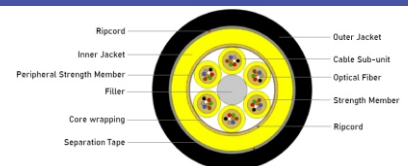
The datasheet can be downloaded here.
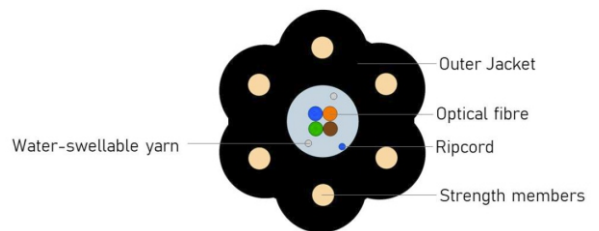


## Data Center Cable 48F +PE
## Distribution Cable for Data Center Cable Systems

This new distribution cable is specially designed for Data Center cabling systems and has a 48 fiber count and a G.657.A1 fiber type.  The outer jacket is black UV-resistant LDPE with a thickness of 1.2 mm.

The datasheet can be downloaded here.



## Data Center Cable 96F +PE
## Distribution Cable for Data Center Cable Systems

As with the 48F +PE cable, this new distribution cable is specially designed for Data Center cabling systems but has a 96-fiber count and a G.657 A1 200 µm fiber type. The outer jacket is black UV-resistant LDPE with a thickness of 1.2 mm.

The datasheet can be downloaded here.



OPTOKON October 2022 Newsletter prepared by Paul Simpson/OPTOKON Marketing Department