Welcome to the July 2013 edition of the OPTOKON newsletter which focuses on the new OPTOKON and ELTEX commercial alliance for telecommunication technologies (FTTH, FTTB PON networks) and contains details of the alliance along with GPON and GEPON new product features.

There are also articles on the ruggedized ICT system solution and the new Demonstration, Training and Test Center (DTTC) by Milan Šnajder the Deputy General Director of OPTOKON. Closer to home, there is an article on the expansion of the ROWANet regional optical telecommunication back-bone network architecture system in Vysočina, which uses OPTOKON products. You can also find information on the 2013 International Distributor Conference to be held later this year as well as our regular features on exhibitions, company news and new products.

Don’t forget that you can also stay up to date with what’s happening at OPTOKON via our website, twitter updates and Facebook page.
Recent Exhibitions

**IDEF**
7.5.13 – 10.5.13, Istanbul, Turkey

**SVIAZ EXPO/COMM**
14.5.13 – 17.5.13, Moscow, Russia

**ANGA CABLES**
4.6.13 – 6.6.13, Cologne, Germany

Forthcoming Exhibitions

**ECOC**
22.9.13 – 26.9.13
London, England
Stand 435

**DSEI**
10.9.12-13.9.13
London, England
Stand No. N8-320

**ELO SYS**
15.10.13-18.10.13
Trencin, Slovakia

**GITEX**
20.10.13-24.10.13
Dubai, UAE
HALL 1 – stand No.116
OPTOKON and ELTEX Alliance

OPTOKON and ELTEX, Novosibirsk, the leading Russian developer and producer of telecommunication equipment announce a new commercial alliance for telecommunication technologies (FTTH, FTTB PON networks).

OPTOKON, a.s. and ELTEX Enterprise, Ltd are pleased to announce that on JUNE 12, 2013 the ELTEX – OPTOKON Alliance was founded to realize mutual research, development, manufacturing and sales of telecommunication equipment in European countries, Near East, Africa and USA. The business plan of ELTEX-OPTOKON alliance is to connect the exclusive know-how of ELTEX and OPTOKON to create a comprehensive solution for the realization of xPON networks.

The primary mission of the ELTEX - OPTOKON Alliance is to provide customers with communication systems using xPON, VoIP, TDM, Ethernet-switch, Thin client, Set-top-box technologies with the best technical parameters and a comprehensive FTTH and FTTB solution for transmission speeds higher than 1 GB/sec within the mutual sales territory.

The strategic mission of the ELTEX - OPTOKON Alliance is to create a competitive entity with a complex cycle of activities ranging from research and development, manufacturing and sales through to maintenance and services, with continual innovative approaches in order to implement cutting edge technologies.

Ing. Jiří Štefl, General Director & CEO, OPTOKON said at the contract signing “The foundation of the OPTOKON – ELTEX Enterprise, Ltd. Alliance means that both companies can significantly reinforce their global market positions in the field of selling telecommunication equipment. This particularly applies to xPON technology when when implementing Fiber-To-The-Home (FTTH) and will result in a significant shift in technology for wide commercial use, which can be expected in the near future with the household digitization process and the introduction of high-speed Internet. The connection of the know-how of both companies and the collective use of research, development and manufacturing capacities create a complex range for implementing xPON networks in all possible configurations. After the launching of the Alliance in accordance with the strategic plan, a regular annual increase in employment in both regions as well as the related development of both companies can be assumed”.

Ing. Aleksey Chernikov, CEO, ELTEX Enterprise, Ltd. evaluated the contract signing as follows: “We expect that our alliance will be beneficial for both companies, particularly because we will extend the commercial offer and product range of both companies and together we will enter markets that are bigger than the previous markets. Our competitive advantage can be seen in the complexity of the solution, in the high systemic and technological sophistication of the offer and our know-how. For us, the alliance with OPTOKON, a.s. provides us with the opportunity to sell our equipment on European Union markets while having the opportunity to sell OPTOKON equipment in our market segment.”
ELTEX Enterprise, Ltd. is a leading Russian developer and producer of telecommunication equipment. The company was formed in 1992 and has over 20 years of experience in the development and production of equipment. ELTEX Enterprise, Ltd offers a range of equipment and solutions for today’s service providers. All equipment is designed by company specialists in Novosibirsk. The complete development cycle of the equipment, including the development of schemes, design boards, writing software and production of prototypes takes place in the enterprise in Novosibirsk, along with the full cycle of production and support equipment. ELTEX Enterprise, Ltd was awarded as the fastest growing technology company and given a top 30 Innovative company rating.

The full press release is available to download in both English and Czech from the OPTOKON website.

DTTC – Demonstration, Training and Test Center (DTTC)

In the first of two articles, as a follow on to the feature in the March 2013 newsletter, the Deputy General Director of OPTOKON, Milan Šnajder, looks further at the new Demonstration, Training and Test center recently established at OPTOKON.

The Defence and Security Industry Association of the Czech Republic has established the Demonstration, Training and Test Center in OPTOKON, a. s. Jihlava. The main purpose of the DTTC is to support the domestic defense and security industry.

The primary mission of DTTC is to promote the presentation activities of all members of the DSIA and to create conditions for the introduction of new technologies and system departments for the Czech Republic.

We assume that DTTC will also be a place where the members of Association can organize joint workshops and technical seminars. The DSIA expects that the use of DTTC will gradually expand with the experience and the requirements and needs of DSIA members. Upon the establishment of the DTTC, the President and CEO of DSIA, Dr. Jiří Hynek commented: “Our main mission is to always support domestic industry in the implementation of contacts for the defence and security industry both at home and abroad. This, of course we do, although the current economic situation forces us to seek ever more efficient and sophisticated ways of support. We can see that both domestic and foreign customers require more and more integrated solutions that one company alone cannot offer. We think that the DTTC will create the conditions for a mutual organization of leading companies to submit joint bids for the implementation of integrated system solutions for foreign acquisition. To help our companies in the export market is also an important factor in new forms of support from the DSIA”.
Mr. Jiří Štefl, General Director and CEO of OPTOKON expressed his opinion of the DTTC concept as follows: “I understand the concept to be an innovative approach to promote domestic industry and to improve the offers that the organization can make to both domestic and foreign customers. The original idea of introducing new approaches and supporting the industry together to finalize implementation of the DTTC does not mean in practice that the desired effect is reached, therefore giving up the search for new approaches. You know, our company operates at home and around the world and in our daily work, we can see how states support domestic industry, and create various restrictions and conditions so that taxpayers contributions are largely channeled into the volume require for local legislation at home. Therefore, I support the idea of finding new ways to support domestic industry and I intend to continue to implement it in order to create suitable conditions”.

In his second article, Dr. Šnajder looks at the family of OPTOKON passive and active equipment used in complex ICT solutions.

OPTOKON aims to provide the complete solution of ruggedized ICT systems which can be used in both heavy industry and in crisis management over a long time horizon. To fulfill this approach means that experts have to take into consideration the outdoor conditions and use materials, electronic parts, PC boards, etc. which are resistant to these conditions. The main goal was to create an outdoor LAN that can be used in physical layer traditional optical fibers or plastic optical fibers.

The interconnectivity between optical and metallic wires within the LAN is achieved by using media convertors developed and manufactured by OPTOKON.

To arrange a functional outdoor LAN as depicted below, then ruggedized connectors must be used along with active parts of LMSW-10 and LMSW-8 LAN-switches.
To achieve an ICT complex solution these passive and active components must be completed with communication equipment, including the LMSB-14 switchboard.

The switchboard is the main component of the new OPTOKON product LMSB-14.4 CIMX COMM ALL, which can be used as a complex solution in ICT systems providing connectivity for different types of communications (HF, VHF, UHF, Satellite, terrestrial, GSM, VPN). CIMx can create an outdoor mobile expandable LAN for x subscribers.

The complex solution - the LMSB-14.4 CIMX COMM ALL comprises a set of modular, mobile, compact blocks which are easy transportable and includes:

- Communication block
- LAN block
- Encryption block
- Power supply
Company News

ROWANet

The ROWANet regional optical telecommunication back-bone network is based on a system of fiber lines containing passive CWDM technology from OPTOKON along with CISCO active elements. ROWANet provides network services to public and non-profit organizations in the Vysočina Region, where OPTOKON is headquartered.

The network was built in cooperation with commercial and academic partners with funds from the European Union (40%), and regional (50%) and national (10%) budgets. The network is administered by the Information Technology Department of the Regional Authority of the Vysočina Region, in cooperation with its contractual partners.

Selected ROWANet network services:

- High-speed Internet - 8 Mb/s to 1 Gb/s connection through the CESNET2 academic backbone (www.cesnet.cz).
- Routing of state and private networks - MPSV, ŘSD and KIVS state networks interconnected with the private networks: Ha-vel Internet, Self Servis, Optonet, GTS, and O2-Eurotel.
- High-capacity data storage services - SAN infrastructure of data storage disks interconnected on the basis of FC and iSCSI protocols on the metro cluster and regional cluster levels.
- VPN - virtual private data networking services up to the speed of 1Gpbs.
- Hosting - hosting services for applications on HTTP/S (web hosting - Apache, PHP, MySQL, IIS, MS SQL), FTP and SMTP.
- GIS - accessible map services of the Geographical Information System of the Vysočina Region.
- Services for the public administrative organizations - data stores, hosting of the registry and record management system.
- Services for the Integrated Rescue System - providing of infrastructure and data services (VPN networks, GPS positional data centers).
- TriplePlay - VoIP (Internet telephony), IPTV (Internet television) and VoD (video on demand), realized with private providers.
- Public Internet - WiFi hot-spots located in public places (squares, schools, offices, and authorities as limited narrowband Internet) and in-door PIAPs (computers located in public places).
- Roaming - a network of WiFi hot-spots (provide public narrowband Internet in combination with EDUROAM services - www.eduroam.cz) and private WiFi regional networks). For more, see www.rowanet.cz/freewifi.
Company News

New services of ROWANet II:

- Camera system video-data distribution - redistribution of live images from cameras on the D1 (PAL for use by the IRS).
- Regional eLearning system - the possibility of a hosted eLearning system with the development of proprietary electronic courses.
- eProcurement for regional organizations - a single system for the management and registration of all public contracts (for regional organizations).

OPTOKON is a project partner and provides optical, CWDM and DWDM technologies, most recently when the UNESCO town of Telč was recently connected. Visitors to OPTOKON frequently take the opportunity to visit this historic town which is believed to have been founded in 1099 and was registered in 1992 on the UNESCO List of World Cultural Heritage sites. The town is a major regional tourist attraction and lies just 25km away from Jihlava in the Vysočina Highlands where it still retains many of its original historic features, as seen in the unique building facades in the town square.

2013 International Distributor Conference

Invitations will be shortly sent to the 2013 International Distributor Conference which will be held in one of the historic spa towns in Bohemia in the Czech Republic in late September / early October. The conference is held every two years and provides the ideal opportunity for delegates to see and sample the latest technologies from OPTOKON, discuss business plans and of course, socialize with staff and fellow distributors.
New Products

PM-212-SI3 Pocket Optical Power Meter

The PM-212-SI3 now tests MM fibers and now comes equipped with a 3.6 mm Si photodetector, and a working area of 13 mm² designed for measuring multimode fibers. The input interface is equipped with changeable ASP adapters, which enable connection of wide range of easily changeable multimode connectors.

The data sheet can be downloaded on WWW.OPTOKON.COM

Mini MOT-700D product line

It's our pleasure to announce that OPTOKON have won the tender for test measurement instruments announced by the Portuguese telecom operator. OPTOKON now supply OTDR units to this operator.

The Mini OTDR MOT-700 product line is designed for measuring optical traces in ranges up to 50 km, which makes it suitable for use during installation and measurement of the last mile in FTTX networks. The included software makes it easy to show a trace profile and evaluate events on a trace with an approximate distance wherever it occurs as the following example illustrates.

Comparison of traces from MOT-700 and MOT-700D

The diagrams clearly show that a higher dynamic range has a positive impact on output data – reflectogram. The MOT-700D shows lesser noise values that describe the tested trace more accurately so the data can be better interpreted.

The data sheet can be downloaded on WWW.OPTOKON.COM

OPTOKON – ELTEX FTTH - PON equipment

As mentioned earlier in the newsletter, the OPTOKON-ELTEX commercial alliance for telecommunication technologies has resulted in the launch of a major new product line for GPON and GEPON systems. The company website will be constantly updated as more products come on line.
New Products

GPON System:

MA4000-PX
Subscriber node access / aggregation

Multiservice Access Node and MA4000-PX aggregation is designed for building a network of GPON access technologies. The system enables to build a scalable, fault-tolerant “last mile” network to ensure the highest safety standards, both in rural and in urban areas. The access point manages subscriber units, switching traffic and connections to the transport network.

The central element of the MA4000-PX is the scalable Ethernet switch level L2 + (PP4X), which works in cooperation with various types of interface modules.

The peripheral modules include modules for optical access PLC8 subscriber connection devices, GPON technology.

OLT LTP-8X
central office node terminal (GPON)

The LTP-8X central office node terminal is designed to provide broadband access over a Passive Optical Network (PON). Access to the transport network of the provider is realized through 10 Gigabit and combo Gigabit uplink interfaces. GPON interfaces are used to connect to the Passive Optical distribution Network (PON). Up to 64 subscriber optical terminals can be connected to each interface with one fiber. The Dynamic Bandwidth Allocation (DBA) can provide a downstream rate of up to 2.5 Gbps.

The LTP-8X application enables the operator to build scalable fail-safe “last mile” networks, providing a high level of safety in urban as well as rural areas. The OLT LTP-8X provides subscriber devices control, packet traffic switching and connection to transport networks.

CZECH MADE products assembled and tested under ELTEX licence in the Czech Republic
New Products

**GEPON System:**

**OLT LTE-2X**

central office node terminal (Turbo GEPON)

The OLT LTE-2X central office node terminal is designed to provide broadband access over a Passive Optical Network (PON). Access to the transport network of the provider is realized through combo Gigabit uplink interfaces. Turbo GEPON interfaces are used to connect to Passive Optical distribution Networks (PON). Up to 64 subscriber optical terminals can be connected to each interface by one fiber. The Dynamic Bandwidth Allocation (DBA) enables to provide a downstream rate up to 2.5 Gbps.

**OLT LTE-8X**

central office node terminal (Turbo GEPON)

The OLT LTE-8X central office node terminal is designed to provide broadband access over Passive Optical Networks (PON). Access to the transport network of the provider is realized through 10 Gigabit and combo Gigabit uplink interfaces. Turbo GEPON interfaces are used to connect to Passive Optical distribution Networks (PON). Up to 64 subscriber optical terminals can be connected to each interface by one fiber. The Dynamic Bandwidth Allocation (DBA) enables to provide a downstream rate up to 2.5 Gbps.

The LTE-8X application enables the operator to build scalable fail-safe “last mile” networks, providing a high level of safety in urban as well as rural areas. The OLT LTE-8X provides subscriber devices control, packet traffic switching and connection to transport networks.

---

**CZECH MADE products**

assembled and tested under ELTEX licence in the Czech Republic

All data sheets containing full technical details can be requested for download from www.optokon.com or by contacting the OPTOKON Customer Service Department.

OPTOKON July 2013 Newsletter prepared by the OPTOKON Marketing Department
DTTC – Demonstration, Training and Test Center (DTTC)

HW ARCHITECTURE FOR C2/C4 ISR
SYSTEM OF SYSTEMS
COMMAND CONTROL COMMUNICATIONS COMPUTERS INTELLIGENCE SURVEILLANCE AND RECONNAISSANCE

LHNSW-10 & LHNSW-30 ruggedized switches have been developed as a part of the Integrated System for Armed Forces of NATO
Czech Army Technical specifications: TP-LHNSW10-0PT01-08

Deployable Squadron Operation Center

LHNSW-10 Switch with PDF

OPTOKON LHNSW-08 Switch with PDF

OPTOKON LHNSW-10 Switch with PDF

OPTOKON Removable PDU Power Converter

OPTOKON Removable UTP Power Converter

OPTOKON Connectors

Deployable 12V-24V Power Supply

www.optokon.com