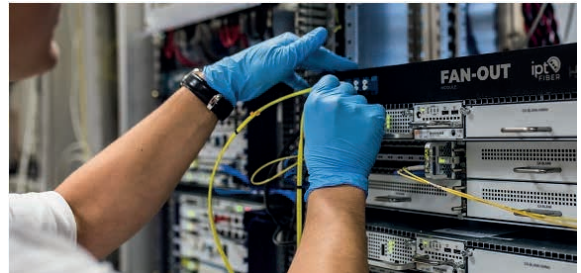


MULTICORE FIBER NEWSLETTER

Orange tested our Multicore Fiber reaching 11.2 Tb/s

Together with Infinera and Orange Polska, tests of innovative multi-core fiber and Infinera ICE6 800G technology were ran in the Orange Polska's Innovation Lab in August 2021. The throughput obtained during the tests is seven times greater than the maximum that can be achieved today using a standard fiber optic cable.

Tests have shown that the Infinera hardware allows for record-breaking 800 Gb/s data transmission in a single transmission channel. The experiment, conducted in collaboration with Orange, used two channels sending data at a speed of 1.6 Tb/s (1 Tb/s = 1000 Gb/s), in each of the 7 cores simultaneously. This gave a total transmission of 11.2 Tb/s. The quality of the signal measured by such parameters as Q-factor and bit error rate (BER) was fully compliant with the applicable standards.



The aim of the tests was also to check if the multi-core IPT Fiber could be used with the state-of-the-art infrastructure adapted to work with standard and currently used single-core optical fibers, and if such a connection would meet the transmission requirements of the operator. This has been confirmed.

"We are delighted to have partnered with Orange and Infinera to achieve record transmission. We are a pioneer in the development of next-generation multi-core optical fibers. By combining our product with Infinera's innovative technology and testing them in Orange's innovation lab, we were able to demonstrate record-breaking data capabilities," said Tomasz Nasiłowski, Ph.D., President of the Board of InPhoTech.

"Thanks to our tests, we already know that the transmission capability in seven-core C-band fiber is as high as 296 Tb/s. These are record numbers, but not the end of our capabilities. Using the entire transmission spectrum, i.e. all available bands – our fiber will be able to achieve throughputs at the level of petabits per second (Pb/s) or thousands of terabits. I am glad that our Polish optical fiber is becoming a real answer to the global telecommunication barriers," said Krzysztof Witoń, CEO of IPT Fiber responsible for the deployment of multi-core fiber optics.

Infinera, "Orange Tested Seven-core Fibre Reaching 11.2 Tb/s"

LightWave, "Orange Polska achieves 11.2 Tbps in multicore fiber tests"

Capacity, "Orange pushes 11.2Tbps over fibre and looks to 300Tbps"

ICCSZ, "Orange 与Infinera对Seven-core光纤测试达到 11.2 Tb/s"

Orange Polska, "Orange przetestował siedmiordzeniowy światłowód uzyskując 11,2 Tb/s"

New investment for a Research & Development Center for specialty fibers

IPT Fiber, InPhoTech's subsidiary, will build a modern Research and Development Center in Lubartów. On March 31, 2021, the notarial deed was signed by the President of the Management Board of IPT Fiber, Tomasz Nasiłowski, and the Mayor of the City of Lubartów, Krzysztof Paśnik.

The Research and Development Center will be launched in 2023 at the latest. It will employ from 50 to 100 people and will produce special optical fibers on a semi-industrial scale - up to 100,000 kilometers annually. The flagship product manufactured in Lubartów will be the innovative seven-core optical fiber, intended for applications in new generation telecommunications, 5G networks, and the Internet of Things. The investment in Lubartów is estimated at 20 million EUR, of which around 8 million EUR comes from EU funding.

IPT Fiber, "The new generation optical fibers will be produced in the Lublin region. IPT Fiber invests in Lubartów"

WPROST, "Światłowody nowej generacji będą wytwarzane na Lubelszczyźnie. Spółka IPT Fiber inwestuje w Lubartowie"

TELKO.in, "Czy w Polsce będziemy mieć światłowodową Teslę?"

Dziennik Wschodni, "Nowa inwestycja w Lubartowie. Najpierw centrum badawcze, potem fabryka"



A new president of IPT Fiber. Krzysztof Witoń will lead the implementation of Polish multi-core optical fibers

Krzysztof Witoń, internationally acknowledged with extensive experience in the field of optical fiber telecommunications, became the president of the management board of IPT Fiber on April 20, 2021. Established in 2017, the company implements into mass production new generation, innovative optical fibers, developed and patented by researchers and engineers from the InPhoTech group.



Krzysztof Witoń has been successfully associated with the telecommunications industry for many years. From 2018-2020, he was an advisor to Infinera Corporation. From 2015 to 2018, he cooperated with Huawei, supporting the company in providing broadband solutions under the Digital Poland Operational. From 2013 to 2014, Mr. Witoń was the president of the Hawe Group and during the 2007-2013 period, he was a representative of the management board of Orange Polska, responsible for obtaining financing and implementing the first projects in Poland to build broadband networks under EU funds in the Lubuskie and Pomorskie voivodeships, and for establishing the innovative formula of the Open Investment Platform. In 2005-2007 he worked as the vice president of the Ukrainian telecommunications operator UMC (now Vodafone Ukraine), as responsible for the development of wholesale services. Previously, he was vice president and president

of telecommunications companies in the PSE Group (NOM, Tel-Energo, Telbank, and Exatel) in which he developed and consolidated data transmission networks and introduced alternative telecommunications services. In the years 1983-1995 Mr. Witoń was an employee of Radio Free Europe in New York and Munich, where he was the director of the administration and implementation department of the Polish section of RWE, responsible, inter alia, for transmission parameters and live broadcasts. Press spokesman for the Trade Union "Solidarity" in 1980-1982. A long-time member of the Program Council of the Economic Forum in Krynica, winner of numerous business awards and distinctions. He graduated in management from the University of Maryland in the United States. Privately, a husband and a fulfilled father of three daughters and a grandfather of six grandchildren.

Telecom Paper, "IPT Fiber appoints new CEO"

TELKO.in, "Krzysztof Witoń został prezesem IPT Fiber"

IPT Fiber, "W IPT Fiber będziemy godzić wodę z ogniem, czyli cele badawczo-rozwojowe z biznesowymi"

Wirtualne Media, "Krzysztof Witoń prezesem IPT Fiber. Pokieruje rozwojem polskich światłowodów wielordzeniowych"



Pioneering installation of our Multicore Fiber

A pioneering installation of our multicore fiber with fan-in and fan-out components was carried out at the production facility of HillTech M&S S.A in Stalowa Wola in November 2020 creating a 180m DCI (Data Center Interconnect) link between two server rooms inside the building. Hilltech is an IT system and industrial automation product supplier based in Poland.



The tests were carried out with the use of a standard multi-channel 1 Gbps/channel transmission, where the concept of a channel is equivalent to a core in a multi-core fiber. Duplex transmission mode was achieved using pairs of unidirectional channels. The test proved a fully operational line and provided a successful outcome of the pilot test demonstrating the potential of the multicore fibers and fan-in/out for such applications. To the best of our knowledge, it is the first installation of this type in Poland and in the world.

InPhoTech, "Pioneering installation of our seven-core fiber!"

WPROST, "Pionierska instalacja polskiego światłowodu wielordzeniowego w Hilltech S.A."

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