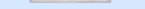


ACTIVE DEVICES GPON ARCHITECTURE

	MES53xx Aggregation Ethernet switches	<ul style="list-style-type: none"> - Bandwidth 800 Gbps, Non-blocking architecture - 24x10G ports , 4x40G ports, - L3 switch - Front-to-Back cooling - Stacking of up to 8 devices - Hot-swappable redundant power supplies - Hot-swappable fans
	MES33xx Aggregation Ethernet switches	<ul style="list-style-type: none"> - Bandwidth up to 128 Gbps, L2+ switch - Support for L3 functions, Front-to-Back cooling - Stacking of up to 8 devices - Hot-swappable redundant power supplies - Duplicate cooling system
	SFP/XFP transceivers 1G/10G/40G/100G series	<ul style="list-style-type: none"> - Small Form Factor Pluggable transceivers - Compatible with Multi-Sourcing Agreement (MSA) - 10 Gbps - X2, XENPAK, XFP and SFP+ standards - Duplex or Bi-Di optical interface - Full CWDM and DWDM spectrum, distance up to 120 km
	MES23xx Ethernet Access switches	<ul style="list-style-type: none"> - L3 switches, Stacking support - Multicast support (IGMP Snooping, MVR) - Advanced security functions (L2-L4 ACL, IP Source Guard, Dynamic ARP Inspection, etc.)
	CLAQ CzechLight Amplifier devices	<ul style="list-style-type: none"> - Booster CATV module, optical splitter included - 8/16/32 output ports, Low noise figure - Monitoring port (1% of power), Microcomputer control system - Display & control panel for local control - Dual power supply
	OLT MA4000-PX GPON Optical Line Terminal	<ul style="list-style-type: none"> - Modular device, design: 19" 9U Eurorack - 2 Switches (Uplink Controllers) with Hot Standby 1:1 - Up to 16 GPON modules (to 128 GPON ports) - Up to 8192 ONT per node - Switching Capacity: 680 Gbps - Low power consumption - 2 separate power supply
	OLT LTP-4X / OLT LTP-8X GPON central office node terminal	<ul style="list-style-type: none"> - Up to 8 GPON line ports - Ideal solution for a cottage or an apartment building - Remote control via CLI, SNMP - G.988, G.984.x and TR-156 Standard - Provides cable TV together with data communication services
	NTU-RG-1402G-Wac GPON subscriber terminals	<ul style="list-style-type: none"> - 1 port GPON, - Gigabit router - FXS phone ports - USB 2.0 port with network storage feature - Wi-Fi 802.11b/g/n/ac
	NTU-2V GPON subscriber terminals	<ul style="list-style-type: none"> - 1xPON - 1xLAN 10/100/1000Base-T - 1x LAN 10/100Base-T - 1x FXS
	SetTopBox Linux / Android	<ul style="list-style-type: none"> - OS Linux / Android - Full HD IPTV, OTT, VoD services - Built-in Web browser - Application store of the operator
	WEP-12AC Wi-Fi Enterprise Indoor access point	<ul style="list-style-type: none"> - Supports 802.11 ac (5G Wi-Fi) - Power: PoE, leased lines - Works in a cluster without a dedicated server (up to 32 devices) - Seamless roaming, Service up to 400 users
	WOP-12AC / WOP-12AC-LR Wi-Fi Enterprise Outdoor access point	<ul style="list-style-type: none"> - High-performance solution based on Broadcom chipset - Dual band Wi-Fi 802.11ac - Cluster operations without dedicated server (up to 64 devices) - Seamless roaming
	WB-1P/WB-1P-LR Wi-Fi users Outdoor access point	<ul style="list-style-type: none"> - Support for Wi-Fi dual-band 802.11 a/b/g n/ac - MIMO 2x2 - Supports PoE/PoE + - Support 802.11ac (5G Wi-Fi) - High-performance solution

PASSIVE NETWORK INFRASTRUCTURE

	Passive components for optical networks	<ul style="list-style-type: none"> - Fiber optic connectors, patchcords, pigtails - Adapters, attenuators - Couplers, splitters - Wavelength division multiplexers
	ROV series rack Free Standing Rack	<ul style="list-style-type: none"> - Universal rack for standard daily IT use - Available in various dimensions - Pre-configured rack, with many other options
	OPT-ER Generic Rack	<ul style="list-style-type: none"> - Depth and width in accordance with ETSI - Several rack configurations - ETSI mounting profiles with cage nuts for shelf mounting - Horizontal and vertical patch cord management
	OFDU Splice and Termination Cabinet	<ul style="list-style-type: none"> - Aluminum material - low weight and shipment costs - Splicing and termination in one cabinet - Up to 144 fiber termination - For FTTH use - microtube holder included

	MCNP Connector Panel Cabinet	<ul style="list-style-type: none"> - Luxury Stainless Steel Look (SSL) - Splicing and termination optical cable in one box - Accepts the industry's most common connector types - FTTH use – microtubes holder included
	MCNR series Splice and termination cabinet	<ul style="list-style-type: none"> - Splicing and termination of optical cable in one box - Angled adaptor montage - Large opening for outgoing patchcords - Reduced depth of 260 mm for low depth rack installation
	OMR-DN Outdoor Street Cabinet	<ul style="list-style-type: none"> - 19" vertical rails 21U height - IP65 according to EN 60529*
	MPIC Wall Mount Interconnect Cabinet	<ul style="list-style-type: none"> - Protection for facility and user connections - For FTTH use - holder for micro tubes included - Aluminum material – low weight and shipment costs - Bend radius protection allows management and rearrangement of slack cable
	Planar Splitter SFT-P 1x64	<ul style="list-style-type: none"> - Up to 1x64/128 ports configuration - PON type - In/Out fiber 0.9 mm - Low insertion loss, high port isolation, low PDL - Full CWDM wavelength spectrum 1250 – 1650 nm
	MOTB-X48 Termination Box	<ul style="list-style-type: none"> - Up to 48 drop cables, up to 54 simplex SC adapters - Up to 6 pieces 1x8, 1x16 and 1x32 PLC splitter - Maximum capacity is 144 fibers (6 trays) - Environmental: Ingress Protection IP54 - Safety lock
	Fiber Optic Splice Closure	<ul style="list-style-type: none"> - The closures offer excellent resistance to vibration, ultraviolet rays and changes in climate. - The closures can be installed at temperatures between - 40 °C to 80 °C - The closures are compact and light weight
	MOTB-X20 Termination Box	<ul style="list-style-type: none"> - Wall and pole mountable, Protection class: IP67 - Ultra violet resistant and weather proof - Can accommodate 1 x 8 & 1 x 16 PLC splitter - Up to 16 FTTH drops
	MOTB-X04 Termination Box	<ul style="list-style-type: none"> - Wall mounting, Protection class: IP55 - Splicing pigtails and termination in SC footprint adaptors - Can hold 1 x 4 PLC splitter - Up to 4 (8) drop cable
	MCPE-01T End user terminating box	<ul style="list-style-type: none"> - Hinged/detachable splice cassette - One or two SC adapters - Suitable for heat-shrinkable splice-protection as well as for mechanical splice protection
	FOH - Hybrid Splice Box Splicing and termination	<ul style="list-style-type: none"> - Small dimensions and low weight, modular system - Easy exchangeable panel for most common optical connector types (SC, LC, E2, ...) - Cable clamps inside for firm holding of hybrid cable

OPTOKON TEST EQUIPMENT

	PM-215-G(L) Pocket optical power meter USB probe	<ul style="list-style-type: none"> - Small size, light weight - Rotate display – switchable function (right/left-hander use) - SM and MM fiber testing, - Six working wavelengths - Absolute and Relative optical power measurement
	LS-215-G Pocket optical light source	<ul style="list-style-type: none"> - Single or Dual wavelength output - Smallest size, light weight - Wide range of output adapters
	PM-800-G(L) Optical Power Meter	<ul style="list-style-type: none"> - Portable Power Meter - Absolute and Relative optical power measurement - CW, 270 Hz, 1 kHz, 2 kHz modulation - Auto Wavelength Detection (AWD) function
	LS-800 Light Source	<ul style="list-style-type: none"> - Standalone light source - Up to 4 channel light source - Modulation CW, 270 Hz, 1 kHz, 2 kHz - Auto Wavelength Detection mode - Changeable output adaptors
	OFT-840 Loss Test Set with RL	<ul style="list-style-type: none"> - Optical Light source, Power meter and Return loss tester - Detection of modulation 270 Hz, 1 kHz, 2 kHz - AWD (Auto Wavelength Detection) function - Absolute and Relative optical power measurement
	PM-830 FTTH Optical power meter	<ul style="list-style-type: none"> - PON Testing - Simultaneous measurement of all PON signals - Two ports for uninterrupted FO measurement
	MOT-940 Mini OTDR series	<ul style="list-style-type: none"> - Portable, light weight reflectometer - FTTH test with PON networks - IP65 protection level, outdoor enhanced - 7-inch anti-reflection LCD screen
	FOI-400W InspectFiber-WiFi Fiber Optic Microscope	<ul style="list-style-type: none"> - WiFi and USB connection to Smartphone and PC - Android App and iOS (Apple) App both - Pass/Fail Analysis to IEC 61300-3-35 - Various connector and adapter types available

About OPTOKON

OPTOKON a.s. is a 100% Czech owned joint-stock company with over 30 years of experience in the information and communications technology market. OPTOKON develops and manufactures connectivity solutions for high-quality communication networks. The company significantly contributes to operational reliability and safety in global voice, data and video transmission through its fiber optic systems. The high product quality and forward-looking system designs means that OPTOKON ensures that networks are fit for the future and that investments remain sound in the long term. OPTOKON connectivity solutions are used in offices, data centers, by network operators, in homes, in industry and the military, where OPTOKON NATO approved solutions dominate the global market. The OPTOKON Czech and Malaysian calibration laboratories offer accredited calibration services. Our Testing Division carries out mechanical, thermal and EMC tests according to standard EN ISO / IEC 17025.

The OPTOKON portfolio includes:

- Connectors, Cable Assemblies
- Fiber Optic & Hybrid Cables
- Cable Management Systems
- Splitters, WDM, CWDM and DWDM
- Data Network Equipment & PON System
- Test Equipment
- Harsh Environment Optical Network
- Service and Calibration Center
- Testing Division

What is OPTOKONcept?

OPTOKONcept is the complete FTTH turnkey solution for broadband connectivity providing users with high-speed unlimited bandwidth and services directly in their own homes and premises. This technology requires the installation of new transmission, wiring, and receiving infrastructure networks to provide users with voice, video and telephony services.

How does it work?

OPTOKONcept covers everything required for your FTTH project – consultation, projects, pricing, delivery, installation, testing, maintenance and training.

By integrating our fiber optic products into your specific project, and using our extensive experience and expertise, OPTOKON can fulfill all major and minor project requirements. Components are specifically developed to meet the demands of next generation networks and include optical distribution frames, patchcords, active Ethernet devices, splitters, FO cables, ducts & microducts and integrated OLT & ONU devices for PON.

What does OPTOKONcept offer?

- Affordable technology
- Enough bandwidth to cover your requirements over the next 3-4 decades
- Reliability
- Low deployment cost through smart technology
- Data, voice, video (Triple Play) using only one fiber
- The opportunity to prepare for your future bandwidth requirements NOW

FTTH is now beyond the infancy stage - recent OPTOKONcept projects include:

- Czech Republic, Telefonica O2 - Active Ethernet network - participation in projects
- Slovakia, Orange - Passive network (PON) - participation in projects
- Sweden, Tranas - Active Ethernet network - participation in project
- Czech Republic, Plzeň - Active Ethernet network - pilot project
- Kuwait, Kuwait City - Passive network (PON) - participation in project
- Czech Republic, Znojmo - Passive network (GEPON)
- Bahrain, Salmaniya - Passive network (PON) - participation in project
- Czech Republic, Havlíčkův Brod - Active Ethernet network
- France, Paris, Orange - Access and User FTTH solution
- Czech Republic, Prague - Complete parts of active switches
- Slovakia, Banovce nad Bebravou - Active Ethernet network
- Czech Republic, Pardubice - Complete infrastructure
- USA, California, Verizon - Passive components
- Czech Republic, Roudnice n. Labem - Access and User FTTH solution
- Latvia, Jelgava - Fiber To The Building implementation
- Czech Republic, Přerov - Complete parts of active switches
- Czech Republic, Jihlava, Vysoké Studnice - Passive network (GEPON)
- Czech Republic – Pavlov – GPON system
- Czech Republic – Dolní Bojanovice – GPON system
- Czech Republic – Moravská Nová Ves – GPON system
- Tunisia – GEPON system
- Portugal – GPON + CATV system
- Tchad – Ndjamena City- GPON project PRESTEABIST FTTH
- South Afrika – GPON system



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2019-11-01

FTTH-OPTOKONcept

FIBER TO THE HOME
IS CLOSER THAN YOU MIGHT
THINK...

... tomorrow's complete package
today



Active Devices GPON Architecture



MES53xx
Aggregation Ethernet switches



MES33xx
Aggregation Ethernet switches



SFP/SFP+, QSFP Transceivers
1G/10G/40G/100G series



MES23xx
Ethernet Access switches



CLAQ - CzechLight Amplifier devices

GPON



OLT MA4000-PX
GPON Optical Line Terminal



OLT LTP-4X / OLT LTP-8X
GPON central office node terminal



Splitter

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NTU-RG-1402G-Wac
GPON subscriber terminals



NTU-2V
GPON subscriber terminals



ANDROID SetTopBox



WEP-12AC
Wi-Fi Enterprise
Indoor access point



WB-1P/WB-1P-LR
Wi-Fi users
Outdoor access point



WOP-12AC / WOP-12AC-LR
Wi-Fi Enterprise
Outdoor access point



FOI-400W InspectFiber-WiFi
Fiber Optic Microscope



Patchcords & Pigtails



OPTOKON OSC-700
Single Fiber Fusion Splicer

Core

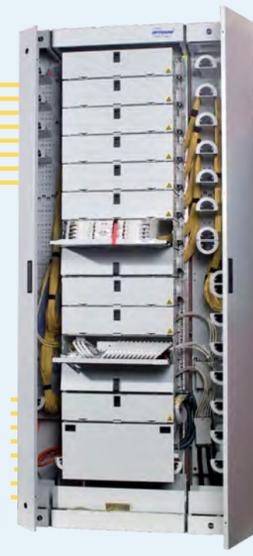
Access

User

Passive Network Infrastructure



ROV series rack
Free Standing Rack



OPT-ER
Generic Rack



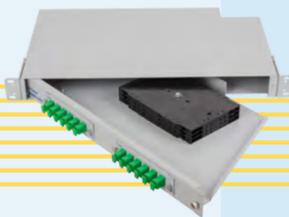
OFDU - Splice and Termination Cabinet



MCNR series
Splice and Termination cabinet



OMR-DN
Outdoor Street Cabinet



MCNP - Connector Panel Cabinet



MCNP-1S /A - Connector Panel Cabinet
ADAPTA DX-7182XW color



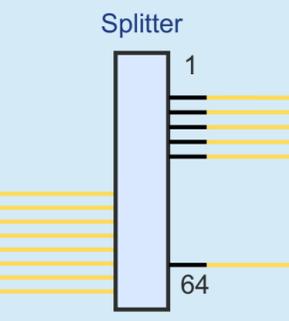
MCNR (SSL) series
Splice and termination cabinet



Fiber Optic
In-Line
Splice Closure



Fiber Optic
Dome Splice Closure



Splitter

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Planar Splitter SFT-P 1x64



Planar Splitter SFT-P-01x32-PJ1-NSC



PM-830 FTTH - PON Testing
Simultaneous measurement of all PON signals
Two ports for uninterrupted FO measurement
(METHOD AND TECHNOLOGY PROTECTED BY US PATENT 7,187,861,
RUSSIAN FEDERATION PATENT RU 2345490,
AND PENDING APPLICATIONS IN OTHER COUNTRIES)



MPIC
Wall Mount
Interconnect Cabinet



MOTB-X48
Termination Box



MOTB-X04
Termination Box



MOTB-X20
Termination Box



MCPE-01T
End user terminating box



FOH - Hybrid Splice Box
Splicing and termination,
Power connectors for LEMO 3K.93C

OPTOKON Test Equipment



PM-215 Pocket Power Meter



LS-215 Pocket Light Source



PM-800
Power Meter



LS-800
Light Source



OFT-840
Loss Test Set with RL



MOT-500 Mini OTDR