

OFS Introduces EZ-Bend Optical Cable Technology

From *BBP Wires*

NORCROSS, GA – OFS (www.ofsoptics.com) has introduced EZ-Bend optical cable technology for multiple dwelling unit (MDU) and in-home wiring applications. EZ-Bend addresses the need to speed and simplify installations by allowing cables to be bent and routed in ways that were not feasible using traditional optical drop cables, in order to facilitate rapid deployment of fiber to and within the residence.

Service providers need drop cables than can support many tight corner bends and stapling. The EZ-Bend tech-

nology enables in-residence optical cable installation with the same simple practices used for copper or coaxial cables. Cables using EZ-Bend technology can be stapled in place using existing copper cable installation tools, and routed around sharp corners. OFS says its bending loss performance represents up to a hundredfold improvement over conventional single-mode fiber (SMF) type cables – 0.1 dB of video signal loss (0.1 dB) for one turn at 5 mm radius, which would shut down service over conventional fibers.

OFS' EZ-Bend technology achieves this performance by integrating a new

bend-optimized fiber design in a new double-protected cable construction. The company says this patent-pending technology is the first to provide such performance within a proven solid glass fiber construction, while being fully compatible with existing installed fibers.

OFS will provide EZ-Bend technology in the V-Linx drop cables used in its recently released V-Linx Spool & Play Solution for MDU deployments. The company says the V-Linx Solution can simplify MDU installations and lower overall costs by up to 50 percent. The V-Linx drop cables are slated to be commercially available in 2008.

JDSU Introduces Three Next-Generation OTDRs and All-in-One Dispersion Analyzer

From *BBP Wires*

MILPITAS, CA – JDSU (www.jdsu.com) has three field-interchangeable, single-slot plug-in OTDRs for the T-BERD/MTS-6000 and T-BERD/MTS-8000 platforms. Each of the new modules has a different application: The very-short-range VSRe module is geared to FTTx/access networks, the medium-range to metro/regional networks and the long-range to core networks.

This month JDSU also introduced the Optical Dispersion Measurement (ODM) module for the T-BERD/MTS-6000 and T-BERD/MTS-8000. Offering chromatic dispersion (CD), polarization mode dispersion (PMD) and Attenuation Profile test functions in a single plug-in module, the ODM is the industry's most compact and integrated dispersion solution dedicated to field-testing fiber optic networks. The module includes a patented solution for CD measurement.

The OTDRs were developed to help telecommunication and cable operator field teams, system vendor field installation and service teams, and contractors install and troubleshoot fiber networks. Each has one-button automated bidirectional OTDR testing that helps save time and reduce errors in the field.

Performance features of the new OTDRs include:

- The ability for multiple units to connect and communicate over the fiber, enabling fully automated test sequences, measurements and pass/fail;
- Traffic detection that will alert the user if he or she has connected to a live fiber and inhibit the transmission of any test pulse down that fiber;
- An automated bend detection mode that helps identify problem fibers, especially in an FTTx/access environment; and
- The ability for the LR OTDR to perform in-service tests through splitters, which are commonly used in FTTH passive optical networks.

In addition, the OTDRs can be combined with all required connection check options available for the T-BERD/MTS-6000 and T-BERD/MTS-8000: connector inspection (VIP), end-to-end connectivity and trace faults in patch panel cabling (VFL), patch cord testing (LTS), power measurements (LTS), and Optical Return Loss (ORL).

The dispersion analyzer module fulfills another function. Measuring CD, PMD and attenuation is essential during fiber characterization, a series of tests

performed to identify fiber viability for very high-speed transmission systems (10 Gige, 40 Gbps and higher) in both the installation and maintenance phases. If not properly managed, CD, PMD and attenuation cause severe performance effects on transmission quality.

The ODM module's combination of CD, PMD, and attenuation test functions allows technicians to validate the fiber link's compatibility with high-speed CWDM/DWDM systems, including Reconfigurable Optical Add/Drop Multiplexers (ROADMs). The performance of each individual function also makes the ODM module ideal for characterizing fiber at 40G and higher.

Additional performance highlights of the ODM module include the industry's only full-band CD analyzer with measurement points in the lower bands (1260-1460nm), very fast CD acquisition time (45 to 70 seconds), test capability through non-bidirectional components (EDFA, filters, and similar components), internal and on-line wavelength referencing, accurate zero-wavelength characterization on G652 fiber, a single input port for any test configuration, and compatibility with plug-in or battery-powered handheld broadband sources at the far end of the fiber under test.

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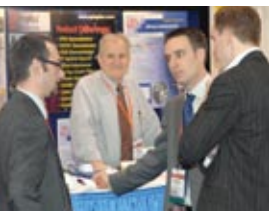
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GPON Gets More Standardized

Expanding a major advantage over some Ethernet solutions, GPON vendors are announcing many new products.

Ligent Introduces GPON Transceiver

From BBP Wires

ST. CHARLES, IL – Ligent Photonics (www.ligentphotonics.com) is now offering its LTB3467 optical network terminal (ONT/ONU) GPON transceiver for FSAN/ITU-T G.984.2 Class B+ service, offering wide dynamic range, fast response time, and low noise.

The device operates in the 1310- and 1490-nm bands and incorporates an APD/TIA receiver and distributed feedback (DFB) laser transmitter. A die-cast electromagnetic and radio-frequency interference (EMI/RFI) shield and cage assembly, in an industry-standard 2x10 SFF fiber pigtail package with SC/APC connector, provides reliability and ruggedized packaging.

The SFF 8472 Revision 9.3 digital diagnostic monitor tracks transceiver operating parameters in real time, checking module temperature, transmitter average burst mode power output, laser burst mode bias current, module voltage, and receiver input/RSSI. The device incorporates a power-level control feature, accessed with a I2C data interface, which permits the optical power to be adjusted in two 3-dB steps. Operating temperature is -40° to +85°C.

NeoPhotonics Unveils Portfolio of Pluggable GPON Transceivers

From BBP Wires

SAN JOSE, CA – NeoPhotonics has a new line of pluggable GPON transceivers to augment its portfolio of bplexer and triplexer modules. The new line includes SFP bplexers for OLT applications as well as modules for use in ONUs. Pluggable transceivers give system designers more flexibility in configuring their platforms for different network applications and allow higher port densities, because they physically separate the optical interface from the rest of the system hardware.

“As part of our strategy to be a broad-based supplier for optical access solutions, these pluggable GPON transceivers are designed to complement our current portfolio of FTTP products,” said Tim Jenks, Chairman and CEO of NeoPhotonics. “They comply with the latest ITU-T G.984.2 Class B+ specifications to meet the performance and reliability requirements for triple-play access networks. Our GPON transceiver line also builds on our experience in several segments of the optical access market.” For more information, visit www.neophotonics.com.

Alloptic Receives Patent for PON Technology

From BBP Wires

LIVERMORE, CA – Alloptic (www.alloptic.com), which was the first company to develop an Ethernet-based passive optical networking (PON) product, announced that it has been granted a US patent for PON technology. This patent provides intellectual property protection to Alloptic for time division multiplex access (TDMA) traffic over a passive fiber optic network, for the use of a second wavelength in a TDM fashion over a PON, and for passive fiber rings.

Occam Networks Announces GPON Product Line

From BBP Wires

SANTA BARBARA, CA – Active Ethernet equipment supplier Occam Networks (www.occamnetworks.com), which recently purchased Terawave’s GPON assets, has now integrated GPON into its broadband loop carrier (BLC 6000) system. Occam’s initial GPON solutions will include both central office and customer premises equipment:

- The BLC 6322 OLT, with four GPON ports. A single Occam BLC 6012 shelf will support up to 48 GPONs.

- The ON 2442 ONT: single family residence, two POTS and four Ethernet ports.
- The ON 2444 ONT: single family residence, two POTS and four Ethernet ports, and 1555 nm RF broadcast.
- The ON 2445 ONT: single family residence, two POTS and four Ethernet ports, 1555 nm RF broadcast, and HPNAv3.
- The ON 2451 ONT: multiple dwelling unit, 4 - 8 POTS ports, 8 - 16 Ethernet ports, 1555 nm RF broadcast, and HPNAv3.1.

At the center of Occam's GPON solution is the Occam Packet Engine, a chip designed to support the massive Ethernet and IP processing required by triple play networks. An OLT blade powered by this chip can switch packets at a multigigabit per second rate, performs deep packet inspection on millions of packets per second, manages 2,048 data streams, and delivers hardware-based QoS, security, and multicast management. Occam projects the new products to be available in Q1 2008, with the exception of the ON 2445, which is anticipated in Q2 2008.

Rather than layering GPON onto older, ATM-based technology, the Occam system supports full line-rate bandwidth for every GPON port simultaneously, both inter-blade and into the backhaul. This is critical for high IP-HDTV on-demand take rates. Occam's highly resilient Ethernet backhaul rings use all backhaul links in normal operation, load-shifting immediately and gracefully on link failure.

Integration of the GPON equipment into the company's BLC 6000 access system enables operators to build cohesive access networks. The BLC merges 10GigE, GigE, ADSL2+, DS1, HPNA, RF video, Ethernet, VoIP, POTS, and now GPON. Everything is integrated, with a unified backhaul and a single set of shelves and enclosures, and all of it is managed by OccamView EMS.

Occam's GPON offerings also reflect its focus on simplicity of turn-up and operation. They include centralized, standards-based ONT control through ONT Management Control Interface (OMCI), and feature easy provisioning with VLANs.

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TXP and Tellabs Accelerate Cabinet Upgrades

From BBP Wires

RICHARDSON, TX – Replacing a remote cabinet is a lengthy and costly process. It typically involves buying a new cabinet; installing a concrete pad; renegotiating rights-of-way and power service. And that's just the start. Then the provider must rent a temporary cabinet for cutover traffic while the new

cabinet is installed, which often involves a crane.

TXP Corporation (www.txpcorporation.com), an Original Design Manufacturer for the telecommunications industry, announced agreements with Tellabs (www.tellabs.com) and ADTRAN (www.adtran.com) to develop retrofit kits for their access systems. The kits will let Tellabs upgrade remote outside plant cabinets with the

Tellabs 1134 Multiservice Access Platform (MSAP), and let ADTRAN upgrade outside plant cabinets with Total Access 5006 systems, in as little as a few hours, saving both time and money for service providers.

TXP will also augment ADTRAN's GPON offering with optical network terminals (ONTs) designed for a variety of applications.

GPON CPE, Too

First- and second-generation FTTH deployments required two separate boxes at the customer premises: an optical network terminal and a residential gateway. Now, vendors are trying to integrate the two devices, in order to enable savings in equipment cost, deployment cost, network complexity, and field maintenance overhead – particularly for GPON, the standard that many North American and European providers have now adopted.

PMC-Sierra Introduces GPON Fiber Access Gateway Device

From BBP Wires

SANTA CLARA, CA –PMC-Sierra (www.pmc-sierra.com) recently announced the availability of a gigabit-speed, multi-service fiber access gateway device with an integrated ITU-T G.984 GPON interface. The MSP7160 integrates all of the functionality required for a GPON residential gateway, and leverages PMC-Sierra's GPON interoperability and software layers to improve performance and reduce OEM time-to-market and development costs.

The MSP7160 delivers gigabit-per-second IPv4 or IPv6 routing, Network Address Translation (NAT) and Quality of Service (QoS) features. It includes integrated multi-channel VoIP terminal adapter capabilities, GPON MAC and SERDES functions with proven interoperability. As the newest addition to the industry's most complete fiber access gateway portfolio, the MSP7160 is also software compatible with PMC-Sierra's other MSP7100 family devices.

GPON Reference Design Simplifies Development of CPE

From BBP Wires

SHENZHEN, CHINA – The industry's only voice-enabled GPON system-on-chip (SoC) is now available as part of a comprehensive hardware/software reference design kit developed to spur the creation of affordable, highly integrated GPON customer premises equipment. A supplier of GPON processors, Freescale Semiconductor (www.freescale.com) collaborated with OpenCon Systems to create the offering.

The reference design kit, available now from OpenCon Systems (www.opencon.com), includes a turnkey software solution for optical network terminals (ONTs) based on OMCI management technology that ships with Freescale's MSC7120 GPON device. The OpenCon software solution also supports SIP-based VoIP voice telephony. The package enables communication between the GPON customer premises equipment and the central office at the service layer, enabling the central office to seamlessly manage and control the data flow to and from the subscriber.

Aztek Networks Launches New Emergency Stand Alone Solution for VoIP

From *BBP Wires*

BOULDER, CO – Aztek Networks’ (www.azteknetworks.net) latest addition to its Emergency Stand Alone switching family helps ensure public safety by maintaining local calling capabilities and access to 911 services if the link to the primary host switch is severed due to an accident or natural disaster. Normally, when the subscriber dials a number, the 5000I simply passes those commands on to the softswitch. But if the

link to the softswitch has been cut, then the 5000I examines the registration and determines if the user is trying to make a local or 911 call. If so, the 5000I completes the call locally.

The Aztek 5000I ensures continuous, uninterrupted voice service for all subscribers served from a local exchange via fiber or broadband copper lines. This allows independent carriers to migrate from legacy end-office switches and proprietary remote switching units to fiber-to-the-home or broadband multiservice

access without sacrificing traditional levels of voice reliability.

The 5000I is compact, environmentally hardened and NEBS-compliant, so it can be placed either in a telephone office environment or in outside plant such as a field cabinet. The 5000I contains dual gigabit Ethernet ports and fully redundant dual processor control cards in order to ensure reliability and up-time. It will be available from Aztek Networks or select partners late in the first quarter of 2008.

New ADC 1x64 Splitter Reduces Fiber in Network

From *BBP Wires*

MINNEAPOLIS – The new Omni-Reach 1x64 splitter from ADC (www.adc.com) lets carriers double the number of customers served from a single splitter, from 32 to 64, and reduce the feeder fibers needed for the network. The company says the new splitter is designed to fit into a centralized-splitting passive optical network (PON) architecture and to be cost-effective for service providers deploying GPON.

Designed for all indoor and outdoor applications in FTTH networks, the 1x64 splitter offers plug-and-play functionality with a design that reduces installation and customer turn-up time, resulting in lower operational expenses.

ADC also recently announced its acquisition of Century Man Communication, a provider of communication



ADC's new 1x64 splitter can deliver bandwidth to 64 customers from one OLT and one fiber.

distribution frame solutions in China – an acquisition that strengthens its presence in China with telecommunications service providers. It also completed its acquisition of LGC Wireless, which

provides specialized wireless coverage and capacity solutions for carriers and enterprises. ACD says the addition of LGC accelerates the execution of its All IP Radio Access Network (RAN).

Alcatel-Lucent Fiber-to-the-User Solution Gets 'Rural Development Acceptance' and 'Buy American' Status

From *BBP Wires*

MURRAY HILL, NJ – Alcatel-Lucent (www.alcatel-lucent.com) says its 7342 ISAM FTTH (Fiber-to-the-User) solution has been granted both “Rural Development Acceptance” and “Buy

American” status by the U.S. Department of Agriculture’s Rural Development agency for deployment under the Rural Development Broadband Loan and Loan Guarantee Program.

USDA acceptance means that communities of up to 20,000 inhabitants

can now install Alcatel-Lucent’s 7342 ISAM FTTH solution in GPON networks using funding obtained under the USDA Rural Development funding programs. It will be listed in the “Access Equipment” category, FTTH Systems.

Higher-Gain, High-Sensitivity Post Amplifiers from Micrel

From BBP Wires

SAN JOSE, CA – Micrel (www.micrel.com) has added two new solutions to its growing family of Post Amplifiers. The SY88343HL and SY88289HL are high-sensitivity, low-power CML limiting post amplifiers, designed with twice the signal gain of the previously announced SY88343DL and SY88289CL. These

solutions are targeted at applications using low-cost transimpedance amplifiers and/or low-gain PIN diodes used in a wide variety of data and telecomm markets including PON, Gigabit Ethernet, SFP/SFF optical transceivers, 1X and 2X Fiber Channel, and SONET. Both devices are currently in volume production with pricing for 1,000-lot quantities starting at \$2.49.

In a fiber optic module, the devices connect to typical transimpedance amplifiers (TIAs). The linear signal output from TIAs can contain significant amounts of noise and may vary in amplitude over time. The SY88289HL and SY88343HL quantize these signals and output them in low noise CML-level waveforms.

Graybar Adds GE Security Products

From BBP wires

ST. LOUIS, MO – Giant distributor Graybar (www.graybar.com) is now working with GE Security to distribute its security solutions. Graybar will carry GE Security video surveillance, intrusion, access control and fiber optic

systems. These solutions are designed to work together to simplify installation for integrators and contractors, and to provide a complete, end-to-end system for commercial, industrial and institutional end-users. In addition, Graybar carries GE lighting solutions, signaling products from the GE division of Ed-

wards and fiber optic systems from the GE division of IFS.

Since entering the security market in 2004, Graybar has been expanding its line and now stocks security solutions throughout its distribution network of more than 250 North American locations.

ECI Telecom Adds Intelligent Control for Reliability

From BBP Wires

PETAH TIKVA, Israel – ECI Telecom (www.ecitele.com), a global provider of networking infrastructure, has announced availability of Automatically Switched Optical Network (ASON) capabilities for its XDM Multi-Service Provisioning Platform (MSPP) family of products, from metro access to core networks. Advanced control plane architecture offers new protection schemes to assure service continuation. The ITU ASON architecture, along with the GMPLS common signaling and routing protocol, enables the introduction of an extra layer of virtual management plane for differentiated service support based on Class of Service (CoS).

“Service providers must safeguard their networks against failures, providing the highest levels of protection and resiliency. In some markets, such as India and Russia, fiber cuts are prevalent and can cause major disruptions in service,” said Sterling Perrin, Senior Analyst at Heavy Reading. “Adding intelligent control planes to MSPP/MSTP products – as ECI has announced with the XDM – is an interesting trend we are beginning to see in optical networking. ASON and GMPLS support enables dynamic mesh restoration and rerouting of traffic within 50 milliseconds in case of failure, with minimal disruption of services.”

Differential services can be implemented in existing and new transport networks by adding a control plane card

to the XDM platform and using ECI’s unified LightSoft end-to-end network management system. Successful dealing with multiple network failures is enabled by a full auto-discovery package, new protection schemes and automatic prioritized restoration.

“The addition of ASON capabilities enables our customers to offer higher QoS with service continuation in spite of network failures, thereby reducing capex and opex through efficient planning and operation of optical networks,” said Eyal Shaked, Executive Vice President and General Manager of ECI Telecom’s Network Solutions Division. “ECI is dedicated to continually enhance our customers’ networks and support their transition towards next-generation services.”