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## Methode Electronics, MaxLinear and LEA Networks Launch Reverse-Powered G.hn micro-DPU for FTTdp Applications

- *Modular platform supports twisted-pair and coaxial cable, delivers data rates up to 2 Gbps, can be reversed-powered up to hundreds of meters and enables service providers to adopt pay-as-you-grow deployment model*
- *Canadian service provider TELUS played a key role in defining the use cases for the platform*

THE HAGUE, Netherlands--(BUSINESS WIRE)-- dataMate, a business unit of Methode Electronics, Inc. (NYSE: MEI), a global developer and manufacturer of custom engineered and application-specific products and solutions, MaxLinear Inc. (NYSE: MXL), a leading provider of mixed-signal integrated circuits for the broadband market, and LEA Networks, a principal provider of home networking, today announced a new G.hn-based fiber-to-the-distribution-point (FTTdp) platform designed to dramatically lower the cost of delivering gigabit broadband services for service providers.

The Methode micro-DPU is the first single-port “distribution point unit” in the market that allows service providers to natively leverage existing twisted pair or coaxial cable infrastructure in their fiber deployments, which significantly reduces installation costs and guarantees a gigabit broadband experience in both upstream and downstream directions.

G.hn is an ITU networking standard that delivers data rates up to 2 Gbps and can operate over a variety of copper media. Multiple service providers today rely on G.hn technology to deliver broadband services to millions of users in North America, Europe and Asia.

The Methode micro-DPU has been designed in close collaboration with TELUS’ engineering team to address the technical, operational and competitive business challenges of gigabit broadband service providers like TELUS.

“Most existing FTTdp solutions in the market require service providers to make large upfront investments before a single customer signs up for service. Installing a 16-port DPU when only one subscriber has signed for service does not make much financial sense,” said Chano Gómez, Sr. Director, G.hn Marketing at MaxLinear. “The single-port micro-DPU solves this problem by enabling pioneering carriers such as TELUS to adopt an innovative pay-as-you-grow model, adding new G.hn ports gradually as new customers sign up for service in an MDU or condominium. The unique auto-sync and cross-talk management provided by our VectorBoost™ technology enables multiple independent DPUs to be installed near each other, with a deployment model that was not possible before.”

Methode General Manager Al Chiappetta added, “For years Methode has been a leading supplier of pluggable modules for the networking industry, and we are glad to see that the broadband access industry is also increasingly adopting modular architectures to reduce their deployment costs and increase flexibility. By collaborating closely with TELUS’ experienced engineering team, we are confident that our micro-DPU platform can meet the requirements of other service providers who want to reduce the cost of their FTTH deployment.”

“Reverse Power Feed is one of the three DPU powering options defined by BBF TR-301, and thanks to our extensive expertise on powering, splitting and filtering at very high frequencies, we have come with an industry-leading open architecture solution around RPF,” said Thierry Fernandez, CEO of LEA Networks. “Thanks to LEA’s optimal implementation of reverse power feed injector, TELUS and service providers around the world will be able to affordably reverse power DPUs with minimal insertion loss at maximum loop length, helping them reduce installation time and costs.”

“As TELUS continues to deploy fibre as close to customers as possible, we recognize there are key deployment scenarios where we need to take advantage of the existing copper drop or riser,” said David Moore, Director of Broadband Access Standards at TELUS. “The modular nature of the micro-DPU ensures it will continue to support our evolving network in both WAN and LAN environments.”

### **Technical Details: Methode micro-DPU**

The Methode micro-DPU is the first FTTdp DPU in the industry that offers the following set of capabilities:

- Data rates up to 2 Gbps, leveraging the latest 200 MHz G.hn band-plans standardized in ITU-T G.9960 Amendments 1 and 2.
- Complete modularity, with replaceable SFP modules both for uplink (PON ONT) and downlink (G.hn over twisted-pair, G.hn over coax, 1G and 2.5G Ethernet over Cat-5e cable).
- Maximum power usage of 10 watts, with flexible powering options, including both local 12V DC power and Reverse Power Feeding (RPF ETSI TS 101 548) over twisted pair or coax.
- Available in both indoor and outdoor configurations.
- ITU-T K.21 over-voltage protection.
- Automatic detection of neighbor DPUs, with automatic synchronization of TDD time slots to eliminate near-end cross-talk (NEXT).
- Compatible with MaxLinear cloud-based VectorBoost platform to eliminate far-end cross-talk (FEXT).
- Flexible bandwidth provisioning, supporting both fixed TDD ratios or dynamic time allocation (DTA) on both coax and twisted-pair.
- Directly supported in mainline OpenWRT, with the latest Linux 4.14 LTS kernel and Open vSwitch 2.92. The micro-DPU will be an SDN-ready software platform with no

dependency on proprietary vendor SDKs.

Service providers planning to deploy the Methode micro-DPU have several options for G.hn connectivity in a pluggable SFP form factor ranging from an F-type connector for coax, RJ11 for phone line and RJ45 for Cat-5e cable. All Methode's G.hn SFP modules integrate MaxLinear's G.hn Wave-2 chipset and are fully interoperable with G.hn products from other vendors. The SFP modules are designed to be used both on the micro-DPU side or in third-party residential gateways, simplifying inventory management by service providers.

### **Technical Details: LEA PSETT02US**

The PSETT02US from LEA Networks is a reverse power injector based on the ETSI TS 101 548 standard. Product features include:

- Simple, easy reverse power feed (RPF) self-installation power supply equipment (PSE).
- Combines modem data with power to reverse power DPU.
- Available in power class SR2 (15 watts) and SR3 (21 watts).
- Native support for twisted-pair interface, with optional plug-in to enable coax cable support and Gigabit Ethernet.
- Support for SISO and MIMO over twisted-pair.
- Compliant with metallic detection-based start-up (MDSU) protocol.
- Wall mount and desk mount option for C-5 universal AC cord adapts to any international plug type.

### **Availability**

The Methode micro-DPU and G.hn SFP modules are available now from Methode. The PSETT02US RPF PSE device is available now from LEA Networks. A live demonstration of the complete solution will be displayed at the TNO Ultra-fast Broadband Seminar, held in The Hague, from June 19<sup>th</sup> to June 21<sup>st</sup>.

### **About dataMate Methode Data Solutions**

dataMate is a tier-one manufacturer of high-performance pluggable products in all of the most prevalent form factors. All are engineered to achieve data transfer rates rivaling fiber-optic speeds while utilizing existing copper infrastructure. Offerings include network demarcation equipment, managed fiber link extenders, transceiver modules, loopbacks and direct-attached transceiver cable assemblies, which can be customized according to application. Learn more at <http://www.methode.com/data/high-speed-copper-transceivers-modules.html#.VsNSbGcVHL8>.

### **About Methode**

Methode Electronics, Inc. (NYSE: MEI) is a global developer of custom engineered and application specific products and solutions with manufacturing, design and testing facilities in Belgium, Canada, China, Egypt, Germany, India, Italy, Lebanon, Malta, Mexico, Singapore,

Switzerland, the United Kingdom and the United States. We design, manufacture and market devices employing electrical, electronic, wireless, safety radio remote control, sensing and optical technologies to control and convey signals through sensors, interconnections and controls. Our business is managed on a segment basis, with those segments being Automotive, Interface, Power Products and Other. Our components are in the primary end markets of the automobile, computer, information processing and networking equipment, voice and data communication systems, consumer electronics, appliances, aerospace vehicles and industrial equipment industries. Further information can be found on Methode's Web site [www.methode.com](http://www.methode.com).

### **About MaxLinear**

MaxLinear, Inc. (NYSE: MXL), is a leading provider of radio frequency (RF), analog and mixed-signal integrated circuits for the connected home, wired and wireless infrastructure, and industrial and multimarket applications. MaxLinear is headquartered in Carlsbad, California. For more information, please visit [www.maxlinear.com](http://www.maxlinear.com).

### **About LEA Networks**

LEA Networks is a worldwide leader in xDSL/G.fast splitters and filters, Power Line Communication (PLC), Power over Ethernet (PoE), Reverse Power Systems, and lightning protection and connectivity solutions for the telecommunication industry. The company researches, designs, markets, and distributes a wide range of standard and custom products, which have been deployed by over 150 carriers worldwide. Headquartered in Paris, France, LEA Networks is a wholly-owned subsidiary of HF Company (Euronext: HF). More information is at <https://www.lea-networks.com>.

### **About TELUS**

TELUS (TSX: T, NYSE: TU) is Canada's fastest-growing national telecommunications company, with \$13.6 billion of annual revenue and 13.1 million subscriber connections, including 8.9 million wireless subscribers, 1.8 million high-speed Internet subscribers, 1.3 million residential network access lines and 1.1 million TELUS TV customers. TELUS provides a wide range of communications products and services, including wireless, data, Internet protocol (IP), voice, television, entertainment, video and home security. TELUS is also Canada's largest healthcare IT provider, and TELUS International delivers business process solutions around the globe.

In support of our philosophy to give where we live, TELUS, our team members and retirees have contributed over \$525 million to charitable and not-for-profit organizations and volunteered more than 8.7 million hours of service to local communities since 2000. Created in 2005 by President and CEO Darren Entwistle, TELUS' 13 Canadian community boards and 5 International boards have led the Company's support of grassroots charities and have contributed more than \$67 million in support of 6,283 local charitable projects, enriching the lives of more than 2 million children and youth, annually. TELUS was honored to be named the most outstanding philanthropic corporation globally for 2010 by the Association of Fundraising Professionals, becoming the first Canadian company to receive this prestigious international recognition. For more information about TELUS, please visit [telus.com](http://telus.com).

### **Cautionary Note About Forward-Looking Statements**

This press release contains “forward-looking” statements within the meaning of federal securities laws. Forward-looking statements include, among others, statements concerning or implying future financial performance or trends and growth opportunities affecting MaxLinear, in particular statements relating to MaxLinear’s collaboration with Methode Electronics and LEA Networks to develop a new G.hn-based fiber-to-the-distribution-point platform as well as TELUS’ selection to deploy the platform in its broadband network. These forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from any future results expressed or implied by these forward-looking statements. We cannot predict whether or to what extent we will realize revenues from our collaboration with Methode Electronics, LEA Networks or TELUS. Forward-looking statements are based on management’s current, preliminary expectations and are subject to various risks and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. Forward-looking statements may contain words such as “will be,” “will,” “expected,” “anticipate,” “continue,” or similar expressions and include the assumptions that underlie such statements. The following factors, among others, could cause actual results to differ materially from those described in the forward-looking statements: intense competition in our industry; the ability of our customers, including TELUS, to cancel or reduce orders; uncertainties concerning how end user markets for our products will develop; our lack of long-term supply contracts and dependence on limited sources of supply; potential decreases in average selling prices for our products; and the potential for intellectual property litigation, which is prevalent in our industry. In addition to these risks and uncertainties, investors should review the risks and uncertainties contained in MaxLinear’s filings with the United States Securities and Exchange Commission, including risks and uncertainties identified in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2018. All forward-looking statements are qualified in their entirety by this cautionary statement. MaxLinear is providing this information as of the date of this release and does not undertake any obligation to update any forward-looking statements contained in this release as a result of new information, future events, or otherwise.

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