

IDT Announces 100G Single Lambda EML Driver and TIA for 200G/400G Datacenter Applications

September 20, 2018

- Enable single wavelength 100G, scalable to 200G and 400G Ethernet Switch-to-Switch and Switch-to-Server Optical Links
- EML laser driver minimizes power consumption, eliminates the need for external components
- TIA, configurable, extends transmission distance with high input sensitivity and low power consumption
- IDT to show live demo of 100G single lambda link in partnership with MultiPhy at IDT booth #448 at ECOC 2018

SAN JOSE, Calif., Sept. 20, 2018 /PRNewswire/ -- Integrated Device Technology, Inc. ([IDT](#)) (NASDAQ: IDTI) today announced the release of its latest single lambda EML driver and TIA for 200G/400G datacenter applications.



Continuously increasing traffic in cloud data centers is driving the demand for low-cost, high-speed optical interconnects, with low power requirements. The sales of optical components and modules for cloud data centers will increase 67% by 2023, with an average annual growth rate of 20%, according to a 2018 report from LightCounting. This high growth will be driven by the ongoing adoption of 100GbE and the wider deployment of 400GbE.

The 400GbE based on 100G single lambda designs is expected to establish an ecosystem to lower the cost per bit, a key enabler for scalable Switch-to-Switch and Switch-to-Server Optical Links, supported with small form factor modules, such as 200G/400G QSFP-DD, OSFP and 400G OBO. The Electro-Absorption Modulated Laser (EML) and Trans-Impedance Amplifier (TIA) are key analog IC components, and the features of IDT's chip set of high bandwidth, high sensitivity and low power consumption are promising to support those modules.

The IDT® 100G single lambda EML Driver is available as a die (HXT45100) and as a packaged driver (HXT45x01) with 1 or 4 channels. The driver family features broad bandwidth, high linearity and low power consumption for the QSFP-DD module form factor. The SMT-type packaged drivers integrate built-in Bias-T, internal high-frequency chokes and input DC blocks, and offers 2Vpp output voltage swing while consuming less than 300mW per channel power. The bandwidth is over 40GHz with excellent phase flatness and channel isolation.

The 100G single lambda TIA, offered as 1 channel and 4 channel dies (HXR45x00), provides under 5kohm transimpedance gain, 500mVpp maximum differential output voltage, excellent flat frequency response and low group delay with 3dB bandwidth higher than 36GHz, is very suitable for 100G single lambda applications, with a power dissipation as low as 168mW per channel. The HXR45x00 is configurable by I2C, for 28G applications, with a flat frequency response and 3dB bandwidth of 25GHz and reduced power dissipation down to 135mWper channel.

"We are very excited of the initial results of our single channel and four channel 112G/ch TIA," said Andrea Betti-Berutto, IDT Fellow. "This new generation of TIAs will well satisfy the high performance challenges required for 100G single lambda applications and simultaneously consume very little power and deliver a high sensitivity solution for lower rate applications, such as 28Gbaud-based small form factor modules."

IDT will demonstrate the new chipset solution at ECOC 2018 in partnership with MultiPhy's 100G single lambda DSP. MultiPhy's FlexPhy PAM4 DSP platform is a low-power, high performance, state-of-the-art single wavelength technology enabling data center applications. MultiPhy's MPF3101, a 100G PAM4 single lambda DSP, and its MPF3404, a 400G PAM4 DSP, are both powered by proven core technology and a strong DSP engine, delivering unprecedented performance and cost efficiency.

The demonstration will present a mature solution that includes a fully functional MPF3404 400G 4x100G working in a breakout mode with the MPF3101 100G DSP, delivering excellent BER and stability.

MultiPhy's MPF3101 and MPF3404 products are both interoperable between 100G and 400G transceivers, a key element for accelerating the adoption of single lambda technology in data centers. The devices are packaged in an advanced process mode and optimized for use in QSFP28 and QSFP-DD modules.

"We are happy to create together with IDT a joint solution just as 100G single lambda begins to dominate next generation architectures in data centers," said Avi Shabtai, CEO at MultiPhy. "Delivering a complete and mature solution that has been tested and verified for its excellent performance and stability leads the paradigm shift in the adoption of DSP technologies for data center connections leveraging it to optimize speed, cost and power and releasing the connectivity barrier, satisfying the demand for the network evolution."

To see our live demo, please visit IDT at [ECOC 2018](#), booth 448, September 24-26 in Rome, Italy.

LightCounting is a market research firm focused on the in-depth study of high speed interconnects for the datacom, telecom and consumer communications markets. More information on LightCounting and its reports is available at www.lightcounting.com.

About MultiPhy

MultiPhy is the world leader in cutting edge digital-signal-processing based integrated circuits for high-speed communications. The company's 100G and 400G CMOS chipsets with advanced PAM4 modulation schemes are leading in the technology paradigm shift made necessary by the dramatic increase in network traffic. MultiPhy's solutions make optical networks in Data Centers faster, more scalable, flexible and cost-effective. www.multiphy.com.

About IDT

Integrated Device Technology, Inc. develops system-level solutions that optimize its customers' applications. IDT's market-leading products in RF, high performance timing, memory interface, real-time interconnect, optical interconnect, wireless power, and smart sensors are among the company's broad array of complete mixed-signal solutions for the communications, computing, consumer, automotive and industrial segments. Headquartered in San Jose, Calif., IDT has design, manufacturing, sales facilities and distribution partners throughout the world. IDT stock is traded on the NASDAQ Global Select Stock Market® under the symbol "IDTI." Additional information about IDT can be found at idt.com. Follow IDT on [Facebook](#), [LinkedIn](#), [Twitter](#), and [YouTube](#).

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