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IDT and Epson Tackle the Phase Noise Challenge with New Timing Solution for the Telecom and Data Center Markets

Coupled with Epson's VCXO, IDT's New Clock Jitter Attenuator and Frequency Synthesizer Product Supports 40/100/400 Gbps Ethernet PHY and Other High-Performance Applications

SAN JOSE, CALIFORNIA--(Marketwired - April 17, 2017) - Integrated Device Technology, Inc. (IDT(R)) (NASDAQ:IDTI) and Seiko Epson Corporation (TSE:6724) ("Epson") the world leader in Quartz crystal technology(1) today introduced an ultra-high performance timing solution addressing the phase noise challenges in telecommunication and data center applications. IDT's new 8V19N474 jitter attenuator and frequency synthesizer is coupled with Epson's VG-4513 high-performance voltage-controlled crystal oscillator (VCXO) to provide best-in-class phase noise performance for highly stringent applications, such as 40/100/400 Gbps Ethernet timing.

(1) #1 market share in crystals & oscillators according to CS&A 2015 market report.

The new 8V19N474 jitter attenuator and frequency synthesizer boasts an ultra-low RMS phase noise of 75 femtoseconds; this level of performance hands the system designers the clocking requirement to transition from 28 Gbps to Ethernet interfaces using 56G PAM4 (TX) PHYs and other high-performance SerDes applications with ample timing margin.

IDT's 8V19N474 generates up to 12 reference clock signals and outputs multiple high-performance synchronized clocks, making it ideal for Ethernet and OTN (OTU3, OTU4) in complex applications as well as driving ADC/DAC converters, cable TV head-end, and DOCSIS 3.1 applications. For wired communications, the solution enables compliance with physical layer specifications of phase noise, bit error rate, and signal-to-noise ratio without the need for external filtering. The integrated low drop out regulator lends a BOM savings by allowing the usage of an economical and inexpensive DC/DC voltage supply.

Epson's VG-4513 VCXO is an essential and proven component in this solution. Using an HFF (high-frequency fundamental) crystal, Epson's VG-4513 VCXO achieves very low close-in phase noise. The integrated VCO in IDT's 8V19N474 provides exceptional phase noise at higher offset frequencies.

"IDT's work with Epson underscores our commitment to delivering the timing technology needed for today's most advanced designs," said Kris Rausch, general manager of IDT's Timing Products Division. "Our joint solution can be a significant help to engineers working on highest line rate Ethernet applications requiring best-in-class data transmission."

"Epson is committed to developing network timing technology," said Masayuki Kitamura, chief operating officer of Epson's Microdevice Operations Division. "The very low phase noise of our VCXOs enables high-speed electrical interfaces, optical modules, and base stations. Our collaboration with IDT has created several reference designs serving a wide range of networking applications including Synchronous Ethernet, IEEE-1588, datacenter and carrier infrastructure, and RF converters for base stations."

IDT's 8V19N474 offers a wide output frequency range from 25 MHz to 2500 MHz, including 125 and 156.25MHz and LVDS and LVPECL outputs with adjustable amplitudes. IDT's 8V19N474 is available now and comes in an 8 x 8 mm 81-CABGA package. Epson's VG-4513 is available now and comes in a 7 mm x 5 mm x 1.6 mm or a 5 mm x 3.2 mm x 1.3 mm ceramic package.

About IDT

Integrated Device Technology, Inc. develops system-level solutions that optimize its customers' applications. IDT's market-leading products in RF, real-time interconnect, wireless power transfer, serial switching, interfaces, automotive ASICs, battery management ICs, sensor signal conditioner ICs and environmental 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(R) under the symbol "IDTI." Additional information about IDT can be found at www.IDT.com. Follow IDT on Facebook, LinkedIn, Twitter, YouTube and Google+.

About Epson

Epson is a global technology leader dedicated to connecting people, things and information with its original efficient, compact and precision technologies. With a lineup that ranges from inkjet printers and digital printing systems to 3LCD projectors, smart glasses, sensing systems and industrial robots, the company is focused on driving innovations and exceeding customer expectations in inkjet, visual communications, wearables and robotics. Led by the Japan-based Seiko Epson Corporation, the Epson Group comprises more than 73,000 employees in 91 companies around the world, and is proud of its contributions to the communities in which it operates and its ongoing efforts to reduce environmental impacts. <http://global.epson.com/>

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