

NTT Electronics ships industry's first 20nm low-power coherent DSP

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NLD0640 LP-DSP

NTT Electronics (NEL), a leading supplier of coherent Digital Signal Processor (DSP) solutions to system and module manufacturers worldwide, announced shipment of industry's first 20nm 100G Long-haul/Metro coherent DSP to customers. Substantial reductions in size and power consumption of the new Low Power DSP (LP-DSP) enhance scalability and flexibility of cost-effective 100-Gbps long-haul and metropolitan networks.

The new 100G LP-DSP product NLD0640 has three-chip functions successfully integrated into a single chip consuming 70% less [power](#) and

footprint as compared to the previous generation 40nm DSP product NLD0629, which additionally required OTN Framer and transmitter MUX chips to achieve the same functionality. This is an important milestone for the industry made possible by NEL's ongoing collaboration with Broadcom Corporation (NASDAQ: BRCM). The new chip leverages Broadcom's industry leading 20nm signal-processing-enhanced mixed-signal technology and integrates the DSP core of the widely deployed NLD0629.

The new LP-DSP provides full coverage of operation modes; the lowest power 80km ZR mode, the power-managed metro mode for distances up to 1200km, and the full function long-haul mode for reaches over-2000km. The LP-DSP with less than 20W power dissipation enables smaller size second generation coherent 100G modules, including a family of C Form-factor Pluggable (CFP) and CFP2 analog coherent optics (ACO) modules.

"We are strongly committed to pioneering innovation in the coherent DSP market through our robust partnership with Broadcom." said Haruhiko Ichino, NEL Executive Vice President and General Manager of Broadband System & Device Business Group. "Our novel LP-DSP has already been shipped to over ten customers, who are designing their product families. We look forward to deployment of our product in early 2015 thereby providing value to the end customers by maximizing the number of 100G ports per system."

"The combination of industry-leading coherent DSP technology and Broadcom's industry leading 20nm signal-processing-enhanced mixed-signal technologies provides a compelling solution for the next generation LH and metro coherent platforms," said Lorenzo Longo, Broadcom Vice President and General Manager of Physical Layer Products (PLP). "We are excited to see our collaboration with NEL enabling economies of scale for mass deployment of 100G in metro and

long-haul networks."

The NLD0640 LP-DSP is sampling now with production volume slated for 1Q 2015.

Provided by NTT Electronics

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