NEWS RELEASE

NEC

New Optical Receiver Modules for High-Speed Networks Offer Industry's Highest Heat Tolerance and Best-in-Class Sensitivity Ratings for 10Gbps Networks

KAWASAKI, Japan, and DUESSELDORF, Germany, February 28, 2005 — NEC Compound Semiconductor Devices, Ltd. and NEC Electronics today introduced the NR3312 and NR4210 series of receiver optical sub-assembly (ROSA) modules used in 10 gigabit per second (Gbps) optical transceivers, which play an important role in high-speed metropolitan access networks (MANs) and local area network (LANs). The NR3312 series is capable of operating in temperatures between -5 and +100 degrees Celsius, the highest heat tolerance for 10Gbps optical modules in the industry.

"As network systems increase in complexity and density, transceivers become more tightly packed together in network equipment, generating heat and resulting in environments with higher operating temperatures," said Masayuki Yamaguchi, department manager, 1st Optical Semiconductor Department, NEC Compound Semiconductor Devices. "Our latest series of optical modules were optimized for these harsh environments, and we believe this will make a significant contribution to advanced 10Gbps networks."

The NR3312 series of cost-efficient PIN-type ROSAs features operating temperatures up to 100 degrees Celsius, a 15-degree improvement over the previous NR3311 series. The PIN detector's applied voltage was reduced from +5.0 volts down to +3.3 volts, matching the applied voltage of the transimpedance amplifier and enabling the module to be used with just a single power supply source.

The NR4210 series of highly sensitive APD-type ROSAs features efficient conversion of optical signals to electronic signals, and is optimized for high speed performance. The series achieves best-in-class sensitivity ratings of -28 decibel milliwatts (dBm), a 3-decibel improvement compared to the previous NR4720MU series, promoting excellent signal integrity.

The NR3312 and NR4210 series support 10Gbps XENPAK, XPAK, and X2 transceivers with SC interfaces, as well as the industry's smallest XFP transceivers with LC interfaces. Both series also support flexible printed circuit boards.

The NR3312 and NR4210 series of optical modules and related products will be

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exhibited from March 8 at the Optical Fiber Communication Conference and Exhibition in Anaheim, California, in booth # 2249.

Availability

Mass production of the NR3312 is expected to begin in July 2005. Samples of the NR4210 series are available now, and mass production is expected to begin in August 2005. Combined production for the two series is expected to reach 200,000 units in two years. Availability is subject to change.

For product specifications, please refer to the attachment.

Notes:
1. XENPAK, XPAK, X2
XENPAK transceivers operate in compliance with the 10 Gigabit Attachment Unit Interface (XAUI), an IEEE802.3-compliant interface specification for Ethernet with a data transmission rate of 10 Gbps. XPAK and X2 specifications are based on XENPAK, but are slightly smaller in size. All three transceiver types use an SC connector.

2. XFP
XFP supports 10 Gbps and is the smallest type of SFP transceiver. XFP employs a serial interface (XFI) instead of the XAUI interface, and uses an LC connector.

About NEC Compound Semiconductor Devices, Ltd.

NEC Compound Semiconductor Devices, Ltd. (NEC Compound Semiconductor Devices) is a leading provider of optical and microwave devices, committed to meeting the specialized needs of its customers in the broadband and mobile networking fields with its compound and silicon semiconductor technologies. NEC Compound Semiconductor Devices was divided from NEC Corporation and established in October 2001, and now a subsidiary of NEC Electronics Corporation. For further information, please visit the home page at: http://www.ncsd.necel.com/.

About NEC Electronics

NEC Electronics Corporation (TSE: 6723) specializes in semiconductor products encompassing advanced technology solutions for the high-end computing and broadband networking markets, system solutions for the mobile handset, PC peripherals, automotive and digital consumer markets, and platform solutions for a wide range of customer applications. NEC Electronics Corporation has 26 subsidiaries worldwide including NEC Electronics America, Inc. (www.necelam.com) and NEC Electronics (Europe) GmbH (www.ee.nec.de). For additional information about NEC Electronics worldwide, visit www.necel.com.

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