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## **Luxtera Leads the Silicon Photonics Race with the Industry's First Single-Chip Dual XFP Transceiver Technology**

*--- Delivers economically feasible fiber-to-the-chip connectivity ---*

**Carlsbad, Calif. August 22, 2006** – Luxtera Inc., a leading innovator in CMOS photonics, today announced the industry's first single-chip integrated photonics-electronics device implemented in a standard CMOS process. Luxtera's breakthrough technology integrates high-performance optics and mainstream electronics on a single die, bringing fiber connectivity directly to the chip. Fabrication in a standard, high volume 0.13 micron SOI CMOS process makes fiber optics feasible and economical for everyday life. Additional digital logic can be integrated into the same chip with optical devices, further reducing overall solution size, power consumption and cost.

Luxtera is currently sampling prototype devices for preliminary testing by strategic development partners. The technology incorporates two lasers and photodetectors mounted directly on a monolithic CMOS die that also includes all logic equivalent to two complete XFP modules including TransImpedance Amplifiers (TIA), Mach-Zehnder modulators, as well as transmit and receive Clock and Data Recovery (CDR) circuits. This complete single chip solution is one-quarter the size of existing XFP module solutions.

The company will launch a commercial transceiver product line based on this underlying technology early in 2007. Initial product offerings will consist of multi-port transceivers for communications, storage, and computing applications. Additionally, Luxtera is currently working with customers to develop new applications for CMOS Photonics.

The first commercial application is expected to be high speed, high bandwidth enterprise data communications. Driven by the high bandwidth capabilities of new multi-core, high performance processors, the need for low cost, low latency and low power 10G, and faster interconnects is here. CMOS Photonics technology will enable the widespread adoption of 10G interconnects, which today are very expensive to deploy, by driving the cost of 10G optical ports to well below \$100.

“The potential impact on the industry of combining photonic and electronic elements on a single CMOS die is substantial,” said Lawrence Gasman, president of CIR. “Many applications, including those in the cost sensitive consumer markets, will benefit from the improvements in cost, power consumption and size.”

As a result of Luxtera's technology, the cost of optical interfaces are reaching those of copper with the added benefits of lower power, lower latency, smaller footprint, longer reach and less expensive cabling. For complete link solutions, the technology provides

7X power reduction, 40X reach, 100X lower latency with scalability to 1000X the bandwidth of 10GBASE-T.

Industry information indicates Luxtera is years ahead of the competition. “This technology is the future of optical interfaces,” said Marek Tlalka, vice president of marketing at Luxtera. “Traditional discrete optical solutions are bulky and costly. Emerging 10G copper interfaces are also bulky, power hungry and extremely limited in their reach. Our advanced developments eliminate these constraints to commercialization and, for the first time, render fiber optic performance at costs associated with copper interfaces a reality.”

#### **About Luxtera**

Luxtera, Inc. is focused on fulfilling the insatiable demand for bandwidth by uniting the benefits of optical communication technology with the low-cost, high-volume advantages of CMOS fabrication. Luxtera was founded in 2001 by a team of industry-renown researchers and technology managers drawn from the communication and semiconductors industries. Luxtera is funded by leading venture capitalists and has partnerships with a number of the leading computer and communications companies. Luxtera is headquartered in Carlsbad, California. More information on Luxtera can be found on the company's web site: [www.luxtera.com](http://www.luxtera.com).

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