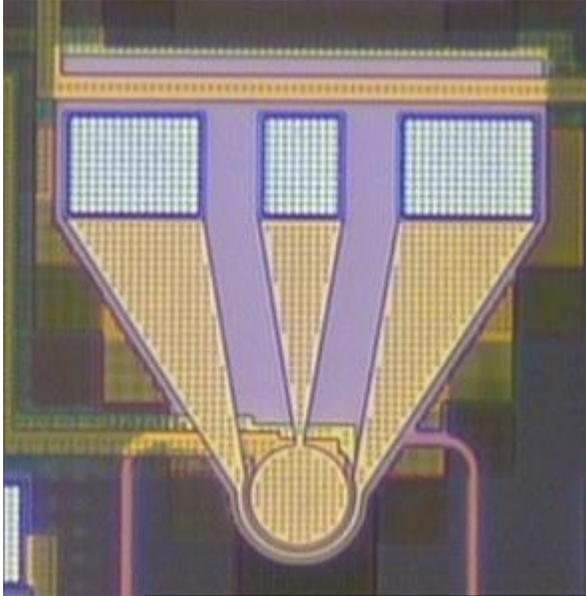




## **Luxtera Inc. Announces World's First 10Gbit CMOS Optical Ring Modulator; Ground-Breaking Technology Delivers Affordable Integration of High-Speed Optical Interfaces in High-Volume CMOS Chips**



Luxtera's 10 gigabit per second optical CMOS ring modulator has a radius of only 30 microns making it more than 1000 smaller than the previous world record CMOS 10Gbit/s MZI modulator. The ring modulator can be used to build CMOS optical transceivers from 10Gbit/s that will eventually scale to 100Gbit/s and even 1 Terabit using DWDM. The area of silicon used is 100 times smaller than the area used in electrical interfaces with the same bandwidth and reach, at a fraction of the power. The Luxtera transceivers can send and receive data on optical fibers at a distance of 2Km. (Photo: Business Wire)

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CARLSBAD, Calif.--([BUSINESS WIRE](#))--Aug. 15, 2005--Luxtera Inc., a fabless semiconductor company and the world leader in silicon photonics, announced today that it has solved the longstanding problem of building ultra-high-density optical modulators into mass-produced silicon chips. For the first time, it is possible to manufacture optical modulators much smaller than electrical drivers with an equivalent data-rate using an industry-standard CMOS fabrication process.

The new Luxtera Ring Modulator delivers more than 10 gigabits per second (Gbit/s) of bandwidth with a radius of only 30 microns. Multiple modulators can be integrated in a single optical interface, making 100Gbit/s and 1 terabit per second (Tbit/s) achievable in the foreseeable future. The modulators will be integrated with standard digital circuitry. Luxtera CMOS Photonics(TM) will give computer and communications OEMs the performance benefits of optical-fiber communications, delivered with the economics of silicon.

“With Luxtera's CMOS Photonics technology, we are now starting to envision performance levels that were unimaginable a couple of years ago. There are some exciting possibilities for future systems design.”

"This development of the world's first ring modulator in CMOS is a fantastic milestone for Luxtera and for our partners," said Alex Dickinson, co-founder and CEO of Luxtera. "We have reached a point that



was considered impossible -- where optical interfaces can be faster and much smaller than their electrical counterparts while preserving the economy of silicon. At speeds of 10Gbit/s or higher, system designers must now focus on optical interconnect or risk falling behind the competition by limiting their interconnect choice to copper."

Luxtera's CMOS Photonics technology delivers the optical modulation required for practical high-speed optical fiber communication and the small dimensions required by future chip designers. Luxtera chips are built in the same CMOS process that Luxtera's development partner, Freescale Semiconductor (NYSE:FSL, FSLB), uses for mass producing their leading-edge PowerPC(TM) based microprocessors. The integration of dense, high-speed photonics into regular silicon processes is a highly significant event for both the semiconductor and optics industries.

"This achievement came much earlier than expected, signaling how far ahead our technology is," said Cary Gunn, co-founder and vice president of technology for Luxtera. "We are seeing a revolution in the making, with all the problems of electrical connectivity going away. We have a new method that will deliver better performances for decades."

"Microprocessor interfaces struggled for years to make small incremental steps in speed," says Kevin Krewell, editor-in-chief of In-Stat's Microprocessor Report. "Luxtera has an exciting technology that could eventually bring extremely high-bandwidth optical connectivity directly into the CPU, and do so in a cost- and silicon-efficient manner."

"The ability to link components with huge bandwidth and low latency has always been a grand challenge for computer designers," says Ashok Krishnamoorthy, distinguished engineer at Sun Microsystems. "With Luxtera's CMOS Photonics technology, we are now starting to envision performance levels that were unimaginable a couple of years ago. There are some exciting possibilities for future systems design."

#### About Luxtera Inc.

Luxtera, Inc., a fabless semiconductor company and the world leader in silicon photonics, is focused on fulfilling the insatiable demand for bandwidth by uniting the communications performances of optical communication technology with the low-cost, high-volume advantages of CMOS semiconductors. The company was founded in 2001 by a team of industry-renowned researchers and technology managers drawn from the communications and semiconductor industries. Luxtera is funded by leading venture capitalists: Sevin Rosen Funds, August Capital, and New Enterprise Associates. Luxtera will announce product details in 2005 and ship the products in 2006. Luxtera is headquartered in Carlsbad, CA. More information about Luxtera can be found on the company's web site: [www.luxtera.com](http://www.luxtera.com).

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