



## Luxtera Announces Production Status of World's First Commercial Silicon CMOS Photonics Fabrication Process

*Luxtera is collaborating with Freescale Semiconductor to enable high volume manufacturing of monolithic Electro-Photonic Integrated Circuits – bringing CMOS Photonics to mainstream markets*

**Carlsbad, Calif. – June 3, 2009** – Luxtera, the worldwide leader in Silicon [CMOS Photonics](#), today announced its collaboration with [Freescale Semiconductor](#) as its foundry source to achieve production of the world's first commercial Silicon CMOS Photonics semiconductor manufacturing process. For a number of years, the companies collaborated on enhancing Freescale's SOI CMOS semiconductor fabrication process, at its Austin, Texas manufacturing facility, to add photonic circuit capabilities to an existing 130nm electronics manufacturing process. This new photonicly enabled CMOS fabrication process enables development and manufacturing of low cost Electro-Photonic Integrated Circuits (EPIC) bringing CMOS Photonics to mainstream markets ahead of competition. Silicon CMOS Photonics is widely recognized as the key enabler of the next-generation of data-networking, computer, multi-core processor, and consumer electronics products.

Silicon CMOS Photonics technology enables design and manufacturing of optics and electronics on a single CMOS die. This process combines standard transistors for digital and analogue electronic circuitry with passive nano-photonic optical structures, as well as monolithic integration of active photonic device elements and enables direct fiber-to-the-chip attachments. The new fabrication process allows the production of integrated single chip transceivers for a multitude of applications. These CMOS Photonic transceivers offer better performance, increased reliability, and reduced power consumption of opto-electronic circuits at a fraction of the cost of traditional optical assemblies.

“By enabling the production process of Silicon CMOS Photonics devices, we are showcasing our forward thinking in advanced semiconductor manufacturing,” said Vivek Mohindra, senior vice president of strategy and business transformation of Freescale. “Luxtera is an industry leader in the development of optical CMOS technology. Collaborating with Luxtera, we have become the first fabrication facility to enable the manufacturing of optics and electronics on a single CMOS chip and meet the high volume, low cost application needs of the communication and consumer markets. We are ahead of the competition by achieving the production status and shipping of commercial Silicon CMOS Photonics products based on this process.”

“Luxtera has pushed the forefront of the technology and is recognized as the world leader in the field of Silicon CMOS Photonics. By achieving volume production status in Freescale's commercial foundry, we have now demonstrated that CMOS Photonics has emerged from research and is now fully ready for mainstream commercial adoption,” said Greg Young, president and CEO of Luxtera. “A key element of our technology is that we enable both optical and electronic circuits on a common mainstream CMOS



process, which is the industry's first. Our Silicon CMOS Photonics technology platform provides us with unprecedented levels of cost, performance, power and reliability in optical systems from gigabits to terabits of data.”

Luxtera is currently applying this process technology to deliver low cost opto-electronic transceiver products for a number of high performance computing, data communications, and consumer electronics markets. The adaptation of Luxtera's technology by Freescale demonstrates the company's flexibility to customize its manufacturing processes to applications that have large market potential for growth. Luxtera is also involved with projects funded by the Defense Advanced Research Projects Agency's ([DARPA](#)) program to develop next-generation [optical interconnects](#) to produce chip-to-chip and intra-chip interconnect technology for high performance computing systems.

Freescale is a world leader in advanced semiconductor technology and its Foundry Services Operation, headquartered in Austin, Texas, offers 200mm development and manufacturing services for a variety of differentiating semiconductor technologies. Foundry Services information is available at [www.freescale.com/foundry](http://www.freescale.com/foundry). Companies interested in foundry services should contact Freescale at FoundryServices@freescale.com

Companies interested in the purchase or design of opto-electronic CMOS products should contact Luxtera at (760) 448-3520.

**About Luxtera:**

Luxtera, Inc. is the world leader in Silicon CMOS Photonics. Its mission is to fulfill the world's insatiable demand for bandwidth by uniting the high performance of fiber-optic communications with the low cost and high volume manufacturing advantages of mainstream Silicon CMOS fabrication. Headquartered in Carlsbad, California, Luxtera is a fabless semiconductor company that was founded in 2001 by a team of industry-renowned researchers and technology managers drawn from the communications and semiconductor industries. Luxtera has received funding from leading venture capitalists including August Capital, New Enterprise Associates, Sevin Rosen Funds and Lux Capital. More information can be found on the company's web site: [www.luxtera.com](http://www.luxtera.com).

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