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For Immediate Release

Banpil awarded milestone 35 patents through 2012: Image Sensors, Photovoltaics, and Interconnects patent portfolio available to license

SANTA CLARA, California, January 15, 2013 -- Banpil Photonics, Inc., a leading company expanding the boundaries of optics and electronics through innovations, today announced that it has achieved a milestone of 35 patents awarded in its portfolio following another record-making year in 2012. Banpil's innovations represented in its impressive IP portfolio include technologies for high-sensitivity & high dynamic range Multispectral Image Sensors, high-efficiency Photovoltaic (PV or solar) cells, and low-power high-speed Interconnects. Banpil holds more than 80 issued or pending patents in its entire portfolio.

Among the latest Banpil patents include three for multispectral image sensor devices, three for significantly high-efficiency photovoltaic cells, and two for ultra-high-speed optical interconnects. These additions increase the multispectral image sensor portfolio to more than 10 patents including nano-enabled platform technologies common to image sensors and PV devices, which make it possible not only to see from visible into infrared spectrums with an uncooled monolithic imager, but also for the first time makes it possible to include energy generation in the same integrated device. This unique capability opens the door for sophisticated applications that can perform 24/7 on independent power sources that optimized the critical balance between size weight, power and cost (SWaP-C) in both commercial and defense applications. Banpil's high-sensitivity and high dynamic range image sensors also have applications such as automobile sensors for total driver vision in day and night, machine vision for quality control applications, and medical imaging.

The Banpil PV IP portfolio has grown to include more than 6 patents with nano-enabled hybrid PV cell capabilities to raise conversion efficiency to over 80%, and generating over two orders of magnitude of power per unit area compared to conventional PVs. With the additional capability to make the PV on a variety of materials including semiconductor, glass, plastics, or metallic substrate, which may not be desirable for the traditional solar equipment, for example all kinds of building surfaces exposed to the sun. Self-powered or energy generating buildings and homes will become a reality without interfering with aesthetics that limit solar deployments today, and all this at high energy efficiency, making it viable for scalable commercial applications in renewable energy.

The Banpil Interconnect IP portfolio, which encapsulates its high-speed interconnects platform technology, is by far the most advanced available today. It now totals over 21 patents in the company's overall interconnects patent portfolio, which addresses the bottleneck between signal conversion between optics and electrical components to accommodate both in current and future high-speed systems requirements.

Banpil has already demonstrated the implementation and superior performance of its patented interconnect technology including its ability to achieve more than 100 Gb/s in over 1-meter long rigid FR4 printed circuit board (PCB) with electrical (metallic) interconnects. Banpil's metallic interconnects make it possible to increase signal-carrying capacity by more than 6 times over conventional solutions, while significantly reducing power consumption by more than 90%. Scaled to data center terms, this means a 50,000-square-foot data center which uses

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approximately 4 Megawatts of power would require less than 400 kilowatts to directly power its server farms by implementing Banpil interconnects. This is a timely achievement when energy conservation and environmental awareness is becoming a factor that companies need to pay attention to along with the benefits technologies deliver to society.

"We are extremely pleased and proud to achieve this milestone in our IP portfolio. We have already shown the significant performance enhancements and benefits to customers that our technologies are capable of providing," said Dr. Achyut Dutta, Banpil's CEO. "The patents issuance and addition to our portfolio will allows us to now more readily work with other technology companies in joint R&D to develop next generation applications or to license our patent portfolio for their own application product development."

Examples of next-generation applications that require high-speed include real-time gaming on high-performance consoles over the Internet, next-generation smart phones or other handheld devices capable of on-demand video and ultra-high broadband connectivity, and ultra-High Definition TVs (HDTVs) that are slim and compact. The need for high-speed interconnects goes hand-in-hand with the need for higher speeds of data transfer in supercomputers and other computer systems that process large amounts of information in high-performance computing, and networking equipment.

Banpil has made sample-level products available for demonstration. The company welcomes opportunities to work with system vendors to explore new or enhanced applications, technology licensing, strategic manufacturing partnerships as well as investors.

About Banpil Photonics, Inc.
Banpil Photonics is expanding the boundaries of optics and electronics through innovations. Banpil develops and manufactures next generation multispectral image sensors for automotive & medical imaging systems, security & surveillance, and machine vision applications; high-efficiency energy harvesting devices for energy applications; and low-power, high-speed electrical interconnects for chip-to-chip, chip-to-board, board-to-board, and rack-to-rack applications in high-performance computing and networking. The company has an extensive IP portfolio of these innovations available for licensing. For more information, visit www.banpil.com.

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