



## NEWS RELEASE

**CONTACT:** Investor Relations  
Irvine Sensors Corporation  
714-444-8718  
[investorrelations@irvine-sensors.com](mailto:investorrelations@irvine-sensors.com)

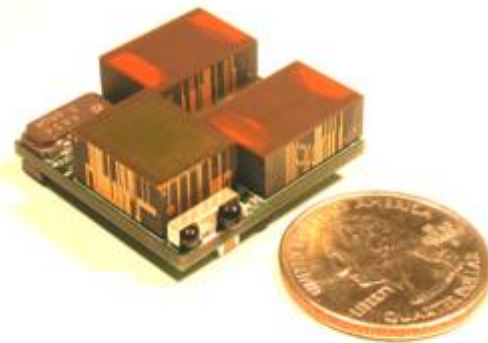
### IRVINE SENSORS ANNOUNCES HIGH SPEED STACKING AND NEW PATENT COVERAGE

FOR IMMEDIATE RELEASE

COSTA MESA, CALIFORNIA -- March 6, 2007 -- Irvine Sensors Corporation (NASDAQ: IRSN, Boston Stock Exchange: ISC) announced today that it has successfully demonstrated stacking of four 500 megahertz DDR memory chips without degradation of the chips' operating speed. The Company's demonstration has been verified by the manufacturer of the chips. The Company believes that its demonstration may be an industry-first, since 3-dimensional packaging approaches used by other companies are known to introduce parasitic effects that substantially degrade the speed performance of DDR chips, when stacked. Overcoming this limitation offers new possibilities for packaging of these widely-used memory devices. The Company is actively exploring commercial exploitation of its latest demonstration. Parties interested in discussing such commercialization are urged to contact Keith Gann, Director of 3-D Electronics at [kgann@irvine-sensors.com](mailto:kgann@irvine-sensors.com).

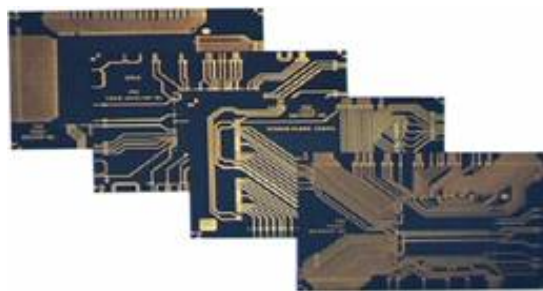
Irvine Sensors achieved its successful demonstration through adaptation of proprietary stacking technologies derived from its long history of developing cognitive vision systems, which require extremely compact and high-speed electronic packaging. Irvine Sensors has an extensive patent portfolio covering these technologies, which has been recently been augmented by several new patent awards and notices of awards. The latest additions to the company's 3D electronics patented intellectual property are: *Method For Making A Neo-Layer Comprising Embedded Discrete Components* (Notice of Allowance received, patent to be issued), *Method Of Fabricating Known Good Dies From Packaged Integrated Circuits* (U.S. Pat. No. 7,174,627), *Process Of Manufacturing A Multilayer Module* (U.S. Pat. No. 7,127,807), and *Three-Dimensional Imaging Processing Module Incorporating Stacked Layers Containing Microelectronic Circuits* (U.S. Pat. No. 7,180,579).

The noticed Neo-Layer™ patent covers technologies that enable the assembly of entire systems in a cube. This is a much more challenging objective than the stacking of identical integrated circuit chips, usually memory, into homogeneous packages. Neo-Layers look like identical chips when they go into a stack, but really contain a host of different size chips and passive components allowing all of the electronics in a personal computer, for example, to be stacked in a small number of cubes, as shown below.



### **Computer in a Cube.**

The second new Irvine Sensors patent listed above captures the basic approach of creating the Neo-Layers themselves. The approach addresses a fundamental bane of stacked 3D electronics -- the absence of known good die. Nearly all integrated circuit chips are thoroughly tested prior to integration within a system, hence the term “known good”. No way has yet been developed to perform comparable testing economically at the die or wafer level. As a result, since conventional chip packaging is inexpensive, industry practice is to test and eliminate non-satisfactory die after packaging. This approach becomes economically less attractive for stacked packages, since a single out-of-specification die can ruin an entire stack. Irvine Sensors’ patented Neo-Layer process, on the other hand, involves the modification of an already packaged die that has been tested and shown to be “known-good”. The Irvine Sensors process involves the thinning and rewiring of one or more of these known-good die into an embedded layer, now stackable and chip-like in appearance. This new Irvine Sensors patent covers that approach not only for use in stacked packages, but also when the resulting layer is used in a single chip-on-board product that then also benefits from its known good properties.



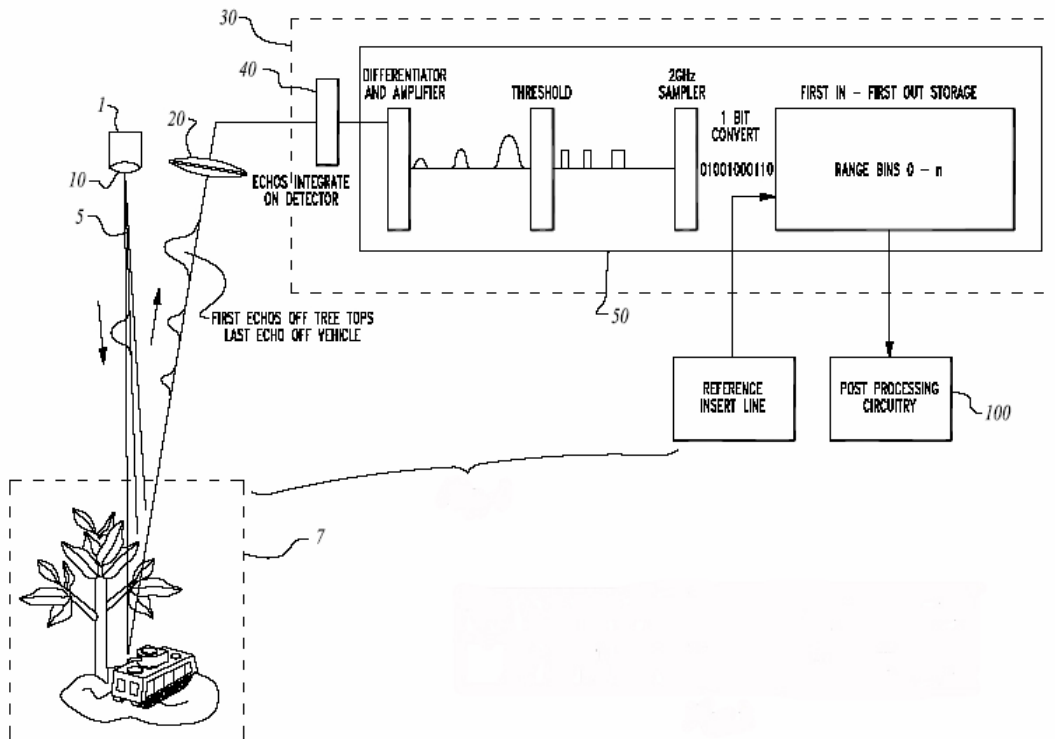
### **Neo Layers.**

The expression “multilayer module” in the title of the third of the new patents listed above could be used to describe any 3D electronics device. Irvine Sensors’ new patent covers a brand new technology that was developed to stack electronic circuits deposited on ultra thin plastic films, such as Kapton®, resulting in very low cost, but extremely dense electronic cubes. An example of such a module is pictured below.



**Multi-Layer Module.**

The expression “three dimensional” in the last of the new Irvine Sensors patents listed above refers to both the electronics and to the signal processor therein that produces a three dimensional image. The application is 3D Imaging in which a reflected laser beam is imaged successively over very short (nano-second) intervals to produce a succession of images at different ranges. This functionality requires 3D electronics that can capture hundred to thousands of these images to provide a full 3D picture of the scene. Potential uses of the patented approach include military, automotive, and security vision systems.



**3D Imaging Using 3D Electronics.**

Irvine Sensors Corporation ([www.irvine-sensors.com](http://www.irvine-sensors.com)), headquartered in Costa Mesa, California, is a vision systems company engaged in the development and sale of miniaturized infrared and electro-optical cameras, image processors and stacked chip assemblies, the manufacture and sale of optical systems and equipment for military applications through its Optex subsidiary and research and development related to high density electronics, miniaturized sensors, optical interconnection technology, high speed network security, image processing and low-power analog and mixed-signal integrated circuits for diverse systems applications.

-----

Kapton is a registered trademark of E. I. du Pont de Nemours and Company.

**Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995:** This message may contain forward-looking statements based on our current expectations, estimates and projections about our industry, management's beliefs, and certain assumptions made by us. Words such as "anticipates," "expects," "intends," "plans," "believes," "seeks," "estimates," "may," "will" and variations of these words or similar expressions are intended to identify forward-looking statements. These statements include, but are not limited to, our ability to commercialize our newly demonstrated DDR stacking technology. Such statements speak only as of the date hereof and are subject to change. We undertake no obligation to revise or update publicly any forward-looking statements for any reason. These statements are not guarantees of future performance and are subject to certain risks, uncertainties and assumptions that are difficult to predict. Therefore, our actual results could differ materially and adversely from those expressed in any forward-looking statements as a result of various factors.

Important factors that may cause such a difference include, but are not limited to, our ability to establish appropriate economic and supply relationships with the manufacturers of DDR chips: our ability to successfully meet potential customers' specifications of stacked DDR chips delivered in volume; the potential market demand for Neo-Layer technologies and products and the general economic and political conditions and specific conditions that may impact potential markets for semiconductor devices. Further information on Irvine Sensors Corporation, including additional risk factors that may affect our forward looking statements, is contained in our Annual Report on Form 10-K, our Quarterly Reports on Form 10-Q, our Current Reports on Form 8-K and our other SEC filings that are available through the SEC's website ([www.sec.gov](http://www.sec.gov)).