



500 Spruce Tree Centre
1600 University Avenue West
St. Paul, Minnesota 55104-3825 USA
651.603.7700 Fax: 651.603.7795
www.imagesensing.com

NEWS RELEASE

**Contacts: Greg Smith, Chief Financial Officer
Image Sensing Systems, Inc. Phone: 651.603.7700**

FOR IMMEDIATE RELEASE

Image Sensing Systems, Inc. Provides Preliminary 2011 First-Quarter Revenue and EPS Results

Saint Paul, Minn., April 20, 2011 – Image Sensing Systems, Inc. (NASDAQ: ISNS), today provided preliminary revenue and earnings per share for its first quarter ended March 31, 2011. The company has not previously provided quarterly guidance, nor does it intend to regularly do so in the future.

Based on preliminary financial information, the company anticipates that revenue for the 2011 first quarter will be in the range of \$5.8 million to \$6.2 million, compared to \$5.4 million in the year-ago period. It also expects a net loss for the first quarter in the range of \$(500,000) to \$(900,000) or \$(0.10) to \$(0.19) per share, compared to net income of \$402,000 or \$0.10 per diluted share in the 2010 first quarter. On a non-GAAP basis, it expects a net loss in the 2011 first quarter of \$(250,000) to \$(650,000) or \$(0.05) to \$(0.14) per share. The non-GAAP results exclude intangible assets amortization net of income taxes, which is estimated at \$250,000 for the first quarter. This compares to non-GAAP earnings of \$529,000 or \$0.13 per diluted share in the year-ago period (excluding \$127,000 of amortization net of tax).

“While these results are below our expectations, as we have previously disclosed, Image Sensing Systems operates in an industry that fluctuates considerably season-to-season and also demonstrates a ‘lumpiness’ on a project-to-project award timing and range of value basis,” said Ken Aubrey, company CEO. “The winter season tends to be a low-demand period, and we witnessed particularly soft demand in the 2011 first quarter across the board in Asia and for the RTMS products. This seasonal hurdle follows our 2010 fourth quarter, which alternatively exhibited beneficial project award timing and range of values. We believe demand will resume to normal levels going forward.

“In addition, we concurrently experienced both planned and unplanned management transitions in our RTMS, Asian and European businesses and were not fully successful in dampening the negative knock-on impacts of these transitions in the face of the simultaneous seasonal downturn. Ultimately, we believe that these management transitions are now in large part behind us and, when fully completed, will prove beneficial going forward.”

Today's Conference Call

Image Sensing Systems will be hosting a conference call later today, April 20, 2011 at 3:30 p.m. Central time to discuss these preliminary results. To join the live call, please dial 1-877-941-9205 in the United States and 1-480-629-9835 outside of the United States and reference conference ID 4435576. If you are unable to participate in the live conference call, you can listen to a replay. The replay option begins at 5:30 p.m. Central time on the date of the call and is available until 5:30 p.m. Central time on April 27, 2011. To listen to the replay, dial 1-800-406-7325 in the United States and 1-303-590-3030 outside of the United States and reference conference ID 4435576.

First Quarter Earnings Conference Call

The results announced today are preliminary and subject to change. The company plans to announce final 2011 first-quarter financial results after the close of the market on May 5, 2011.

About Image Sensing

Image Sensing Systems, Inc. is a provider of software-based detection solutions for the Intelligent Transportation Systems (ITS) sector and adjacent markets including security, police and parking. We have sold more than 120,000 units of our industry leading Autoscope® machine-vision, RTMS® radar and CitySync automatic number plate recognition (ANPR) products in over 60 countries worldwide. The depth of our experience coupled with the breadth of our product portfolio uniquely positions us to provide powerful hybrid technology solutions and to exploit the convergence of the traffic, security and environmental management markets. We are headquartered in St. Paul, Minnesota. Visit us on the web at imagesensing.com.

Safe Harbor Statement: Statements made in this release concerning the Company's or management's intentions, expectations, or predictions about future results or events are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements reflect management's current expectations or beliefs, and are subject to risks and uncertainties that could cause actual results or events to vary from stated expectations, which variations could be material and adverse. Factors that could produce such a variation include, but are not limited to, the following: the inherent unreliability of earnings, revenue and cash flow predictions due to numerous factors, many of which are beyond the Company's control; developments in the demand for the Company's products and services; relationships with the Company's major customers and suppliers; the mix of and margins on the products we sell; unanticipated delays, costs and expenses inherent in the development and marketing of new products and services, including ANPR products; the impact of governmental laws and regulations; increased international presence; our success in integrating acquisitions; the seasonality of the Company's financial results; and competitive factors. Our forward-looking statements speak only as of the time made, and we assume no obligation to publicly update any such statements. Additional information concerning these and other factors that could cause actual results and events to differ materially from the Company's current expectations are contained in the Company's reports and other documents filed with

the Securities and Exchange Commission, including its Annual Report on Form 10-K for the year ended December 31, 2010.

#