

IMAGE SENSING SYSTEMS INC  
Form S-3/A  
November 18, 2009  
Table of Contents

As filed with the Securities and Exchange Commission on November 18, 2009

Registration No. 333- 162810

**U.S. SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

Amendment No. 1 to

**FORM S-3**

**REGISTRATION STATEMENT UNDER  
THE SECURITIES ACT OF 1933**

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**IMAGE SENSING SYSTEMS, INC.**

(Exact Name of Registrant as Specified in Its Charter)

**Minnesota**

(State or Other Jurisdiction of Incorporation or Organization)

**41-1519166**

(I.R.S. Employer Identification No.)

**500 Spruce Tree Centre  
1600 University Avenue West  
St. Paul, Minnesota 55104  
Telephone: (651) 603-7700**

(Address, Including Zip Code, and Telephone Number,  
Including Area Code, of Registrant's Principal Executive Offices)

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**Gregory R. L. Smith  
Chief Financial Officer  
500 Spruce Tree Centre  
1600 University Avenue West  
St. Paul, Minnesota 55104  
Telephone: (651) 603-7700  
Facsimile: (651) 603-7795**

(Name, Address, Including Zip Code, and Telephone Number,  
Including Area Code, of Agent for Service)

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Copies of communications to:  
**Michele D. Vaillancourt**

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Winthrop & Weinstine, P.A.  
 225 South Sixth Street, Suite 3500  
 Minneapolis, Minnesota 55402  
 Telephone: (612) 604-6400  
 Facsimile: (612) 604-6800

Approximate date of commencement of proposed sale to the public: **From time to time after the effective date of this Registration Statement.**

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

**The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until this registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.**

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer  Accelerated filer   
 Non-accelerated filer  Smaller reporting company   
 (Do not check if a smaller reporting company)

**CALCULATION OF REGISTRATION FEE**

Title of Each Class of Securities to Be Registered	Amount to Be Registered	Proposed Maximum Offering Price Per unit	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$.01 par value(4)	(1)	(2)	\$15,000,000(3)	\$837(4)

- (1) There is being registered hereunder such indeterminate number of shares of common stock of Image Sensing Systems, Inc. as shall have an aggregate initial offering price not to exceed \$15,000,000.
- (2) The proposed maximum offering price per share of common stock will be determined from time to time by the registrant in connection with the issuance by the registrant of shares of common stock registered hereunder.
- (3) At no time will the maximum aggregate offering price exceed the amount allowed by General Instruction I.B.6 of the Registration Statement on Form S-3.

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- (4) The registration fee was calculated in accordance with Rule 457(o) under the Securities Act of 1933 based on the maximum aggregate offering price of the shares of common stock listed and was previously paid with the initial filing of the Registration Statement on Form S-3 on November 2, 2009.

### Table of Contents

#### **Explanatory Note**

Image Sensing Systems, Inc. is filing this Pre-Effective Amendment No. 1 to the Registration Statement on Form S-3 (File No. 333-162810) for the purpose of amending the section entitled **Incorporation of Certain Documents By Reference** to incorporate its Quarterly Report on Form 10-Q filed on November 12, 2009 and to include current legal and independent registered public accounting firm consents.

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### Table of Contents

**The information in this prospectus is not complete and may be changed. We may not sell these securities until our registration statement filed with the Securities and Exchange Commission is effective. The prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.**

**SUBJECT TO COMPLETION, DATED NOVEMBER 18, 2009**

### **PROSPECTUS**

## Image Sensing Systems, Inc.

### **Common Stock**

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We may offer and sell from time to time up to \$15,000,000 in the aggregate of shares of our common stock.

We will provide specific terms of the offering of our common stock in supplements to this prospectus for each offering of common stock. Any prospectus supplement may also add, update or change information in this prospectus. This prospectus may not be used to offer or sell shares of our common stock unless accompanied by a prospectus supplement. You should read this prospectus and the applicable prospectus supplement carefully before you invest in our common stock.

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Our common stock is listed on The Nasdaq Capital Market under the symbol ISNS. On November 17, 2009, the closing price of our common stock as quoted on The Nasdaq Capital Market was \$13.75 per share.

We may offer shares of our common stock through underwriting syndicates managed or co-managed by one or more underwriters, dealers or agents or directly to purchasers. The prospectus supplement for each offering of common stock will describe in detail the plan of distribution for that offering. For general information about the distribution of common stock, see Plan of Distribution in this prospectus.

Unless the context otherwise requires, the terms we, our, us, the Company and Image Sensing Systems refer to Image Sensing Systems, Inc. and its consolidated subsidiaries.

**This investment involves risk. See Risk Factors contained in our filings with the Securities and Exchange Commission and any applicable prospectus supplement.**

The aggregate market value of our outstanding common equity held by non-affiliates as of September 18, 2009 was approximately \$46.4 million. We have not issued any securities pursuant to Instruction I.B.6. of the Registration Statement on Form S-3 during the 12 calendar month period that ends on and includes the date hereof.

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**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.**

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The date of this prospectus is \_\_\_\_\_, 2009.

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### TABLE OF CONTENTS

	Page
<a href="#">About This Prospectus</a>	1
<a href="#">Image Sensing Systems, Inc.</a>	2
<a href="#">Risk Factors</a>	3
<a href="#">Special Note Regarding Forward-Looking Statements</a>	3
<a href="#">Incorporation of Certain Documents by Reference</a>	4
<a href="#">Where You Can Find More Information</a>	5
<a href="#">Use of Proceeds</a>	5
<a href="#">Description of Capital Stock</a>	6
<a href="#">Plan of Distribution</a>	9
<a href="#">Legal Matters</a>	10
<a href="#">Experts</a>	10

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[Table of Contents](#)

### ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a shelf registration statement. Under this shelf registration statement, we may, from time to time, sell shares of our common stock in one or more offerings. The aggregate initial offering price of all shares of our common stock sold under this prospectus will not exceed \$15,000,000.

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This prospectus provides you with a general description of our proposed offering of shares of our common stock. Each time we offer shares of our common stock under this prospectus, we will describe in a prospectus supplement, which we will deliver with this prospectus, specific information about the offering. In each prospectus supplement, we will include the following information:

- the public offering price per share of our common stock;
- the names of any underwriters, agents or dealers through or to which the shares of common stock will be sold;
- any compensation of those underwriters, agents or dealers;
- any risk factors applicable to the shares of common stock that we propose to sell; and
- any other material information about the offer and sale of our common stock.

We will file each prospectus supplement with the SEC. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with additional information described under the heading **Where You Can Find More Information** below.

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If you are in a jurisdiction where offers to sell, or solicitations of offers to purchase, the shares of common stock offered by this document are unlawful, or if you are a person to whom it is unlawful to direct these types of activities, then the offer presented in this prospectus does not extend to you.

We have not authorized anyone to give any information or make any representation about us that is different from, or in addition to, that contained in this prospectus, including in any of the materials that we have incorporated by reference into this prospectus, any accompanying prospectus supplement, or any free writing prospectus prepared or authorized by us. Therefore, if anyone does give you information of this sort, you should not rely on it as authorized by us. Neither the delivery of this prospectus, nor any sale made hereunder, shall under any circumstances create any implication that there has been no change in our affairs since the date hereof or that the information incorporated by reference herein is correct as of any time after the date of such information.

### Table of Contents

## **IMAGE SENSING SYSTEMS, INC.**

We are the leading provider of software-based computer enabled detection, or CED, products and solutions for the intelligent transportation systems, or ITS, industry. Our family of products, which we market as Autoscope® and RTMS®, provides end users with the tools needed to optimize traffic flow, enhance driver safety, regulate air quality and address emerging security/surveillance concerns. Our technology analyzes signals from sophisticated sensors and transmits the information to management systems and controllers or directly to users.

CED is a process in which software rather than humans examines outputs from various types of sophisticated sensors to determine what is happening in a field of view. In the ITS industry, CED is a critical component of managing congestion and traffic flow. In many markets, it is not possible to build roads, bridges and highways quickly enough to accommodate increasing automobile ownership. For example, in 2007 there were approximately 3.0 million vehicles in Moscow, and the number of vehicles is expected to increase by 50% to 4.5 million vehicles by 2012. In China, 9.4 million new vehicles were introduced in 2008, with this annual figure expected to increase to 16.3 million new vehicles in 2014. We believe this growing use of vehicles worldwide will make CED-based ITS solutions increasingly necessary to complement existing and new roadway infrastructure to manage traffic flow and optimize throughput.

We believe our CED solutions are technically superior to those of our competitors because they have a higher level of accuracy, limit the occurrence of false detection, are generally easier to install with lower costs of ownership, work effectively in a multitude of light and weather conditions, and provide end users the ability to manage inputs from a variety of sensors for a number of tasks. It is our view that the technical advantages of our products make our solutions ideally suited for use in ITS as well as adjacent markets. We believe that the market for CED is increasingly favoring converged solutions that include ITS, security/surveillance and environmental management, which we expect to increase demand for CED products such as ours.

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We believe the strength of our distribution channels positions us to increase the penetration of our technology-driven solutions in the marketplace. We market our Autoscope products in North America, the Caribbean and Latin America through an exclusive agreement with Econolite Control Products, Inc., or Econolite, which we believe is the leading distributor of ITS intersection control products in North America and the Caribbean. We market our Autoscope products outside of North America, the Caribbean and Latin America and our RTMS products through a combination of distribution and direct sales channels, including our wholly-owned subsidiaries in Hong Kong, Poland and the United Kingdom. Our end users primarily include governmental agencies and municipalities, and, as of December 31, 2008, we had sold over 100,000 instances in more than 60 countries.

In December 2007, we completed our purchase of certain assets of EIS Electronic Integrated Systems, Inc., or EIS. EIS was a leading provider of radar-based detection solutions. In addition to the increased scale we gained through the EIS asset purchase, the addition of EIS RTMS radar products enables us to provide a wider array of CED products to our end users and support the introduction of hybrid product offerings to help drive market demand. We operate the EIS asset purchase business through ISS Image Sensing Systems Canada Ltd., our wholly-owned subsidiary in Toronto, Ontario, Canada.

We were incorporated under Minnesota law in December 1984. Our executive offices are located at 500 Spruce Tree Centre, 1600 University Avenue West, St. Paul, Minnesota 55104. Our telephone number is (651) 603-7700. Our website is [www.imagesensing.com](http://www.imagesensing.com). The information contained on our website is not a part of this prospectus. We have included our website address in this prospectus as an inactive textual reference only.

2

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### Table of Contents

## **RISK FACTORS**

An investment in our common stock involves a high degree of risk. You should carefully consider the risk factors under the heading "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2008, which is on file with the SEC and is incorporated into this prospectus by reference. If any of these risks related to our business actually occurs, our business, financial condition and operating results would be adversely affected. The market price of our common stock could decline due to any of these risks and uncertainties related to our business, or related to an investment in our common stock, and you may lose part or all of your investment.

Those risk factors are not exhaustive. Other sections of this prospectus, any prospectus supplement and the documents incorporated by reference may include additional factors which could adversely affect our business and financial performance. Moreover, we operate in a very competitive and rapidly changing environment. New risk factors emerge from time to time, and it is not possible for our management to predict all risk factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. In evaluating our business, prospective investors should carefully consider the risk factors in addition to the other information included or incorporated by reference in this prospectus.

## **SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This prospectus contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 that involve risks and uncertainties. In some cases, you can identify forward-looking statements by the words anticipate, believe, continue, could, estimate, expect, intend, may, ongoing, plan, potential, predict, project, negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results or our industry's actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. Forward-looking statements are only predictions and are not guarantees of performance. These statements are based on our management's beliefs and assumptions, which in turn are based on currently available information.

These important factors include those described in our SEC filings and any prospectus supplement. You should read these risk factors and the other cautionary statements made in this prospectus as being applicable to all related forward-looking statements wherever they appear in this prospectus and any prospectus supplement. We cannot assure you that the forward-looking statements in this prospectus and any prospectus supplement will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. You should read this prospectus and any prospectus supplement completely. Other than as required by law, we undertake no obligation to update these forward-looking statements, even though our situation may change in the future.

3

Table of Contents

**INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE**

The SEC allows us to incorporate by reference into this prospectus the information we file with the SEC. This means that we can disclose important information about us and our financial condition to you by referring you to those documents we filed separately with the SEC. The information incorporated by reference is considered to be part of this prospectus, and information that we file with the SEC after the date of this prospectus will automatically update and may supersede this information. We are incorporating by reference into this prospectus the documents described below which we have previously filed with the SEC:

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2008;

Our Proxy Statement dated April 27, 2009;

Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2009;

Our Quarterly Report on Form 10-Q for the quarter ended June 30, 2009;

Our Quarterly Report on Form 10-Q for the quarter ended September 30, 2009;

Our Current Reports on Form 8-K filed on January 9, 2009 and March 19, 2009; and

The description of our common stock contained in our Registration Statement on Form 8-A dated May 10, 1995 as filed with the SEC, including any amendments or reports filed for the purpose of updating that description.

In addition, all documents we file under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus and before the termination of the offering are also incorporated by reference and are an important part of this prospectus. Nothing in this prospectus shall be deemed to incorporate information that we furnished to but did not file with the SEC.

Any statement contained in a document incorporated by reference in this prospectus shall be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or in any other subsequently filed document which is incorporated by reference modifies or supersedes such statement.

We will provide without charge to each person to whom this prospectus is delivered, upon written or oral request, a copy of any or all documents that have been or may be incorporated by reference in the prospectus (other than exhibits to such documents that are not specifically incorporated by reference into such documents). Your requests should be directed to our Chief Financial Officer at our principal executive offices at:

500 Spruce Tree Centre  
1600 University Avenue West  
St. Paul, Minnesota 55104  
Telephone number: (651) 603-7700

Table of Contents

**WHERE YOU CAN FIND MORE INFORMATION**

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and we file annual, quarterly and special reports, proxy statements and other information with the Securities and Exchange Commission, or the SEC. You may read and copy the reports, proxy statements and other information that we file at the Commission's public reference facilities at 100 F Street NE, Washington, D.C. 20549 at prescribed rates. Our filings are also available free of charge at the SEC's website at <http://www.sec.gov>. You may also obtain copies of such materials by calling the SEC at 1-800-SEC-0330, or by mail from the Public Reference Room at 100 F Street NE,

Washington, D.C. 20549.

This prospectus is part of a Registration Statement on Form S-3, or the Registration Statement, we filed with the SEC under the Securities Act of 1933. This prospectus does not contain all of the information set forth in the Registration Statement. For more information about us and our common stock, you should read the Registration Statement and its exhibits and schedules. Copies of the Registration Statement, including its exhibits, may be inspected without charge at the offices of the SEC or obtained at prescribed rates from the Public Reference Section of the SEC at 100 F Street NE, Washington, D.C. 20549. Copies of the Registration Statement may be obtained without charge via the SEC's website.

### USE OF PROCEEDS

Unless otherwise indicated in the applicable prospectus supplement, we anticipate that the net proceeds, if any, from the sale of the shares of common stock that we may offer under this prospectus and any accompanying prospectus supplement will be used for general corporate purposes, including acquiring or investing in businesses, products or technologies. However, we have no current plans, agreements or commitments and are not currently engaged in any negotiations with respect to any transaction. We reserve the right to modify the use of proceeds for other purposes if we are unable to identify suitable acquisition partners or investment opportunities. Pending the uses described above, we intend to invest the net proceeds of this offering in short- to medium-term, investment-grade, interest-bearing securities. We cannot predict whether the net proceeds will yield a favorable return.

We have not yet determined the amount or timing of the expenditures for each of the categories listed above, and these expenditures may vary significantly depending on a variety of factors. As a result, we will retain broad discretion in the allocation and use of the net proceeds of this offering.

5

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### Table of Contents

### DESCRIPTION OF CAPITAL STOCK

As of the date of this prospectus, we are authorized to issue 25,000,000 shares of capital stock, consisting of 20,000,000 shares of common stock, par value \$.01 per share, of which 3,985,819 shares were outstanding as of October 30, 2009, and 5,000,000 shares of undesignated preferred stock, none of which are outstanding. Our board of directors is authorized to issue preferred stock from time to time in one or more class or series, to establish the designation and number of shares of each such class or series, and to fix the relative rights and preferences of the shares of each class or series. There is no cumulative voting by shareholders, and shareholders do not have preemptive rights.

The following is a summary of the material terms of our capital stock and certain provisions of our Articles of Incorporation and Bylaws. It also summarizes some relevant provisions of the Minnesota Business Corporation Act, which we sometimes refer to as Minnesota law. Because the terms of our Articles of Incorporation and Bylaws, and Minnesota law, are more detailed than the general information provided below, you should rely on only the actual provisions of those documents and Minnesota law. If you would like to read those documents, they are on file with the SEC, as described under the heading "Where You Can Find More Information" in this prospectus.

#### **Common Stock**

All shares of common stock are voting shares and are entitled to one vote per share. Subject to any preferential rights of preferred shareholders, holders of common stock are entitled to a pro rata share, based upon the number of shares held, of any dividends or distributions that are declared by the board of directors, and of any distribution of assets of our company upon its liquidation, dissolution or winding up.

#### **Undesignated Preferred Stock**

In authorizing the issuance and establishing the rights and preferences of one or more class or series of preferred stock, the board is permitted to provide that shares in a class or series of preferred stock are entitled to cumulative, partially cumulative or non-cumulative dividends; are entitled to preferential dividends over one or more other classes of capital stock; are entitled to a preference with respect to distribution of assets upon liquidation, dissolution or winding up over one or more other classes of capital stock; are redeemable or exchangeable at the option of our company; are entitled to the benefits of a sinking fund; are convertible at the option of the holders into shares of any other class or series of capital stock; are exchangeable at the option of the holders for cash, capital stock or indebtedness; are entitled to certain voting rights at all times or upon the occurrence of specified events; and are subject to restrictions on the issuance of additional shares of preferred stock of such class or series or of any other class or series.



## Anti-Takeover Provisions

**Minnesota Law.** We are subject to the anti-takeover provisions of section 302A.671 of the Minnesota Business Corporation Act, or the MBCA. This provision generally limits the voting rights of a shareholder acquiring at least 20% of the voting shares of a corporation in an attempted takeover or otherwise becoming a substantial shareholder unless holders of a majority of the voting power of the disinterested shares approve full voting rights for such substantial shareholder, with certain exceptions.

Section 302A.673 of the MBCA generally prohibits a public Minnesota corporation from engaging in a business combination with an interested shareholder for a period of four years after the date of the transaction in which the person became an interested shareholder unless before the date of the transaction, a committee of the board of directors of the corporation consisting of one or more disinterested directors, or, if the board has no disinterested directors, by three or more disinterested persons selected by the board, approved either the business combination or the transaction which resulted in the shareholder becoming an interested shareholder. As used in section 302A.673, a business combination includes:

any merger or consolidation involving our company or our subsidiary and the interested shareholder;

any exchange under a plan of exchange of shares or other securities of our company or our subsidiary or money, or other property for shares, other securities, money or property of the interested shareholder;

any sale, lease, exchange, mortgage, pledge, transfer or other disposition involving the interested shareholder of 10% or more of the assets of our company; and

6

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## Table of Contents

the receipt by the interested shareholder of the benefit of any loans, advances, guarantees, pledges or other financial assistance provided by or through our company.

In general, as used in section 302A.673, an interested shareholder is any entity or person beneficially owning, directly or indirectly, 10% or more of the outstanding voting stock of our company, or an affiliate or associate of our company that, at any time within the four-year period immediately before the date in question, was the beneficial owner, directly or indirectly, of 10% or more of the outstanding voting stock of our company.

**Articles of Incorporation.** Certain provisions of our articles of incorporation may delay or discourage transactions involving an actual or potential change in our control or change in our management, including transactions in which shareholders might otherwise receive a premium for their shares, or transactions that our shareholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock. Among other things, our articles of incorporation:

permit our board of directors to issue up to 5,000,000 shares of preferred stock with any rights, preferences and privileges as they may designate, including the right to approve an acquisition or other change in our control;

provide that the authorized number of directors may be changed by resolution of the board of directors;

provide that all vacancies, including newly-created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum; and

do not provide for cumulative voting rights (therefore allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose).

## **Limitation on Liability of Directors and Indemnification**

Our articles of incorporation limit the liability of our directors to the fullest extent permitted by Minnesota law. Minnesota law provides that a director's personal liability to our company or our shareholders for monetary damages for breach of fiduciary duty may be eliminated, except for liability due to:

breach of the duty of loyalty to our company or our shareholders;

an act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;

unlawful payment of dividends or redemption of shares as provided in section 302A.559 of the MBCA or civil liability for securities violations under section 80A.76 of the Minnesota Statutes; or

transaction from which the directors derived an improper personal benefit.

These limitations of liability do not apply to liabilities arising under federal securities laws and do not affect the availability of equitable remedies such as injunctive relief or rescission.

Our bylaws provide that we will indemnify and advance expenses to our directors, officers and persons serving in any other capacity at our request to the fullest extent permitted by Minnesota law. Section 302A.521 of the MBCA also permits us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in connection with their services to us. We maintain a directors and officers liability insurance policy.

At present, there is no pending litigation or proceeding involving any of our directors or officers as to which indemnification is required or permitted, and we are not aware of any threatened litigation or proceeding that may result in a claim for indemnification.

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Table of Contents

Insofar as indemnification for liabilities arising under the Securities Act of 1933, or the Securities Act, may be permitted for directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC, this indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. If a claim for indemnification against these liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by the director, officer or controlling person in connection with the securities being registered, we will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether this indemnification by us is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

**Nasdaq Capital Market Listing**

Our common stock is listed on the Nasdaq Capital Market under the symbol ISNS .

**Transfer Agent And Registrar**

The transfer agent and registrar for our common stock is Continental Transfer and Trust Company.

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Table of Contents

**PLAN OF DISTRIBUTION**

We may sell the shares of common stock being offered pursuant to this prospectus:

directly to purchasers;

to or through underwriters;

through dealers or agents; or

through a combination of methods.

We may distribute the shares of common stock from time to time in one or more transactions at a fixed price or prices, which may be changed, at market prices prevailing at the time of sale, at prices related to the prevailing market prices or at negotiated prices. We may also determine the price or other terms of the shares of common stock offered under this prospectus by use of an electronic auction.

Any prospectus supplement with respect to the shares of common stock being offered will set forth the terms of the offering, including the names of any underwriters, dealers or agents, the purchase price of the shares, the net proceeds to us, any underwriting discounts and other items constituting underwriters' compensation, and any discounts or concessions allowed or reallowed or paid to dealers. Also, if applicable, we will describe in the prospectus supplement how any auction will determine the price or any other terms, how potential investors may participate in the auction, and the nature of the underwriters' obligations with respect to the auction.

If underwriters are used in an offering, we will sign an underwriting agreement with the underwriters and will specify the name of each underwriter and the terms of the transaction (including any underwriting discounts and other terms constituting compensation of the underwriters and any dealers) in a prospectus supplement. If an underwriting syndicate is used, the managing underwriter(s) will be identified on the cover of the prospectus supplement. If underwriters are used in the sale, the shares of common stock will be acquired by the underwriters for their own accounts and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Any public offering price and any discounts or concessions allowed or reallowed or paid to dealers may be changed from time to time. Unless otherwise set forth in any prospectus supplement, the obligations of the underwriters to purchase the shares of common stock will be subject to conditions precedent, and the underwriters will be obligated to purchase all of the shares if any are purchased.

If dealers are used in an offering, we will sell the shares of common stock to the dealers as principals. The dealers then may resell the shares to the public at varying prices that they determine at the time of resale. The dealers and the terms of the transaction will be identified in a prospectus supplement.

The shares of common stock may be sold directly by us or through agents we designate. If agents are used in an offering, the agents will be identified and the terms of the agency will be described in a prospectus supplement. Unless otherwise indicated in a prospectus supplement, the agents will act on a best efforts basis for the period of their appointment.

Dealers and agents named in a prospectus supplement may be deemed to be underwriters (within the meaning of the Securities Act of 1933) of the shares of common stock offered. In addition, we may sell the shares directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act of 1933 with respect to any resales thereof.

Underwriters, dealers and agents may be entitled to indemnification by us against specific civil liabilities, including liabilities under the Securities Act of 1933, or to contribution with respect to payments that the underwriters or agents may be required to make in respect thereof, under underwriting or other agreements. Certain underwriters, dealers or agents and their associates may engage in transactions with and perform services for us in the ordinary course of business.

Any common stock sold pursuant to a prospectus supplement will be eligible for listing and trading on The Nasdaq Capital Market, subject to official notice of issuance. Any underwriters to whom shares are sold by us for public offering and sale may make a market in our common stock, but the underwriters will not be obligated to do so and may discontinue any market making at any time without notice.

## LEGAL MATTERS

Winthrop & Weinstine, P.A., Minneapolis, Minnesota, is giving an opinion on validity of our shares of common stock being offered by this prospectus.

## EXPERTS

The consolidated financial statements incorporated in this prospectus by reference to our Annual Report on Form 10-K for the year ended December 31, 2008 have been so incorporated in reliance on the report of Grant Thornton LLP, an independent registered public accounting firm, as indicated in their report with respect thereto, and are incorporated by reference herein in reliance upon the authority of said firm as experts in auditing and accounting.

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Table of Contents

**\$15,000,000**

**IMAGE SENSING SYSTEMS, INC.**

**Common Stock**

**PROSPECTUS**

**, 2009**

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Table of Contents

**PART II**

**INFORMATION NOT REQUIRED IN PROSPECTUS**

**Item 14. Other Expenses of Issuance and Distribution**

The following table sets forth the costs and expenses, other than underwriting discounts and commissions, payable by Image Sensing Systems, Inc. in connection with the issuance and distribution of the shares of common stock being registered.

SEC registration fee	\$ 837
Legal fees and expenses	35,000
Accounting fees and expenses	20,000
Printing expenses	6,000
Miscellaneous	2,163
TOTAL	\$ 64,000

Each amount set forth above, except the SEC registration fee, is estimated.

**Item 15. Indemnification of Directors and Officers**

Section 302A.521 of the Minnesota Statutes provides that unless prohibited or limited by a corporation's articles of incorporation or bylaws, we must indemnify our current and former officers, directors, employees and agents against expenses (including attorneys' fees), judgments, penalties, fines and amounts paid in settlement and which were incurred in connection with actions, suits, or proceedings in which such persons are parties by reason of the fact that they are or were an officer, director, employee or agent of our company, if they (i) have not been indemnified by another organization, (ii) acted in good faith, (iii) received no improper personal benefit, (iv) in the case of a criminal proceeding, had no reasonable cause to believe the conduct was unlawful, and (v) reasonably believed that the conduct was in the best interests

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of our company. Section 302A.521 also permits our company to purchase and maintain insurance on behalf of our officers, directors, employees and agents against any liability which may be asserted against, or incurred by, such persons in their capacities as officers, directors, employees and agents of our company, whether or not we would have been required to indemnify the person against the liability under the provisions of such section.

Section 7 of Article III of our bylaws provides that we shall indemnify our officers, directors, employees and agents and other persons to the fullest extent authorized or permitted by the Minnesota Business Corporation Act.

We maintain directors and officers liability insurance for the benefit of our directors and certain of our officers.

Before the closing of this offering, we may enter into an underwriting agreement or subscription agreements, which would provide that the underwriters or purchasers, as applicable, are obligated, under some circumstances, to indemnify our directors, officers and controlling persons against specified liabilities.

### Item 16. Exhibits

The exhibits are described on the Exhibit Index to this Registration Statement on Form S-3.

### Item 17. Undertakings

(a) The undersigned registrant hereby undertakes:

- (1) to file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
  - (i) to include any prospectus required by section 10(a)(3) of the Securities Act of 1933;
  - (ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement; and

II-1

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### Table of Contents

- (iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;  
*provided, however,* that paragraphs (a)(1)(i) and (a)(1)(ii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.
  - (2) that, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
  - (3) to remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

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- (4) that, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
- (i) each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
  - (ii) each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however,* that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.
- (5) that, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
- (i) any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
  - (ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
  - (iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
  - (iv) any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

II-2

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### Table of Contents

- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (c) If the securities registered are to be offered at competitive bidding, the undersigned registrant hereby undertakes: (1) to use its best efforts to distribute prior to the opening of bids, to prospective bidders, underwriters, and dealers, a reasonable number of copies of a prospectus which at that time meets the requirements of section 10(a) of the Act, and relating to the securities offered at competitive bidding, as contained in the registration statement, together with any supplements thereto, and (2) to file an amendment to the registration statement reflecting the results of bidding, the terms of the reoffering and related matters to the extent required by the applicable form, not later than the first use, authorized by the issuer after the opening of bids, of a prospectus relating to the securities offered at competitive bidding, unless no further public offering of such securities by the issuer and no reoffering of such securities by the purchasers is proposed to be made.
- (d) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is

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asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

- (e) The undersigned registrant hereby undertakes that:
- (1) for purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
  - (2) for the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

II-3

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### Table of Contents

### SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of St. Paul, State of Minnesota, on November 18, 2009.

IMAGE SENSING SYSTEMS, INC.

/s/ GREGORY R. L. SMITH  
Gregory R. L. Smith  
*Chief Financial Officer*  
*(Principal Financial Officer and Principal Accounting Officer)*

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ KENNETH R. AUBREY * Kenneth R. Aubrey	President, Chief Executive Officer and Director (Principal Executive Officer)	November 18, 2009
/s/ GREGORY R. L. SMITH Gregory R. L. Smith	Chief Financial Officer, Secretary and Treasurer (Principal Financial Officer and Principal Accounting Officer)	November 18, 2009
James Murdakes	Chairman of the Board of Directors	November __, 2009
/s/ PANOS G. MICHALOPOULOS * Panos G. Michalopoulos	Director	November 18, 2009
/s/ MICHAEL G. ELEFThERIOU * Michael G. Eleftheriou	Director	November 18, 2009
/s/ SVEN A. WEHRWEIN * Sven A. Wehrwein	Director	November 18, 2009
/s/ JAMES W. BRACKE * James W. Bracke	Director	November 18, 2009

\* By: /s/ Gregory R. L. Smith  
Gregory R. L. Smith, Attorney-in-fact

November 18, 2009

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Table of Contents

**EXHIBIT INDEX**

<b>Exhibit No.</b>	<b>Description of Exhibit</b>
5.1	Opinion of Winthrop & Weinstine, P.A.
23.1	Consent of Grant Thornton LLP.
23.2	Consent of Winthrop & Weinstine, P.A., included in Exhibit 5.1.