

Registration No. 333-75228

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

AMENDMENT NO. 1

TO

FORM S-3
REGISTRATION STATEMENT UNDER
THE SECURITIES ACT OF 1933

OSI SYSTEMS, INC.
(Exact Name of Registrant as Specified in Its Charter)

California	12525 Chadron Avenue Hawthorne, California 90250 (310) 978-0516	33-0238801
(State or Jurisdiction of Incorporation or Organization)	(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)	(IRS Employer Identification Number)

Deepak Chopra
President and Chief Executive Officer
12525 Chadron Avenue
Hawthorne, California 90250
(310) 978-0516
(Name, Address, Including Zip Code, and Telephone Number,
Including Area Code, of Agent for Service)

Copies to:
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Approximate Date of Commencement of Proposed Sale to the Public:
As soon as practicable 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, check the following box and list the
Securities Act registration statement number of 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 delivery of the prospectus is expected to be made pursuant to Rule 434,
please check the following box. ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price Per Share (1)	Proposed Maximum Aggregate Offering Price (1)	Amount of Registration Fee
Common Stock, no par value	2,691,000	\$19.84	\$53,389,440	\$12,760.08*

(1) Estimated solely for purpose of calculating the registration fee in accordance with Rule 457(c) under the Securities Act of 1933. Based on the average of the high and low prices per share of Common Stock of the registrant as reported on the NASDAQ National Market on December 13, 2001.

* Previously paid

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 or until this registration statement shall become effective on such date as the Commission acting pursuant to said Section 8(a), may determine.

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PROSPECTUS

2,691,000 SHARES

OSI SYSTEMS, INC.

COMMON STOCK

Certain of our stockholders (the "Selling Stockholders") are offering to sell up to 2,691,000 shares of our common stock (the "Stock"). We are not offering or selling any of the Stock. The Selling Stockholders may sell the Stock on the open market at market price in ordinary broker transactions or in negotiated transactions, and they may pay broker commissions in connection with such transactions. We will not receive any of the proceeds of sale of the Stock nor pay any broker commissions in connection with such sales. Our common stock is quoted on the NASDAQ National Market under the symbol OSIS. On December 12, 2001, the closing price of the our common stock was \$19.30 per share.

You should carefully consider each of the risk factors described under RISK FACTORS beginning on page 3 of this prospectus.

The Selling Stockholders and any broker-dealer executing selling orders on behalf of or purchasing from the Selling Stockholders may be deemed to be an "underwriter" within the meaning of the Securities Act. Commissions received by any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act of 1933.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is December 20, 2001

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PROSPECTUS SUMMARY

You should read this summary together with the other information contained in other parts of this prospectus and the documents which are incorporated by reference. Because it is a summary, it does not contain all of the information that you should consider before investing in our common stock. We will provide copies of documents incorporated by reference to you upon request and without cost to you.

We are a vertically-integrated, worldwide provider of devices, subsystems and end-products based on optoelectronic technology. We design and manufacture optoelectronic devices and value-added subsystems for original equipment manufacturers ("OEMs") for use in a broad range of applications, including security, medical diagnostics, fiber optics, telecommunications, gaming, office automation, aerospace and defense electronics, computer peripherals and industrial automation. In addition, we utilize our optoelectronic technology and design capabilities to manufacture security and inspection products that we market worldwide to end users under the "Rapiscan," "Secure" and "Metor" brand names. These products are used to inspect people, baggage, cargo and other objects for weapons, explosives, drugs and other contraband. In the medical field, we manufacture and sell bone densitometers, which are used to provide bone loss measurements in the diagnosis of osteoporosis. We also manufacture and sell saturation of arterial hemoglobin ("SpO₂") monitors and sensors under the trade names Digital Dolphin(TM) and Dolphin 2000(TM). Digital Dolphin(TM) model 2100 SpO₂ monitors have received 510[k] approval for sale in the United States.

In fiscal 2001, revenues from the sale of optoelectronic devices and subsystems and medical imaging systems amounted to \$59.3 million, or approximately 53.4% of our revenues, while revenues from sales of security and inspection products amounted to \$51.8 million, or approximately 46.6% of our revenues.

Unless the context otherwise requires, the terms "we" or "us" as used herein includes OSI Systems, Inc., a California corporation, and its subsidiaries.

Business Overview

Our optoelectronic devices and subsystems are designed and manufactured primarily for sale to OEMs, while our security products and medical imaging and some monitoring systems are sold to end-users.

Optoelectronic Devices and Subsystems. Optoelectronic devices consist of both active components, such as silicon photodiodes that sense light of varying wavelengths and convert the light detected into electronic signals, and passive components, such as lenses, prisms, filters and mirrors. An optoelectronic subsystem typically consists of one or more optoelectronic devices that are combined with other electronic components for integration into an end-product. Optoelectronic devices and subsystems, and medical imaging systems, are used for a wide variety of applications ranging from simple functions, such as the detection of paper in the print path of a laser printer, to complex monitoring, measurement or positioning functions, such as in industrial robotics where the subsystem is used to detect the exact position, motion or size of another object. Because optoelectronic devices and subsystems can be used in a wide variety of measurement, control and monitoring applications, optoelectronics may be used in a broad array of industrial applications. Optoelectronic devices also are key components in the telecommunications and fiber optics market.

Medical Diagnostic and Imaging Systems. We have expanded into medical diagnostic and imaging systems. We manufacture and distribute the DTX 200 (DEXACARE), a U.S. Food & Drug Administration ("FDA") approved forearm DEXA (Dual Energy X-Ray) densitometer, which is used to diagnose osteoporosis as well as to provide follow-up bone density measurements. We also produce the ultrasound DTU-One, the first commercially available ultrasound scanner using imaging capability for the diagnosis of osteoporosis. In September 2000, we received pre-market approval ("PMA") from the FDA to sell the DTU-One in the United States.

Security and Inspection Products. We manufacture and sell a range of security and inspection equipment that we market under the "Rapiscan," "Secure" and "Metor" brand names. To date, the security and inspection equipment has principally been used at airports to inspect carry-on and checked baggage for guns and knives. However, inspection products are increasingly being used for both security purposes at a wide range of facilities other than airports and for other non-security purposes. Our inspection and detection products combine the use of x-ray technology with our core optoelectronic capabilities. Our products combine dual or multi-energy x-ray technology with computer-enhanced imaging technology to facilitate the detection of materials such as explosives, narcotics, currency or other contraband. These systems range in size from compact tabletop systems to large cargo pallet inspection systems weighing over 100,000 lbs.

Growth Strategy

Our objectives are to become a leading provider of specialized optoelectronic products, to enhance our position in the international inspection and detection marketplace and to leverage our expertise in the optoelectronic technology industry by entering into new end-product markets on a selective basis. The key elements of our strategy include:

- . Leveraging our optoelectronic design and manufacturing expertise to address new applications
- . Further penetrating existing security and inspection markets and expanding into other markets
- . Capitalizing on vertical integration
- . Capitalizing on global presence, and
- . Selectively entering new end markets

Our business and operations are subject to numerous risks, some of which are described in the RISK FACTORS section beginning on page 3 of this prospectus.

The Offering

This prospectus concerns an offering of up to 2,691,000 shares of our common stock (the "Stock") by some of our current stockholders (the "Selling Stockholders"). We are not offering or selling any of the Stock. We have registered this offering in compliance with registration rights which we granted to the Selling Stockholders when we sold the Stock to them. The Selling Stockholders are not required to sell the Stock; sales of the Stock are entirely at the discretion of each Selling Stockholder. The Stock consists of 2,070,000 of common stock owned by the Selling Stockholders as of December 12, 2001, together with 621,000 additional shares of our common stock issuable to the Selling Stockholders pursuant to warrants purchased by them contemporaneous with their purchase of such common stock. The warrants have a 7-year term and are exercisable at a price of \$23.47 per share. The warrants prohibit the holders thereof from exercising the warrants to the extent that such exercise would result in the holder, together with any affiliate thereof, beneficially owning in excess of 4.999% and 9.999% of the outstanding shares of common stock following such exercise, as the case may be. Such restrictions may be waived by the holder of the warrant as to itself upon not less than 61 days notice to us. The Selling Stockholders may sell the Stock either on the open market at market price in ordinary broker transactions or in negotiated transactions, and they may pay broker commissions in connection with such transactions. We will not receive any of the proceeds of sale of the Stock nor pay any broker commissions in connection with such sales. Our common stock is quoted on the NASDAQ National Market under the symbol "OSIS." On December 13, 2001, the closing price for our stock was \$19.30 per share. We will pay the costs of registering the offer and sale of the Stock with the Securities and Exchange Commission (the "SEC") and any required state securities agencies.

Common Stock Offered by the Selling Stockholders.....	2,691,000 Shares
NASDAQ National Market Symbol.....	OSIS

Deepak Chopra
President and Chief Executive Officer
OSI Systems, Inc.
12525 Chadron Avenue
Hawthorne, California 90250
(310) 978-0516

RISK FACTORS

Investing in our common stock involves a significant degree of risk. You should carefully consider the following risk factors and all the other information contained in this prospectus or incorporated by reference before investing in our common stock. If any of the following risks actually occurs, our business, financial condition and results of operations could suffer, in which case the trading price of our common stock may decline.

Risks Related To Our Business

Fluctuations in our quarterly operating results may cause our stock price to decline.

Given the nature of the markets in which we participate, we cannot reliably predict future revenue and profitability. Changes in competitive, market and economic conditions may cause us to adjust our operations. A high proportion of our costs are fixed, due in part to our significant sales, research and development, and manufacturing costs. Thus, small declines in revenue could disproportionately affect our operating results in a quarter. Factors that may affect our quarterly operating results and the market price of our common stock include:

- . demand for and market acceptance of our products;
- . competitive pressures resulting in lower selling prices;
- . adverse changes in the level of economic activity in regions in which we do business;
- . adverse changes in industries, such as semiconductors and electronics, on which we are particularly dependent;
- . changes in the portions of our revenue represented by our various products and customers;
- . delays or problems in the introduction of new products;
- . our competitors' announcement or introduction of new products, services or technological innovations;
- . variations in our product mix;
- . the timing and amount of our expenditures in anticipation of future sales;
- . increased costs of raw materials or supplies; and
- . changes in the volume or timing of product orders.

We face aggressive competition in many areas of our business. If we do not compete effectively, our business will be harmed.

We encounter aggressive competition from numerous competitors in many areas of our business. In the optoelectronic device and subsystem market and in the medical diagnostic and imaging systems market, competition is based primarily on factors such as expertise in the design and development of optoelectronic devices, product quality, timeliness of delivery, price, customer technical support, and on the ability to provide fully-integrated services from application development and design through volume subsystem production. In the security and inspection market, competition is based primarily on such factors as product performance, functionality and quality, the over-all cost of the system, prior customer relationships, technological capabilities of the product, price, certification by government authorities, local market presence, and breadth of sales and service organization. We may not be able to compete effectively with all of these competitors. To remain competitive, we must develop new products and periodically enhance our existing products in a timely manner. We anticipate that we may have to adjust prices of many of our products to stay competitive. In addition, new competitors may emerge, and entire product lines may be threatened by new technologies or market trends that reduce the value of these product lines.

The September 11 terrorist attacks have increased financial expectations that may not materialize.

The September 11 terrorist attacks have created increased interest in our security and detection products; however, we are uncertain whether the level of demand will continue to be as high as anticipated. Additionally, it is uncertain what, if any solutions, will be adopted as a result of the terrorism and whether our products will be a part of the ultimate solution. Additionally, should our products be considered as a part of the security solution, it is unclear what the level may be and how quickly funding to purchase our products may be made available. These factors may adversely impact us and create unpredictability in revenues and operating results.

Our revenues are dependent on orders in the security and inspection products category which has lengthy and unpredictable sales cycles.

Sales of security and inspection products depend in significant part upon the decision of governmental agencies to upgrade or expand existing airports, border crossing inspection sites and other security installations. Accordingly, a portion of our sales of security inspection and detection products is often subject to delays associated with the lengthy approval processes that often accompany such capital expenditures. During these approval periods, we expend significant financial and management resources in anticipation of future orders that may not occur. If we fail to receive an order after expending such resources, it could have a material adverse effect on our business, financial condition and results of operations.

If we do not introduce new products in a timely manner, our products could become obsolete, and our operating results would suffer.

We sell many of our products in industries characterized by rapid technological changes, frequent new product and service introductions and evolving industry standards. Without the timely introduction of new products and enhancements, our products could become technologically obsolete over time, in which case our revenue and operating results would suffer. The success of our new product offerings will depend upon several factors, including our ability to:

- . accurately anticipate customer needs;
- . innovate and develop new technologies and applications;
- . successfully commercialize new technologies in a timely manner;
- . price our products competitively and manufacture and deliver our products in sufficient volumes and on time; and
- . differentiate our offerings from our competitors' offerings.

Some of our products are used by our customers to develop, test and manufacture their products. We therefore must anticipate industry trends and develop products in advance of the commercialization of our customers' products. In developing any new product, we may be required to make a substantial investment before we can determine the commercial viability of the new product. If we fail to accurately foresee our customers' needs and future activities, we may invest heavily in research and development of products that do not lead to significant revenue.

Interruptions to our ability to purchase raw materials and components may adversely affect our profitability.

We purchase certain raw materials and subcomponents from third parties pursuant to purchase orders placed from time to time. Purchase order terms range from three months to one year at fixed costs, but we do not have guaranteed long-term supply arrangements with our suppliers. Any material interruption in our ability to purchase necessary raw materials or subcomponents could have a material adverse effect on our business, financial condition and results of operations.

We may not be able to successfully implement our acquisition strategy, integrate acquired businesses into our existing business or make acquired businesses profitable.

One of our strategies is to supplement our internal growth by acquiring businesses and technologies that complement or augment our existing product lines. This growth has placed, and may continue to place, significant demands on our

management, working capital and financial resources. We may be unable to identify or complete promising acquisitions for many reasons, including:

- . competition among buyers;
- . the need for regulatory approvals, including antitrust approvals; and
- . the high valuations of businesses.

Some of the businesses we may seek to acquire may be marginally profitable or unprofitable. For these acquired businesses to achieve acceptable levels of profitability, we must improve their management, operations, products and market penetration. We may not be successful in this regard and may encounter other difficulties in integrating acquired businesses into our existing operations.

To finance our acquisitions, we may have to raise additional funds, through either public or private financings. We may be unable to obtain such funds or may be able to do so only on unfavorable terms.

Economic, political and other risks associated with international sales and operations could adversely affect our sales.

In fiscal 1999, 2000, and 2001, revenues from shipments made outside of the United States accounted for approximately 48.5%, 55.8% and 43.2%, respectively, of our revenues. Of the revenues generated during fiscal 2001 from shipments made to customers outside of the United States, 30.1% represented sales from the United States to foreign customers, and the balance represented sales generated by our foreign subsidiaries. Since we sell our products worldwide, our businesses are subject to risks associated with doing business internationally. We anticipate that revenue from international operations will continue to represent a substantial portion of our total revenue. In addition, many of our manufacturing facilities, employees and suppliers are located outside the United States. Accordingly, our future results could be harmed by a variety of factors, including:

- . changes in foreign currency exchange rates;
- . changes in a country's or region's political or economic conditions, particularly in developing or emerging markets;
- . longer payment cycles of foreign customers and difficulty of collecting receivables in foreign jurisdictions;
- . trade protection measures and import or export licensing requirements;
- . differing tax laws and changes in those laws;
- . difficulty in staffing and managing widespread operations;
- . differing labor laws and changes in those laws;
- . differing protection of intellectual property and changes in that protection; and
- . differing regulatory requirements and changes in those requirements.

Our failure to protect our intellectual property could impair our competitive position.

We believe that our principal competitive strength is our ability to design, develop and manufacture complex optoelectronic devices and subsystems for various industry segments. While we own certain patents and marks, other aspects of our business are not protected by patents or marks. Accordingly, there are no legal barriers that prevent potential competitors from copying certain of our products, processes and technologies or from otherwise entering into operations in direct competition with us.

Our products may infringe on the intellectual property rights of others, and resulting claims against us could be costly and prevent us from making or selling certain products.

Third parties may seek to claim that our products and operations infringe their patent or other intellectual property rights. We may incur significant expense in any legal proceedings to protect our proprietary rights or to defend infringement claims by third parties. In addition, claims of third parties against us could result in awards of substantial damages or court orders that could effectively prevent us from making, using or selling our products in the U.S. or abroad.

A claim for damages could materially and adversely affect our financial condition and results of operation.

Our business exposes us to potential product liability risks, particularly with respect to our security and inspection products. There are many factors beyond our control that could lead to liability claims, including the failure of the products in which our subsystems are installed, the reliability of the customer's operators of the inspection equipment, and the maintenance of the inspection units by the customers. There can be no assurance that the amount of product liability insurance that we carry will be sufficient to protect us from product liability claims. A product liability claim in excess of the amount of insurance we carry could have a material adverse effect on our business, financial condition and results of operations.

Our ongoing success is dependent upon the continued availability of certain key employees.

We are dependent in our operations on the continued availability of the services of our employees, many of whom are individually key to our current and future success, and the availability of new employees to implement our company's growth plans. In particular, we are dependent upon the services of Deepak Chopra, the Chairman of our Board of Directors, and our President and Chief Executive Officer. We have entered into a 5-year employment agreement with Mr. Chopra, which expires in April 2002 and maintain a \$13.0 million policy of key man life insurance on the life of Mr. Chopra. The market for skilled employees is highly competitive, especially for employees in technical fields. While our compensation programs are intended to attract and retain the employees required for us to be successful, there can be no assurance that we will be able to retain the services of all of our key employees or a sufficient number to execute on our plans, nor can there be any assurances that we will be able to continue to attract new employees as required.

Our failure to comply with environmental regulations may create significant environmental liabilities and force us to modify our manufacturing process.

We are subject to various federal, state and local environmental laws, ordinances and regulations relating to the use, storage, handling and disposal of certain hazardous substances and wastes used or generated in the manufacturing and assembly of our products. Under such laws, we may become liable for the costs of removal or remediation of certain hazardous substances or wastes that have been or are being disposed of offsite as wastes or that have been or are being released on or in our facilities. Such laws may impose liability without regard to whether we knew of, or caused, the release of such hazardous substances or wastes. Any failure by us to comply with present or future regulations could subject us to the imposition of substantial fines, suspension of production, alteration of manufacturing processes or cessation of operations, any of which could have a material adverse effect on our business, financial condition and results of operations.

Changes in governmental regulations may reduce demand for our products or increase our expenses.

We compete in markets in which we or our customers must comply with federal, state, local and foreign regulations, such as environmental, health and safety and food and drug regulations. We develop, configure and market our products to meet customer needs created by these regulations. Any significant change in these regulations could reduce demand for our products.

Risks Related To Our Capital Structure and Common Stock

Our officers and directors and stockholders affiliated with them own a large percentage of our voting stock.

As of December 13, 2001, our directors and executive officers (including Scope Industries, an affiliate of one of our directors), in the aggregate, beneficially owned approximately 23% of our outstanding common stock. Consequently, Scope Industries, together with our directors and executive officers acting in concert, will have the ability to significantly affect the

election of our directors and have a significant effect on the outcome of corporate actions requiring shareholder approval. Such concentration may also have the effect of delaying or preventing a change of control of our company.

Our articles of incorporation and other agreements contain provisions that could discourage a takeover.

Our Articles of Incorporation authorize our Board of Directors to issue up to 10,000,000 shares of preferred stock in one or more series, to fix the rights, preferences, privileges and restrictions granted to or imposed upon any wholly unissued shares of preferred stock, to fix the number of shares constituting any such series, and to fix the designation of any such series, without further vote or action by its shareholders. The terms of any series of preferred stock, which may include priority claims to assets and dividends and special voting rights, could adversely affect the rights of the holders of common stock and thereby reduce the value of our common stock. We have no present plans to issue shares of preferred stock. The issuance of preferred stock, coupled with the concentration of ownership in the directors and executive officers, could discourage certain types of transactions involving an actual or potential change in control of our company, including transactions in which the holders of common stock might otherwise receive a premium for their shares over then current prices, otherwise dilute the rights of holders of common stock, and may limit the ability of such shareholders to cause or approve transactions which they may deem to be in their best interests, all of which could have a material adverse effect on the market price of our common stock. We have in place a stockholder rights plan, adopted in 2000, under which our stockholders are entitled to purchase shares of our preferred stock under certain circumstances. These circumstances include the purchase of 20% or more of the outstanding shares of common stock by a person or group, or the announcement of a tender or exchange offer to acquire 20% or more of the outstanding common stock. The stockholder rights plan may have the effect of impeding or preventing certain types of transactions involving a change in control of our company which could be beneficial to the stockholders.

Our articles of incorporation limit the liability of our directors which may limit the remedies that we or our shareholders have available.

Our Articles of Incorporation provide that, pursuant to the California Corporations Code, the liability of our directors for monetary damages shall be eliminated to the fullest extent permissible under California law. This is intended to eliminate the personal liability of a director for monetary damages in an action brought by us, or in our right, for breach of a director's duties to us or our shareholders and may limit the remedies available to us or our shareholders. This provision does not eliminate the directors' fiduciary duty and does not apply for certain liabilities: (i) for acts or omissions that involve intentional misconduct or a knowing and culpable violation of law; (ii) for acts or omissions that a director believes to be contrary to our best interests or our shareholders or that involve the absence of good faith on the part of the director; (iii) for any transaction from which a director derived an improper personal benefit; (iv) for acts or omissions that show a reckless disregard for the director's duty to us or our shareholders in circumstances in which the director was aware, or should have been aware, in the ordinary course of performing a director's duties, of a risk of serious injury to us or our shareholders; (v) for acts or omissions that constitute an unexcused pattern of inattention that amounts to an abdication of the director's duty to us or our shareholders; (vi) with respect to certain transactions or the approval of transactions in which a director has a material financial interest; and (vii) expressly imposed by statute for approval of certain improper distributions to shareholders or certain loans or guarantees.

FORWARD-LOOKING STATEMENTS

The statements contained in this prospectus that are not historical facts are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933. These forward-looking statements may be identified by the use of forward-looking terms such as "believes," "expects," "may," "will," "should" or "anticipates" or by discussions of strategy that involve risks and uncertainties. From time to time, we have made or may make forward-looking statements, orally or in writing. These forward-looking statements include statements regarding anticipated future revenues, sales, operations, demand, competition, capital expenditures, credit arrangements, and other statements regarding matters that are not historical facts, involve predictions which are based upon a number of future conditions that ultimately may prove to be inaccurate. Our actual results, performance or achievements could differ materially from the results expressed in, or implied by, these forward-looking statements. Factors that may cause or contribute to such differences include those discussed under Risk Factors, above, in our Form 10-K for fiscal year ended June 30, 2001, in Business and in Management's Discussion and Analysis of Financial Condition and Results of Operations, as well as those discussed elsewhere in this prospectus. These factors, of course, do not include all factors which might affect our business and financial condition.

USE OF PROCEEDS

The Selling Stockholders selling the Stock and will receive all of the proceeds from any sales. We will not receive any sales proceeds.

SELLING STOCKHOLDERS

All of the Stock being offered in this prospectus is being offered by the Selling Stockholders listed below. We have registered this offering because of registration rights we granted to the Selling Stockholders when we sold the Stock to them. The Selling Stockholders are not required to sell all or any of the Stock. The Stock consists of 2,070,000 shares of common stock owned by the Selling Stockholders as of December 13, 2001, together with 621,000 additional shares of our common stock issuable to the Selling Stockholders pursuant to warrants purchased by them contemporaneously with the purchase of the common stock. The warrants have a 7-year term and are exercisable at a price of \$23.47 per share. The warrants prohibit the holders thereof from exercising the warrants to the extent that such exercise would result in the holder, together with any affiliate thereof, beneficially owning in excess of 4.999% and 9.999% of the outstanding shares of common stock following such exercise, as the case may be. Such restrictions may be waived by the holder of the warrant as to itself upon not less than 61 days notice to us.

Name	Shares Owned Before Offering (1)	Shares to be Sold in Offering	Shares Owned After Offering (2)
First Investors Holding Co., Inc.	651,196 (3) (4)	250,000 (4)	401,196 (3.23%) (3)
Pine Ridge Financial Inc. (3).....	1,146,671 (3) (5)	5,475 (5)	401,196 (3.23%) (3)
Cranshire Capital, L.P.	621,675 (6)	281,250 (6)	340,425 (2.74%)
Deephaven Private Placement Trading, Ltd.	63,906 (7)	63,906 (7)	0
J. Steven Emerson IRA II Bear Stearns Securities Corp, Custodian.....	31,250 (8)	31,250 (8)	0
Smithfield Fiduciary LLC.....	125,000 (9)	125,000 (9)	0
Riverview Group, LLC.....	250,000 (10)	250,000 (10)	0
Third Point Partners LP.....	57,346 (11)	57,346 (11)	0
Third Point Offshore Fund Ltd.	85,200 (12)	85,200 (12)	0
Points West International Investments Ltd.	25,063 (13)	25,063 (13)	0
Banzai Partners LP.....	15,851 (14)	15,851 (14)	0
Banzai Offshore Fund Ltd.	6,063 (15)	6,063 (15)	0
Lyxor Asset Management.....	66,096 (16)	66,096 (16)	0
Vertical Ventures, LLC.....	62,500 (17)	62,500 (17)	0
Westfield Life Sciences Fund L.P.	15,750 (18)	15,750 (18)	0
Westfield Life Sciences Fund, L.P. II.....	6,750 (19)	6,750 (19)	0
ZLP Master Fund, Ltd.	125,000 (20)	125,000 (20)	0
ZLP Master Technology Fund, Ltd.	375,000 (21)	375,000 (21)	0
Roth Capital Partners, LLC.....	103,500 (22)	103,500 (22)	0
Total.....		2,691,000 (23)	

Percentage of ownership for each holder is calculated based on 12,436,180 shares of common stock outstanding on December 12, 2001. Beneficial ownership is determined in accordance with the SEC Rule 13d-3 and generally includes shares over which the holder has voting or investment power, subject to community property laws. All shares of common stock obtainable upon conversion of securities or exercise of stock options or warrants (including those that are not currently exercisable but will become exercisable within 60 days hereafter) are considered to be beneficially owned by the person holding the options or warrants for computing that person's percentage, but are not treated as outstanding for computing the percentage of any other person.

- (1) Includes shares of common stock covered by this prospectus.
- (2) Assumes the completion of this offering and that the Selling Stockholders dispose of all of their shares of common stock covered by this prospectus, that they do not dispose of common stock owned but not covered by this prospectus and that they do not acquire any additional shares of common stock.
- (3) Pine Ridge Financial Inc. and First Investors Holding Co., Inc. are under common management and, accordingly, 401,196 shares of the amount shown represents the combined holdings of our common stock by both of these investment funds.
- (4) Includes 50,000 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (5) Includes 149,095 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (6) Includes 56,250 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (7) Includes 12,781 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (8) Includes 6,250 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (9) Includes 25,000 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (10) Includes 50,000 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (11) Includes 11,469 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (12) Includes 17,040 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (13) Includes 5,013 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (14) Includes 3,170 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (15) Includes 1,213 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (16) Includes 13,219 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.

- (17) Includes 12,500 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (18) Includes 3,150 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (19) Includes 1,350 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (20) Includes 25,000 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (21) Includes 75,000 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (22) Includes 103,500 shares of our common stock issuable upon the exercise of warrants, subject to the 4.999% and 9.999% limitation.
- (23) Includes 621,000 shares of our common stock issuable upon the exercise of warrants.

PLAN OF DISTRIBUTION

The Selling Stockholders and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their shares of Common Stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. The Selling Stockholders may use any one or more of the following methods when selling shares:

- . ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- . block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- . purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- . an exchange distribution in accordance with the rules of the applicable exchange;
- . privately negotiated transactions;
- . short sales
- . broker-dealers may agree with the Selling Stockholders to sell a specified number of such shares at a stipulated price per share;
- . a combination of any such methods of sale; and
- . any other method permitted pursuant to applicable law.

The Selling Stockholders may also sell shares under Rule 144 under the Securities Act of 1933 (the "Securities Act"), if available, rather than under this prospectus.

Broker-dealers engaged by the Selling Stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. The Selling Stockholders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved.

The Selling Stockholders may from time to time pledge or grant a security interest in some or all of the Shares or common stock or Warrant owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act of 1933 amending the list of Selling Stockholders to include the pledgee, transferee or other successors in interest as Selling Stockholders under this prospectus.

The Selling Stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The Selling Stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The Selling Stockholders have informed us that they do not have any agreements or understandings, directly or indirectly, with any person to distribute the Common Stock.

We are required to pay all fees and expenses incident to the registration of the shares. We have agreed to indemnify the Selling Stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

RECENT DEVELOPMENTS

Subsequent to the end of our last fiscal year, June 30, 2001, we have made two private placements of our common stock to institutional investors, the first on November 13, 2001, for 1,696,946 shares, and the second on December 10, 2001, for 2,070,000 shares of common stock and 517,500 7-year warrants to purchase common stock at \$23.47 per share. On November 29, 2001, we filed with the Securities and Exchange Commission a Form S-3, Registration No. 333-73618, for the public resale of the stock sold in the first private placement and of 84,847 shares of our common stock issuable upon exercise of a warrant granted to the placement agent in the first private placement as part of the compensation for its services. This prospectus is part of the Form S-3 registration statement which we have filed for the public resale of the stock sold in the second offering and the stock to be sold upon exercise of the warrants included in the second private placement. This prospectus also covers the resale of stock issuable upon exercise of a similar warrant for 103,500 shares which we granted to the placement agent in the second private placement as part of the compensation for its services.

LEGAL MATTERS

The law firm of Richman, Mann, Chizever, Phillips & Duboff, of Beverly Hills, California, will pass upon the validity of the securities offered by this prospectus.

INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" in this prospectus certain information which we file with the SEC. This means we can fulfill, and fulfilled, our obligations to provide you with certain important information by referring you to other documents which we have filed with the SEC. The information which is incorporated by reference is an important part of this prospectus.

We are incorporating by reference in this prospectus the following documents which we have filed, or may later file, with the SEC under the Securities Exchange Act of 1934 (the "Exchange Act"). The information we file with the SEC later will automatically update and supersede the present information.

1. Our Annual Report on Form 10-K for the fiscal year ended June 30, 2001 (SEC file number 0-23125).
2. Our Quarterly Report on Form 10-Q for the three months ended September 30, 2001 (SEC file number 0-23125).
3. All reports which we file with the SEC under the Exchange Act after the date of the initial registration statement of which this prospectus is a part and prior to the effective date of such registration statement.
4. The description of our common stock in our registration statement on Form 8-A (File No. 0-24394) filed under the Exchange Act on September 24, 1997, which, in turn, incorporated such description by reference to page 54

of our Preliminary Prospectus, dated August 27, 1997, filed with the Securities and Exchange Commission on September 2, 1997, as part of our Registration Statement on Form S-1 (No. 333-29179), and any amendments or reports filed to update the description; and,

All documents which we file under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 between the date of this prospectus and the termination of the offering shall be deemed to be incorporated by reference into this prospectus.

We will provide to each person to whom a prospectus is delivered, including any beneficial owner, a copy of any or all of the information which is incorporated by reference in this prospectus but which is not delivered with this prospectus. We will provide such information, at no cost to the requesting person, upon written or oral request made to:

Deepak Chopra
President and Chief Executive Officer
12525 Chadron Avenue
Hawthorne, California 90250
(310) 978-0516

You should rely only on the information in this prospectus or any prospectus supplement or incorporated by reference in them. We have not authorized anyone else to provide you with different information. Offers of the securities are being made only in states where the offers are permitted. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of those documents. If information in incorporated documents conflicts with information in this prospectus, you should rely on the most recent information. If information in an incorporated document conflicts with information in another incorporated document, you should rely on the most recent incorporated document.

This prospectus is part of a Registration Statement on Form S-3 that has been filed with the SEC. It does not include all of the information that is in the registration statement and the additional documents filed as exhibits with it. For more detailed information, you should read the exhibits themselves.

We are subject to the informational requirements of the Exchange Act and, in accordance with it, are required to file reports, proxy and information statements, and other information with the SEC. Such reports, proxy and information statements and other information can be inspected and copied at the SEC's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549. The public may obtain information about the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. We electronically file reports, proxy and information statements, and other information with the SEC. The SEC maintains an Internet website that contains our electronically filed reports, proxy and information statements, and other information at <http://www.sec.gov>. We maintain an Internet website at <http://www.osi-systems.com>. Our common stock is traded on the NASDAQ National Market under the symbol OSIS, and our SEC reports, proxy statements and other information concerning us also can be inspected at the offices of Nasdaq Operations, 1735 K Street, N.W., Washington, D.C. 20006.

INDEMNIFICATION

Our articles of incorporation allows us to indemnify our officers and directors to the maximum extent allowed under California law. This includes indemnification for liability which could arise under the Securities Act. Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers or persons controlling the registrant under these provisions, the registrant has been informed 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.

No dealer, salesperson or other person has been authorized to give any information or to make any representations not contained in this prospectus in connection with the offering covered by this prospectus. If given or made, such information or representations must not be relied upon as having been authorized by OSI Systems, Inc., a Selling Stockholder, or any underwriter. This prospectus does not constitute an offer to sell, or a solicitation of any offer to buy, common stock in any jurisdiction to any person to whom, it is unlawful to make such an offer or solicitation in such jurisdiction. Neither the delivery of this prospectus nor any sale made under this prospectus shall, under any circumstances, create any implication that the information contained in this prospectus is correct as of any time after the date of the prospectus or that there has been no change in the affairs of OSI Systems, Inc. after the date of this prospectus.

2,691,000 SHARES

OSI SYSTEMS, INC.

COMMON STOCK

PROSPECTUS

December 20, 2001

PART II

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth an itemized estimate of fees and expenses payable by the registrant in connection with the offering described in this registration statement:

SEC registration fee.....	\$12,760
NASDAQ additional listing fee.....	\$26,910
Counsel fees and expenses.....	\$25,000
Accounting fees and expenses.....	\$ 7,500
Blue Sky fees and expenses.....	\$ 0
Transfer agent and registrar fees.....	\$ 2,000
Miscellaneous.....	\$ 2,000

Total.....	\$76,170

All of the above expenses will be paid by the registrant.

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Section 317 of the California General Corporations Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers who are parties or are threatened to be made parties to any proceeding (with certain exceptions) by reason of the fact that the person is or was an agent of the corporation, against expenses, judgments, fines, settlements and other amounts actually and reasonably incurred in connection with the proceeding if that person acted in good faith and in a manner the person reasonably believed to be in the best interests of the corporation.

Section 204 of the law provides that this limitation on liability has no effect on a director's liability (a) for acts or omissions that involve intentional misconduct or a knowing and culpable violation of law, (b) for acts or omissions that a director believes to be contrary to the best interests of the corporation or its shareholders or that involve the absence of good faith on the part of the director, (c) for any transaction from which a director derived an improper personal benefit, (d) for acts or omissions that show a reckless disregard for the director's duty to the corporation or its shareholders in circumstances in which the director was aware, or should have been aware, in the ordinary course of performing a director's duties, of a risk of a serious injury to the corporation or its shareholders, (e) for acts or omissions that constitute an unexcused pattern of inattention that amounts to an abdication of the director's duty to the corporation or its shareholders, (f) under Section 310 of the law (concerning contracts or transactions between the corporation and a director), or (g) under Section 316 of the law (directors' liability for improper dividends, loans and guarantees). Section 317 does not extend to acts or omissions of a director in his capacity as an officer. Further, Section 317 has no effect on claims arising under federal or state securities laws and does not affect the availability of injunctions and other equitable remedies available to our shareholders for any violation of a director's fiduciary duty to us or our shareholders. Although the validity and scope of the legislation underlying Section 317 have not yet been interpreted to a significant extent by the California courts, Section 317 may relieve directors of monetary liability to us for grossly negligent conduct, including conduct in situations involving attempted takeovers of our company.

In accordance with Section 317, our articles of incorporation eliminate the liability of each of our directors for monetary damages to the fullest extent permissible under California law. Our articles further authorize us to provide indemnification to our agents (including our officers and directors), subject to the limitations set forth above. We have entered into indemnification agreements with our officers and directors consistent with the foregoing provisions.

Additionally, we maintain insurance policies which insure our officers and directors against certain liabilities. The foregoing summaries are necessarily subject to the complete text of the statute, our articles, our bylaws and the agreements referred to above and are qualified in their entirety by reference thereto.

ITEM 16. EXHIBITS

Exhibit No.	Description
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5*	Opinion of Richman, Mann, Chizever, Phillips & Duboff
23.1*	Consent of Richman, Mann, Chizever, Phillips & Duboff. (included in Exhibit 5)
23.2*	Consent of Deloitte & Touche LLP

* Previously filed

ITEM 17. UNDERTAKINGS

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 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.

(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.

(4) 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 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to 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.

(5) 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 provisions described in Item 15, 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 Securities 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 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 Securities Act and will be governed by the final adjudication of such issue.

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 amended Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Hawthorne, State of California, on this 20/th/ day of December, 2001.

OSI Systems, Inc.

By: /s/ Deepak Chopra

Deepak Chopra, President and Chief
Executive Officer

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

Signature -----	Title -----	Date -----
/s/ Deepak Chopra ----- Deepak Chopra	Chairman of the Board, President and Chief Executive Officer (Principal Executive Officer)	December 20, 2001
/s/ Ajay Mehra ----- Ajay Mehra	Vice President, Chief Financial Officer (Principal Financial and Accounting Officer), Secretary and Director	December 20, 2001
/s/ Steven C. Good ----- Steven C. Good	Director	December 20, 2001
/s/ Meyer Luskin ----- Meyer Luskin	Director	December 20, 2001
/s/ Madan G. Syal ----- Madan G. Syal	Director	December 20, 2001
/s/ Chand R. Viswanathan ----- Chand R. Viswanathan	Director	December 20, 2001