

AMTECH SYSTEMS INC  
Form S-3  
January 18, 2017

As filed with the Securities and Exchange Commission on January 18, 2017

Registration No. 333-\_\_\_\_\_  
UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

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

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

Arizona 86-0411215  
(State or Other Jurisdiction of (I.R.S. Employer  
Incorporation or Organization) Identification Number)

131 South Clark Drive  
Tempe, AZ 85281  
(480) 967-5146  
(Address, including Zip Code, and Telephone Number, including Area Code of Registrant's Principal Executive  
Offices)

Robert T. Hass  
Chief Financial Officer  
Amtech Systems, Inc  
131 South Clark Drive  
Tempe, AZ 85281  
(480) 967-5146  
(Name, Address, including Zip Code and Telephone Number, including Area Code, of Agent For Service)

Copy to:  
Jaime R. Daddona  
Squire Patton Boggs (US) LLP  
1 East Washington Street  
Suite 2700  
Phoenix, AZ 85004  
(602) 528-4000

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Approximate date of commencement of proposed sale to 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.

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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 reinvestment plans, please check the following box.

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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 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 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.

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.

Large Accelerated Filer <input type="checkbox"/>	Accelerated Filer <input checked="" type="checkbox"/>	Non-accelerated Filer <input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller Reporting Company <input type="checkbox"/>
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**CALCULATION OF REGISTRATION FEE**

Title of each class of securities to be registered (1)	Amount to be registered (1)(2)	Proposed maximum offering price per share (2)(3)	Proposed maximum aggregate offering price (2)(3)	Amount of registration fee (2)(4)
Common Stock, par value \$.01 per share				
Preferred Stock				
Debt Securities				
Warrants				
Units				
Total:			\$50,000,000	\$5,795

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There are being registered under this registration statement such indeterminate number of shares of common stock and preferred stock; such indeterminate principal amount of debt securities; such indeterminate number of warrants to purchase common stock, preferred stock and/or debt securities; and such indeterminate number of units as may be sold by the registrant from time to time, which together shall have an aggregate initial offering price not to exceed \$50,000,000. If any debt securities are issued at an original issue discount, then the offering price of such debt securities shall be in such greater principal amount at maturity as shall result in an aggregate initial offering price not to exceed \$50,000,000, less the aggregate dollar amount of all securities previously issued hereunder.

- (1) Any securities registered hereunder may be sold separately or as units with other securities registered hereunder. The securities registered hereunder also include such indeterminate number of shares of common stock and preferred stock, amount of debt securities and warrants as may be issued upon conversion of or exchange for preferred stock or debt securities that provide for conversion or exchange; upon exercise of warrants; or pursuant to the anti-dilution provisions of any such securities. In addition, pursuant to Rule 416 under the Securities Act of 1933, as amended, the shares being registered hereunder include such indeterminate number of shares of common stock and preferred stock as may be issuable with respect to the shares being registered hereunder as a result of stock splits, stock dividends or similar transactions.
- (2) In United States dollars or the equivalent thereof in any other currency, currency unit or units or composite currency or currencies.

- (3) The proposed maximum per unit and aggregate offering prices per class of securities will be determined from time to time by the registrant in connection with the issuance by the registrant of the securities registered under this registration statement and is not specified as to each class of security pursuant to General Instruction II.D of Form S-3 under the Securities Act of 1933, as amended.

- (4) Calculated in accordance with Rule 457(o) under the Securities Act of 1933, as amended.

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

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

SUBJECT TO COMPLETION, DATED JANUARY 18, 2017

PROSPECTUS

Amtech Systems, Inc.  
\$50,000,000  
Common Stock  
Preferred Stock  
Debt Securities  
Warrants  
Units

We may, from time to time, offer and sell any combination of securities described in this prospectus, either separately or in one or more series or offerings and on terms that we will determine at the time of the offering, and we may continue to sell our securities in other lawful ways. The aggregate initial offering price of all securities sold pursuant to this prospectus will not exceed \$50,000,000, or such lesser amount as we may be permitted at the time of a particular offering to sell under General instruction I.B.6 of Form S-3.

We will provide specific terms of any securities that we actually offer for sale in supplements to this prospectus. Any prospectus supplement may also add, update or change information contained in this prospectus. The names of any underwriters, dealers or agents involved in the sale of our securities and their compensation will be described in the applicable prospectus supplement. The net proceeds we expect to receive from such sales will be set forth in such prospectus supplement.

This prospectus may not be used to sell securities unless accompanied by a prospectus supplement. You should carefully read this prospectus and the applicable prospectus supplement as well as the documents incorporated or deemed to be incorporated by reference in this prospectus before you purchase any of the securities offered hereby. This prospectus also covers common stock or preferred stock issuable upon exercise, conversion or exchange of warrants, rights and/or debt securities.

Our common stock has a par value \$0.01 per share, and we are authorized to issue 100,000,000 shares of our Common Stock. Our common stock is traded on the NASDAQ Stock Market under the symbol "ASYS". On January 13, 2017, there were 13,179,535 shares of our common stock issued and outstanding in total, our non-affiliates held 10,249,590 of those shares, the closing price of our common stock on NASDAQ was \$4.33 per share, the aggregate market value those total outstanding shares was \$57,067,387, and the aggregate market value of the

outstanding shares of our common stock then held by our non-affiliates was \$44,380,725. We have not offered any securities pursuant to General Instruction I.B.6 of Form S-3 during the 12 calendar months prior to and including the date hereof.

Our principal offices are located at 131 South Clark Drive, Tempe, Arizona 85281 and our telephone number is (480) 967-5146.

**INVESTING IN OUR SECURITIES INVOLVES RISKS. YOU SHOULD CAREFULLY CONSIDER THE RISKS THAT WE HAVE DESCRIBED IN THIS PROSPECTUS AND IN THE ACCOMPANYING PROSPECTUS SUPPLEMENT BEFORE YOU INVEST. SEE "RISK FACTORS" ON PAGE 2.**

You should rely only on the information contained or expressly incorporated by reference in this prospectus, including each applicable prospectus supplement and incorporated report or other filing by us with the SEC. No one is authorized to provide you with any different or inconsistent information. If they do, you should not rely on it. You cannot assume that any information in this prospectus would be accurate for other than the specified dates and periods, since the corresponding information for later dates and periods may be materially different.

This 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 of these securities is not permitted.

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

The date of this prospectus is January 18, 2017.

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## ABOUT THIS PROSPECTUS

This prospectus is part of a shelf registration statement that we filed with the Securities and Exchange Commission (the “SEC”). By using a shelf registration statement, we may offer and sell any combination of the securities described in this prospectus, in one or more offerings from time to time over the next three years, up to a total dollar amount of \$50,000,000. This prospectus provides you with general information. Each time we sell securities under this shelf registration statement, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement also may add, update or change information contained in the prospectus. You should read both this prospectus and the prospectus supplement related to any offering as well as additional information described under the headings “Incorporation By Reference” and “Where You Can Find More Information.”

You should rely only on the information that we have provided or incorporated by reference in this prospectus, any prospectus supplement, any free writing prospectus or other written communication we may authorize to be delivered to you. We have not provided, and have not authorized anyone else to provide, you with different or additional information.

This prospectus, any prospectus supplement, any free writing prospectus and any other written communication do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they specifically relate, nor does this prospectus, any prospectus supplement, any free writing prospectus or any other written communication constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information contained in this prospectus or in the documents incorporated by reference herein, any prospectus supplement, any free writing prospectus or other written communication is accurate as of any date other than the date noted therein or, in the case of documents incorporated by reference, the filing date thereof, regardless of its time of delivery, and you should not consider any information in this prospectus or in the documents incorporated by reference herein, any prospectus supplement, any free writing prospectus or other written communication to be investment, legal or tax advice. We encourage you to consult your own counsel, accountant and other advisors for legal, tax, business, financial and related advice regarding an investment in our securities.

For further information about our business and the securities, you should refer to the registration statement and its exhibits. The exhibits to our registration statement contain the full text of certain contracts and other important documents we have summarized in this prospectus. Since these summaries may not contain all the information that you may find important in deciding whether to purchase the securities we may offer, you should review the full text of these documents.

This prospectus does not contain all the information provided in the registration statement we filed with the SEC. For further information about us or our securities offered hereby, you should refer to that registration statement, which you can obtain from the SEC as described below under the caption “Where You Can Find More Information.”

We may sell securities through underwriters or dealers, through agents, directly to purchasers or through a combination of these methods. We and our agents reserve the sole right to accept or reject, in whole or in part, any proposed purchase of securities. The prospectus supplement, which we will provide to you each time we offer securities, will set forth the names of any underwriters, agents or others involved in the sale of securities and any applicable fee, commission or discount arrangements with them. See the information described below under the caption “Plan of Distribution.”

In this prospectus, the terms “we,” “our,” “us,” “Amtech” and the “Company” refer to Amtech Systems, Inc., unless otherwise specified.



## PROSPECTUS SUMMARY

The following summary does not contain all of the information that may be important to purchasers of our securities. Prospective purchasers of securities should carefully review the detailed information and financial statements, including the notes thereto, appearing elsewhere in or incorporated by reference into this prospectus.

### Our Company

We are a leading, global manufacturer of capital equipment, including thermal processing, silicon wafer handling automation, and related consumables used in fabricating solar cells, LED and semiconductor devices. Semiconductors, or semiconductor chips, are fabricated on silicon wafer substrates, sliced from ingots, and are part of the circuitry, or electronic components, of many products including solar cells, computers, telecommunications devices, automotive products, consumer goods, and industrial automation and control systems. The Company's wafer handling, thermal processing and consumable products currently address the diffusion, oxidation, and deposition steps, including atomic layer deposition used in the fabrication of solar cells, LEDs, semiconductors, microelectromechanical systems ("MEMS") and the polishing of newly sliced silicon wafers.

Our major emphasis in the solar industry is the development of thermal processes, and deposition for solar cell manufacturing, which we believe, collectively, are key to driving higher cell efficiencies. The markets we serve are experiencing rapid technological advances and are, historically, cyclical. Therefore, future profitability and growth depend on our ability to develop or acquire and market profitable new technology products, and on our ability to adapt to cyclical trends.

We believe our product portfolio, developed through a track record of technological innovation as well as the successful integration of key acquisitions, reduces the cost of solar cell manufacturing by increasing solar cell efficiency, increasing throughput and increasing yields. We have been providing manufacturing solutions to the semiconductor industry for over 30 years and have leveraged our semiconductor technology and industry presence to capitalize on growth opportunities in the solar industry. Our customers use our equipment to manufacture solar cells, semiconductors, silicon wafers and MEMS, which are used in end markets such as solar power, telecommunications, consumer electronics, computers, automotive and mobile hand-held devices. Through the acquisition of BTU International, Inc. in fiscal 2015, we expanded our thermal processing capability with the supply of solder reflow systems used for surface mount and semiconductor packaging applications in the electronics assembly market, and custom equipment for multiple industrial markets. Also in fiscal 2015, we expanded our participation in the solar market through the acquisition of a controlling interest in SoLayTec B.V., which provides Atomic Layer Deposition systems used in high efficiency solar cells. To complement our research and development efforts, we also sell our equipment to, and coordinate certain development efforts with, research institutes, universities and customers.

For fiscal 2016, we recognized net revenue of \$120 million, which included \$61 million of solar revenue or approximately 51% of our total revenue.

### Our Offices

We maintain our principal executive offices at 131 South Clark Drive, Tempe, Arizona 85281. Our telephone number is (480) 967-5146. Our website is located at [www.amtechsystems.com](http://www.amtechsystems.com). Other than as described in "Where You Can Find More Information" below, the information on, or that can be accessed through, our web site is not incorporated by reference in this prospectus or any prospectus supplement, and you should not consider it to be a part of this prospectus or any prospectus supplement. Our web site address is included as an inactive textual reference only.

### Maximum value of the Shares to be Offered under this Prospectus

We will be offering and selling our securities pursuant to this prospectus in accordance with General Instruction I.B.6 of Form S-3, which permits us to use Form S-3 to sell securities during any 12 month period having an aggregate market value of no more than one-third of the aggregate market value of the voting and non-voting common equity held by our non-affiliates. On January 13, 2017, our non-affiliates held such equity having an aggregate market value of \$44,380,725 so our maximum offering would be \$14,793,500 if the equity held by our non-affiliates does not increase and our stock price remains the same. However, if there is an increase in either our stock price or the number of shares held by our non-affiliates, or both, the amount of our maximum offering under that rule also would increase. Conversely, decreases in them would cause the amount of our maximum offering and remaining availability under that rule to likewise decrease (which may stop further sales but would not affect previously permitted sales). Sales of our Common Stock or other securities not made under I.B.6 (including private placements and S-1 offerings) do not count against such maximum or remaining availability.

### Our Determination of Offering Prices

We from time to time will determine the prices at which our securities will be sold, which may and likely will vary over time and may be negotiated or based directly or indirectly on the market price of our common stock at the time. We will specify the price(s), share amount, expected net proceeds, manner of distribution and other terms of each offering in the applicable prospectus supplement. We will try to maximize the net proceeds we receive in each sale, and we hope to sell our securities for more than our net book value per share (and thus avoid diluting the equity of our existing stockholders), but there can be no assurance that we will be able to do so.

### Our Sales and Distributions

We may offer and sell these securities under this prospectus directly to investors (which may include our affiliates) or through underwriters, dealers or agents as we may determine from time to time. If we designate or engage any underwriter, dealer or agent in such offering, we will identify them and their compensation in the applicable prospectus supplement. See "PLAN OF DISTRIBUTION" on page 33 of this prospectus.

### No Selling Stockholders

None of our existing stockholders will be offering any of their respective securities under this prospectus.

### RISK FACTORS

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading "Risk Factors" contained in the applicable prospectus supplement and any related free writing prospectus, and in our most recent Annual Report on Form 10-K as amended, or any updates in our Quarterly Reports on Form 10-Q, together with all of the other information appearing in this prospectus or incorporated by reference into this prospectus and any applicable prospectus supplement, before deciding whether to purchase any of the securities being registered pursuant to the registration statement of which this prospectus is a part. Each of the risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities, and the occurrence of any of these risks might cause you to lose all or a part of your investment.

### WHERE YOU CAN FIND MORE INFORMATION

Edgar Filing: AMTECH SYSTEMS INC - Form S-3

We file annual, quarterly and current reports, proxy statements and other information with the SEC under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). You may access our filings through our website at [www.amtechsystems.com](http://www.amtechsystems.com), free of charge, as soon as reasonably practical after we electronically file them with or furnish them to the SEC. Other information contained in our website is not incorporated by reference in, and should

not be considered a part of, this prospectus or any accompanying prospectus supplement. You also may read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. Our SEC filings are also available to the public from the SEC's website at [www.sec.gov](http://www.sec.gov).

This prospectus is part of a registration statement on Form S-3 that we filed with the SEC to register the securities offered hereby under the Securities Act of 1933, as amended (the "Securities Act"). This prospectus does not contain all of the information included in the registration statement, including certain exhibits and schedules. You may obtain the registration statement and exhibits to the registration statement from the SEC at the address listed above or from the SEC's website – [www.sec.gov](http://www.sec.gov).

#### FORWARD-LOOKING STATEMENTS

This prospectus and each prospectus supplement include and incorporate forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. All statements, other than statements of historical facts, included or incorporated in this prospectus or any prospectus supplement are hereby identified as forward-looking statements. Examples of forward-looking statements include, but are not limited to, statements regarding our strategy, prospects, plans, objectives, future operations, future revenue and earnings, projected margins and expenses, technological innovations, future products or product development, product development strategies, potential acquisitions or strategic alliances, the success of particular product or marketing programs, the amount of revenue generated as a result of sales to significant customers, financial position, and liquidity and anticipated cash needs and availability are forward-looking statements. The words "anticipates," "believes," "could," "confident," "continue," "estimates," "expects," "forecasts," "hopes," "intends," "likely," "may," "plans," "possible," "predicts," "projects," "should," "will," "would" and the negatives or variations of such words and similar expressions are intended to identify forward-looking statements.

You should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the forward-looking statements we make. Among the factors that could cause actual results to differ materially are the factors discussed under the "Risk Factors" heading in our Annual Report on Form 10-K as amended for the fiscal year ended September 30, 2016. We also will include or incorporate by reference in each prospectus supplement important factors that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Should one or more known or unknown risks or uncertainties materialize, or should underlying assumptions prove inaccurate, actual results could differ materially from past results and those anticipated, estimated, projected or implied by these forward-looking statements. You should consider these factors and the other cautionary statements made in this prospectus, any prospectus supplement or the documents we incorporate by reference in this prospectus as being applicable to all related forward-looking statements wherever they appear in this prospectus, any prospectus supplement or the documents incorporated by reference. While we may elect to update forward-looking statements wherever they appear in this prospectus, any prospectus supplement or the documents incorporated by reference, we do not assume, and specifically disclaim, any obligation to do so, whether as a result of new information, future events or otherwise. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

#### INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

This prospectus constitutes a part of a registration statement on Form S-3 filed under the Securities Act. As permitted by the SEC's rules, this prospectus and any prospectus supplement, which form a part of the registration statement, do not contain all the information that is included in the registration statement. You will find additional information about us in the registration statement. Any statements made in this prospectus or any prospectus supplement concerning legal documents are not necessarily complete and you should read the documents that are filed as exhibits to the registration statement or otherwise filed with the SEC for a more complete understanding of the

document or matter.

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The SEC allows us to incorporate by reference the information we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information that we incorporate by reference is considered to be part of this prospectus. Information that we file with the SEC in the future and incorporate by reference in this prospectus automatically updates and supersedes previously filed information as applicable.

We incorporate by reference into this prospectus the following documents filed by us with the SEC, other than any portion of any such documents that are not deemed “filed” under the Exchange Act in accordance with the Exchange Act and applicable SEC rules:

Annual Report on Form 10-K as amended for the fiscal year ended September 30, 2016 filed with the SEC on December 1, 2016;

Current Report on Form 8-K filed with the SEC on November 16, 2016; and

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

We also incorporate by reference into this prospectus all documents (other than any portions of any such documents that are not deemed “filed” under the Exchange Act in accordance with the Exchange Act and applicable SEC rules) filed by us under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement and before effectiveness of the registration statement, and after the date of this prospectus.

You may request a copy of these filings that are incorporated by reference into this prospectus, which we shall deliver to you, together with all exhibits thereto, at no cost, by writing or telephoning us as follows:

Amtech Systems, Inc.  
Attention: Corporate Secretary  
131 South Clark Drive  
Tempe, Arizona 85281  
(480) 967-5146

Any statement contained in a document that is incorporated by reference will be modified or superseded for all purposes to the extent that a statement contained in this prospectus or any accompanying prospectus supplement, or in any other document that is subsequently filed with the SEC and incorporated by reference, modifies or is contrary to that previous statement. Any statement so modified or superseded will not be deemed a part of this prospectus or any accompanying prospectus supplement, except as so modified or superseded. Since information that we later file with the SEC will update and supersede previously incorporated information, you should look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or any accompanying prospectus supplement or in any documents previously incorporated by reference have been modified or superseded.

## PROSPECTUS SUPPLEMENTS

This prospectus provides you with a general description of the proposed offering of our securities. Each time that we sell securities under this prospectus, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may add to, update or change information contained in this prospectus and should be read as superseding this prospectus. You should read both this prospectus and any prospectus supplement together with additional information described under the headings “Incorporation of Certain Information by Reference” and “Where You Can Find More Information.”

The prospectus supplement will describe the terms of any offering of securities, including the offering price to the public in that offering, the purchase price and net proceeds of that offering, and the other specific terms related to that



offering of securities.

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## USE OF PROCEEDS

Except as may be otherwise set forth in any prospectus supplement accompanying this prospectus, we will use the net proceeds we receive from sales of securities offered hereby for general corporate purposes, which may include the repayment of indebtedness outstanding from time to time and for working capital, capital expenditures, acquisitions and repurchases of our common stock or other securities. Pending these uses, the net proceeds may also be temporarily invested in short-term securities.

## SECURITIES WE MAY OFFER

The descriptions of the securities contained in this prospectus, together with the applicable prospectus supplements, summarize the material terms and provisions of the various types of securities that we may offer. We will describe in the applicable prospectus supplement relating to any securities the particular terms of the securities offered by that prospectus supplement. If we indicate in the applicable prospectus supplement, the terms of the securities may differ from the terms we have summarized below. We will also include in the prospectus supplement information, when applicable, about material U.S. federal income tax considerations relating to the securities and the securities exchange, if any, on which the securities will be listed.

We may sell from time to time, in one or more offerings, any one or more of the following:

- common stock, including the associated rights;
- preferred stock;
- debt securities;
- warrants to purchase common stock, preferred stock and/or debt securities;
- units consisting of common stock, preferred stock, debt securities and/or warrants in any combination; or
- any combination of the foregoing securities.

In this prospectus, we refer to the common stock (including the associated rights), preferred stock, debt securities, warrants and units collectively as “securities.” The total dollar amount of all securities that we may issue under this prospectus will not exceed \$50,000,000.

If we issue debt securities at a discount from their original stated principal amount, then, for purposes of calculating the total dollar amount of all securities issued under this prospectus, we will treat the initial offering price of the debt securities as the total original principal amount of the debt securities.

This prospectus may not be used to consummate a sale of securities unless it is accompanied by a prospectus supplement.

## DESCRIPTION OF COMMON AND PREFERRED STOCK

This section describes the general terms of our common stock and preferred stock. A prospectus supplement may provide information that is different from this prospectus. If the information in a prospectus supplement with respect to our common stock or preferred stock being offered differs from this prospectus, you should rely on the information in the prospectus supplement. A copy of our amended and restated articles of incorporation, as amended (“articles of incorporation”) has been incorporated by reference from our filings with the SEC as an exhibit to the registration statement.

### Common Stock

Our common stock and the rights of the holders of our common stock are subject to the applicable provisions of Arizona law, our articles of incorporation, our bylaws, as amended (“bylaws”), and the rights of the holders of our preferred stock, if any. Certain provisions of Arizona law and our articles of incorporation and bylaws are described under the heading “Certain Provisions of Arizona Law and the Company’s Articles of Incorporation and Bylaws” below.



As of December 31, 2016, under our articles of incorporation, we had the authority to issue 100,000,000 shares of common stock, par value \$.01 per share, of which 13,179,535 shares of our common stock were outstanding as of that date. As of December 31, 2016, we had outstanding stock options to purchase 1,885,941 shares of our common stock, of which 1,375,174 shares of common stock were issuable upon exercise of vested stock options as of that date.

**Voting Rights.** Each outstanding share of our common stock is entitled to one vote per share of record on all matters submitted to a vote of shareholders and to vote together as a single class for the election of directors and in respect of other corporate matters. At a meeting of shareholders at which a quorum is present, all questions other than the contested election of directors shall be decided by determining if the votes cast by shareholders favoring the action exceed the votes cast by shareholders opposing the action, without regard to abstentions, unless the matter is one upon which a different vote is required by express provision of Arizona law, the NASDAQ or our articles of incorporation or bylaws. Directors, in a contested election, will be elected by a plurality of the votes of the shares present at a meeting. Holders of shares of common stock have cumulative voting rights with respect to the election of directors.

**Dividends.** Holders of our common stock are entitled to receive dividends or other distributions when, as and if declared by our board of directors. The right of our board of directors to declare dividends, however, is subject to any rights of the holders of other classes of our capital stock and the availability of sufficient funds under Arizona law to pay dividends.

**Preemptive Rights.** Other than as described under the heading "Stockholders' Rights Plan" below, the holders of our common stock do not have preemptive rights to purchase or subscribe for any of our capital stock or other securities.

**Redemption.** The shares of our common stock are not subject to redemption by operation of a sinking fund or otherwise.

**Liquidation Rights.** In the event of any liquidation, dissolution or winding up of the Company, subject to the rights, if any, of the holders of other classes of our capital stock, the holders of shares of our common stock are entitled to receive any of our assets available for distribution to our shareholders ratably in proportion to the number of shares held by them.

**Listing.** Our common stock is listed on the NASDAQ under the symbol "ASYS."

**Transfer Agent and Registrar.** The transfer agent and registrar for our common stock is Computershare Trust Company, 350 Indiana Street, Suite 800, Golden, Colorado 80401.

#### Preferred Stock

A certificate of designation or amendment to our articles of incorporation will specify the terms of the preferred stock being offered, and will be filed or incorporated by reference as an exhibit to the registration statement before the preferred stock is issued. The following description of our preferred stock, and any description of the preferred stock in a prospectus supplement, may not be complete and is subject to, and qualified in its entirety by reference to, Arizona law and the actual terms and provisions contained in our articles of incorporation and bylaws, each as amended from time to time.

As of December 31, 2016, under our articles of incorporation, we had the authority to issue 100,000,000 shares of preferred stock, which are issuable in series on terms to be determined by our board of directors. Accordingly, our board of directors is authorized, without action by the shareholders, to issue preferred stock from time to time with such dividend, liquidation, conversion, voting and other rights and restrictions as it may determine. As of December 31, 2016, our board of directors had designated 540,000 shares as Series A Convertible Preferred Stock (the "Series A

Preferred Stock"), but no shares of the Series A Preferred Stock were outstanding. No Series A Preferred Stock will be issued in connection with this registration statement, rather new series of preferred stock with different rights from the Series A Preferred Stock may be issued.

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The terms of any particular series of preferred stock will be described in the prospectus supplement relating to that particular series of preferred stock, including, where applicable:

- the title and stated value of the preferred stock;
- the number of shares of preferred stock to be issued and the offering price of the preferred stock;
- any dividend rights;
- any dividend rates, periods, or payment dates, or methods of calculation of dividends applicable to the preferred stock;
- the date from which distributions on the preferred stock shall accumulate, if applicable;
- the terms and conditions, if applicable, upon which the preferred stock will be convertible into our common stock, including the conversion price (or manner of calculation thereof);
- any right to convert the preferred stock into a different type of security;
- any rights and preferences upon our liquidation or winding up of our affairs;
- any terms of redemption;
- the procedures for any auction and remarketing, if any, for the preferred stock;
- the provisions for a sinking fund, if any, for the preferred stock;
- any listing of the preferred stock on any securities exchange;
- a discussion of federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to distribution rights (including whether any liquidation preference as to the preferred stock will be treated as a liability for purposes of determining the availability of assets for distributions to holders of stock ranking junior to the shares of preferred stock as to distribution rights);
- any limitations on issuance of any series of preferred stock ranking senior to or on a parity with the series of preferred stock being offered as to distribution rights and rights upon the liquidation, dissolution or winding up of our affairs;
- and
- any other specific terms, preferences, rights, limitations, or restrictions of the preferred stock.

Registrar and Transfer Agent. The registrar and transfer agent for our preferred stock will be set forth in the applicable prospectus supplement.

#### Certain Provisions of Arizona Law and The Company's Articles of Incorporation and Bylaws

Certain provisions of our articles of incorporation and bylaws and Arizona law could make our acquisition by a third party, a change in our incumbent management or a similar change in control more difficult, including:

- an acquisition of us by means of a tender or exchange offer;
- an acquisition of us by means of a proxy contest or otherwise; or
- the removal of a majority or all of our incumbent officers and directors.

These provisions, which are summarized below, are likely to discourage certain types of coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that these provisions help to protect our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us, and that this benefit outweighs the potential disadvantages of discouraging such a proposal because our ability to negotiate with the proponent could result in an improvement of the terms of the proposal. The existence of these provisions which are described below could limit the price that investors might otherwise pay in the future for our securities. This description is intended

as a summary only and is qualified in its entirety by reference to our articles of incorporation and bylaws, as well as Arizona law.

Articles of Incorporation, Bylaws and Arizona Law