

## 2008 Annual Report on Form 10-K



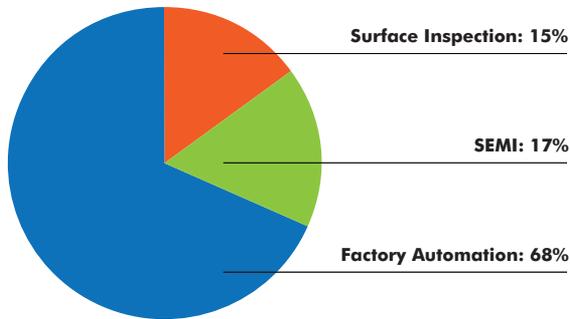
In-Sight

## Cognex 2008 Financial Highlights

Dollars in millions, except per share amounts

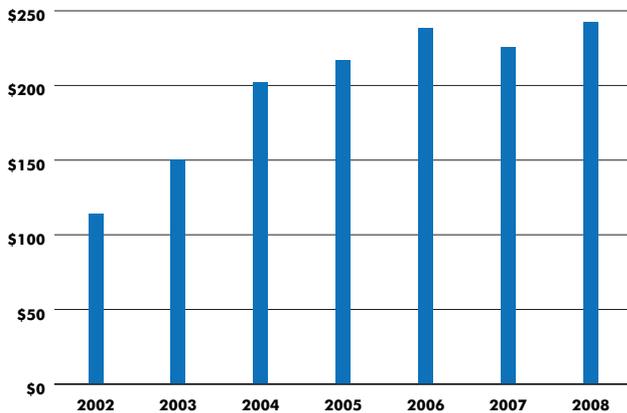
	2008	2007	2006
Revenue	<b>\$242.7</b>	\$225.7	\$238.3
Gross Margin	<b>72%</b>	71%	73%
Income From Continuing Operations	<b>\$30.5</b>	\$27.5	\$40.0
Income Per Diluted Share From Continuing Operations	<b>\$0.73</b>	\$0.63	\$0.86
Dividend Per Common Share	<b>\$0.47</b>	\$0.34	\$0.33
Book Value Per Common Share	<b>\$10.42</b>	\$10.99	\$10.67
Total Assets	<b>\$474.0</b>	\$539.5	\$528.7
Shareholders' Equity	<b>\$413.1</b>	\$476.4	\$473.9
Long-Term Debt	<b>\$0</b>	\$0	\$0

### 2008 Revenue by Market



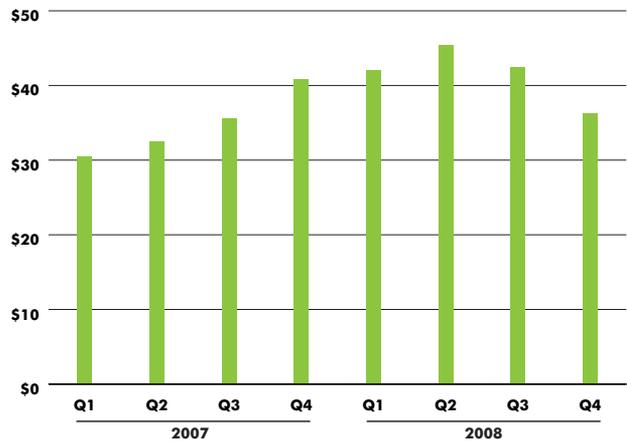
### Cognex Revenue 2002 - 2008

Dollars in millions



### MVSD Factory Automation Revenue by Quarter

Dollars in millions



## Cognex Corporation: *Letter to Shareholders*

### Dear Shareholders,

The Cognex motto is, “*Work hard! Play hard! Move fast!*” And I know that in these difficult times you want me to move even faster than usual to bring in new business opportunities instead of spending my time... and the company’s money...producing a fancy printed annual report. So that’s what I’ve decided to do...I’ve drafted a quick summary that provides an overview of what happened in our business in 2008 and what we expect to happen in 2009 and beyond.

After reading these notes (or even without reading them), you can go online to <http://investor.cognex.com> to browse around my “virtual” office and see what you can learn from the items you’ll find there. You can think of it as a “do-it-yourself” annual report that saves me time and Cognex money! I hope that you’ll enjoy it. And, I hope that next year we can save even more by sending fewer “hard copies” out to shareholders.

### Cognex’s Vision

Cognex makes vision systems, vision sensors and vision software.

The primary use of these products is in factories where our systems continuously observe items while they are being made (the items can be virtually anything from a low-tech chocolate chip cookie to a very high-tech computer chip). Based on what our systems see, they make decisions about those products and communicate those decisions to the rest of the production line.

Manufacturers use Cognex vision to maximize product quality and, at the same time, to minimize production cost.

Vision systems and sensors consist of three main parts: an image capture device (a specialized digital camera), a computing device (either a digital signal processing chip or, in some cases, a PC) and intelligent software. And today, all of that comes in a package small enough to fit into your shirt pocket!

You want to automatically place labels on medicine bottles at the rate of 10 per second? And you want to make sure that they are the correct labels, that they are not crooked or torn, and that the printing is clear? Machine vision can do that. You want to read the code that is stamped on engine pistons to make sure that they go into the correct cylinder? Well, our vision systems and sensors can do that too (when used that way, the vision system is called an I.D. reader).

Cognex sells its vision systems, vision sensors and vision software into three major markets:

- **Factory Automation:** Manufacturers who use our products to automate various processes in their manufacturing operations.
- **Surface Inspection:** Manufacturers of materials such as steel, paper and plastics that use our products to find and classify defects in materials that are made at very high speeds in a continuous process.

- **SEMI:** Manufacturers of capital equipment for the semiconductor and electronics industry that integrate our products into equipment that they manufacture and then sell to wafer fabs and electronic assembly houses around the world.

### 2008 Financial Results: A Good Year, Overall

2008 started off looking great at Cognex; we had strong growth in bookings during the first half of the year, and all of us were feeling very optimistic. But the tone of business changed in Q3 when we started to see our bookings fall due to the global economic crisis. By the end of Q4 bookings had dropped 23% from the previous quarter! And the most disconcerting part to us is that the downturn came out of the blue after a very strong first half, and it had nothing at all to do with our products or our channels.

Although that slowdown ruined our chances of meeting our ambitious growth plans for the year, we did, nevertheless, turn in rather good results for the full year:

In 2008, total revenue increased 8% to \$242.7 million from the \$225.7 million that we reported in 2007. Income from continuing operations increased 11% in 2008 to \$30.5 million from \$27.5 million in 2007. And, finally, our income from continuing operations per diluted share increased a whopping 17%, due to both the earnings increase and to fewer shares outstanding from our stock-buyback program.

### **Factory Automation**

Our Factory Automation business was our largest business segment in 2008. With \$166.1 million in revenue, it represented 68% of our business for the year. Factory Automation showed good revenue growth during 2008, increasing 17% over 2007. Since 2005, Cognex has been working hard to build our sales channels in order to better serve the large Factory Automation market. And that hard work has paid off; today, we have very effective channels calling on customers around the world. Those customers are currently served by 261 of our own direct sales and applications engineers and a network of 325 channel partners. During 2008 that global presence helped Cognex win some very large strategic corporate accounts and close some big orders. For example, a global consumer products company is standardizing on Cognex at more than 50 plants around the world, and another has named Cognex its exclusive vision supplier. These customers chose Cognex because of our strong product offering and because of our local support at customers' plants around the globe.

### **Surface Inspection**

Another very bright spot for Cognex during 2008 was our Surface Inspection business, which reported record revenue of \$36.1 million, representing 22% growth over 2007. These record results were driven primarily by higher sales in

the metals industry. The growth in our metals business was due partly to an increase in the global demand for steel, especially in Asia, but was also the result of the hard work done by the SISD sales team to increase our market share. In addition to the inroads that we made in the steel segment, we also had some very good successes in the paper market during 2008. For example, last year we shipped the largest web inspection system in the world (it contained more than 100 cameras!) to a large paper manufacturer in Asia; the value of that order was more than \$2 million!

### **SEMI**

So, you may be asking yourself, "With all that good news why only 8% revenue growth?" Well, our overall results would have been much better in 2008 if not for a continuing deep slump in our SEMI business, the last of the three business segments we serve. This segment consists of companies that buy our vision products and incorporate them into the capital equipment that they manufacture and then sell to companies that make semiconductor chips or that assemble printed circuit boards.

During 2008, revenue from these customers declined dramatically in every geographic region; the end result was a revenue decline for SEMI of 25% from 2007. As I write these notes, things are still looking very grim in this segment... one of our largest SEMI customers recently told us that demand for

their systems is so slow that they are operating their factories only 2 days a week! And when customers aren't buying their machines, these capital equipment makers don't buy our vision systems.

In the recent past, a SEMI downturn of this severity would have dragged our entire business into the red. However, because of the good decisions that we made years ago to expand into both Factory Automation and Surface Inspection, we were able to report a rather good year in 2008 in spite of this SEMI downturn.

### **Cash is King**

As you know, Cognex has a very strong business model that typically generates quite a bit of cash. And since Q3 of 2003, Cognex has been using some of that cash to pay a quarterly dividend. During 2008, we paid out dividends to our shareholders totaling \$19.3 million or \$0.47 per share. And, the company spent an additional \$93 million during 2008 to buy back a total of 4.6 million shares of the company's stock. (At that time, business was strong, so buying our stock back at an average price of \$20 per share looked like a good investment. And it seemed to be a cost-effective way to lower earnings dilution. But now, with 20/20 hindsight and the stock down 50% or so from where we bought it, it sure looks dumb!)

Even though we spent over \$110 million on dividends and share buybacks in 2008, we ended the

year in a solid financial position with \$221 million in cash and investments and no debt. In the past, some shareholders and analysts commented that with all of our cash we looked more like a bank than a high tech company, but with the current problems that banks are now in, that comment no longer rings true...thankfully!

### **2008: Business Decisions That Will Impact Our Future**

There are thousands of business decisions made each day, and the success of any enterprise depends in very large part on the senior management team's ability to make those decisions correctly and in a timely manner (a good decision made too late is a bad decision). Here are some of the important decisions that we made in 2008; time will tell if they were the correct ones to choose, and if we made them correctly.

#### ***We expanded our business in some areas...***

In 2008 we opened offices in several key geographic regions around the globe where business has the greatest potential to grow. In March we opened an office in Toyota City, Japan, in order to better serve the Japanese automotive industry (in view of the recent news coming out of Toyota, however, it appears that this was a bad decision). We expanded our presence in China, where we already have two offices serving our Modular Vision Systems Division, with a new office dedi-

cated to serving Surface Inspection customers. And, we also opened offices in Vienna, Austria and Budapest, Hungary to better serve customers in Eastern Europe, which is becoming an increasingly important manufacturing center.

In 2008, we also expanded our senior management team. In June of 2008 Rob Willett joined Cognex as the President of our largest division, the Modular Vision Systems Division (MVSD). Rob has an impressive track record of growing and managing technology businesses, and he also brings a focus on making organizations more efficient. He is off to a great start analyzing our current MVSD business opportunities, spending time on the road meeting our customers and partners, and helping me make decisions on markets and products that will affect our future.

In November we hired Tom Nash as the President of our Surface Inspection Systems Division (SISD). Tom has significant past experience managing sales, marketing, operations, and product development for companies in the global automation industry. He also spent more than ten years overseeing businesses in Asia, which will be important in helping Cognex continue...or even accelerate....SISD's current strong growth in that part of the world.

Finally, Markku Jaaskelainen, who grew our SISD revenue from \$10.6 million to \$36.1 million since joining Cognex in 1999, has now

moved over to MVSD where he will head up our Vision Software business unit. We expect Markku to replicate the great success he had at SISD by leveraging his strategic market development skills to broaden the number and type of customers for Vision Software beyond the current, SEMI-dominated base.

#### ***...and we divested other parts of our business.***

While we increased resources in areas with high growth potential, we also made the decision to reduce our investment in areas where the returns appeared to be less promising. That included putting some R&D projects on the back burner, and pulling the plug on investments that did not work out as we had hoped, such as selling our Lane Departure Warning business. Most of the bets that we've made in the past on new products and markets have paid off, and on those that didn't, we exited quickly at minimal cost. You've got to know when to hold 'em, and know when to fold 'em.

#### **2009: Heavy Weather Ahead**

Last fall when the banking crisis and its effect on the global economy hit the news, it became clear to us that Cognex's business would soon be impacted. We acted quickly to better align our business expenses with the lower level of revenue that we expected in 2009 by implementing the following cost-cutting measures:

- In November, we announced plans to close our Duluth, Georgia facility in mid-2009.

## **Cognex Corporation: Letter to Shareholders** *(continued)*

In total the company estimates a restructuring charge of \$1.5 million related to this action; \$258,000 of that was recognized in Q4 of 2008, and the remainder will be recognized primarily in the first half of 2009. While the company anticipates that those restructuring costs will offset the expense savings for 2009, this action should result in a savings of approximately \$2.5 million per year starting in 2010.

- We eliminated approximately 60 positions (7% of the workforce), primarily in North America.
- We delayed or canceled certain R&D projects and redeployed those engineering resources onto projects with higher growth potential.

As I sit here now writing this letter, business conditions have become far more severe than we predicted last fall, and our bookings continue to soften every day. It is too soon to tell if the steps that we took in late 2008 have been sufficient, or if we will need to tighten our belt even further before the heavy weather subsides. It's bad enough to make you puke!

### **Betting on the Future**

Nothing lasts forever. The "irrational exuberance" of the past fifteen or more years came to an end in late 2008, and, although it is hard to believe right now, the tough economic times that the world is mired in will also come to an end some

day. The good news at Cognex is that we have a strong balance sheet with zero debt, and, therefore, we can not only hold out for better times, we can continue to invest in product development and in growing our channels to ensure that when good times resume...as they surely will...we will be in a great position to move fast and capitalize on those investments.

Here are a few areas that we will continue to invest in because they hold the greatest promise for future growth:

### **Mitsubishi Partnership**

We have been successful in growing our Factory Automation business in North America, Europe and in Asia, but in Japan, which is one of the world's largest markets for industrial automation, our Factory Automation business has been disappointing. Why? Unlike the rest of the world where competition is relatively weak, we have two large and well-known local competitors in Japan...Omron and Keyence.

Both of those companies offer a wide range of automation products, in addition to vision. And they both have extensive sales channels capable of reaching every factory in Japan. Our vision systems and sensors are technically superior to theirs, so we are able to win business...but only when their products can't do the job. The bottom line is that Cognex has not been able to

gain a toehold in this large market (well...maybe a toehold, but just the little toe!). But that's going to change....

### *The enemy of my enemy...*

Mitsubishi Electric, the largest manufacturer of factory automation products in Japan, has recently been facing stiff competition from Omron and Keyence...the same two companies that we compete with in Japan. Mitsubishi does not currently offer machine vision systems or sensors to its customers, but both Omron and Keyence do, and they have been using their vision products to try to get into Mitsubishi's accounts. Recognizing that we have a common enemy (or, in this case common enemies), Cognex and Mitsubishi joined forces in 2008 with the objective of providing all of Mitsubishi's customers and prospects with a full-range of automation products...including Cognex vision!

Cognex engineers have been working long hours to design a powerful new vision system that will be both easy to use and readily connect to Mitsubishi's factory controllers. This new product (based in large part on Cognex's existing technology and products) is scheduled to be introduced in the first half of 2009, and it will be sold through Mitsubishi Electric's extensive distribution channel. Because of the investments that both Cognex and Mitsubishi have made to this project, we believe that our share of the vision business in

Japan will increase in 2009, despite the difficult business climate.

### **I.D. Products**

The fastest growing segment of our business today is our I.D. Products business. I.D. products (or I.D. readers) are specialized vision sensors that can read either (a) codes that are printed on labels which are attached to items or (b) codes that are marked directly on the products themselves (in this case, the code is called a "direct part mark" or "DPM"). Irrespective of where the codes are marked, the codes can be either bar codes, like the ones that you see on just about everything that you buy (these are called "one-dimensional codes" or "1-D codes"), or they can be the next-generation of codes that consist of series of dots in a particular 2-dimensional pattern (these are called "two dimensional codes" or "2-D codes").

We first entered the code-reading business when companies came to us to read codes that they were applying directly to the parts themselves (DPM codes can be either 1-D codes or 2-D codes). This is the most complex type of reading application because the surfaces of the parts are unpredictable, and the quality of the marking is often poor. Because of our focus (no pun intended) on machine vision, we have developed superior technology that is capable of reading *both* 1-D and 2-D codes.

Over the past 20 or more years, the market for code readers has increased dramatically because using codes enables the manufacturer, the shipper, the distributor and the retailer to accurately track each item as it moves from the factory to the consumer. In the past, just about all of this item-level tracking has been done using laser-based scanners. They are inexpensive, and they work very well on 1-D codes that are printed on labels. However... and this is the important part...laser-based scanners do not work, and cannot be made to work, on 2-D codes....and 2-D codes are becoming increasingly important because they have a much higher information density. That means that they can encode far more information about each item in a far smaller space, and that is very valuable in every stage of the supply chain that goes from manufacturer to consumer.

Over the next few years, we expect that 2-D codes will replace most, if not all, of the 1-D codes in the marketplace. And, because 2-D codes can *only* be read by image-based systems, most of the laser-based readers in the marketplace will have to be replaced by image-based readers like Cognex's DataMan® I.D. readers. This represents an enormous opportunity for Cognex, but because of the size of the market, we will certainly have competition. We have learned from our past experience (for example, in the factory floor market in Japan that I just

discussed) that the best technology does not guarantee market share. So, in addition to having the best technology, we will need to build channels to deliver our I.D. products to the large number of customers around the world that will soon need image-based I.D. readers. And in 2009, we plan to start working on just that!

### **New Vertical Markets**

At Cognex we are constantly looking for new markets where machine vision can quickly deliver a significant return on investment, because those are the markets most likely to deliver customers to Cognex! One of the most promising of these new markets is the solar cell industry.

In the 1990s, Cognex became the leading supplier of machine vision to the semiconductor and electronics industries, where Cognex vision was used extensively in the manufacture and handling of silicon used to make semiconductor chips.

Well the chip business is down, but there's a new fast-growing industry that also relies on growing and handling silicon: solar cell manufacturing. Cognex has been aggressively pursuing this market, and in 2008 we closed several large orders with companies serving the solar cell industry...including a few in China. And, we are adding new tools to our vision software library that are fine-tuned for that industry and should further enhance our

**Cognex Corporation: Letter to Shareholders** (continued)

sales. As investments in alternative forms of energy continue, solar cell manufacturing appears to be a market with a good upside potential for us in years to come.

**Research & Development**

Cognex has a long history of making breakthrough innovations in machine vision technology. It is those breakthroughs that have made us not only the technological leader, but more importantly the leader in revenues and in profits. Despite the difficult economic climate, we expect to continue to fund the R&D efforts that are likely to lead to future breakthroughs which will ensure our market lead. One of the most exciting of these

technologies is chip-level vision... creating an entire vision system on a single silicon chip. We call this project "VSoC" (for Vision System on a Chip), and we expect to introduce products based on our VSoC platform sometime in the next two years. The applications for VSoC are hush-hush, and since this is a public document that is available to all of our competitors, I won't say any more here. But I will tell you that I expect VSoC to be very important to the future success of Cognex.

**In Conclusion**

There is no getting around it; 2009 is going to be a terrible year for everyone...and 2010 may not be any better. But, with our strong balance

sheet, we believe that Cognex can weather a very prolonged economic downturn. And, with our successful business model and an energetic and motivated workforce we will emerge from the downturn with all cylinders humming and ready to go into high gear when the economy recovers. I look forward to reporting back to you again at that time!

Sincerely,



Dr. Robert J. Shillman  
Chairman and  
Chief Executive Officer

## Cognex Corporation: Company Information

### Corporate Headquarters

Cognex Corporation  
One Vision Drive  
Natick, Massachusetts 01760  
Telephone: (508) 650-3000  
Fax: (508) 650-3333  
<http://www.cognex.com>

### Transfer Agent

National City Bank, now a part of PNC  
Shareholder Services Operations  
3rd Floor, North Annex  
4100 West 150th Street  
Cleveland, OH 44135-1385  
Telephone: (216) 257-8663  
Toll free: (800) 622-6757  
Facsimile: (216) 257-8508  
Email: [shareholder.inquiries@nationalcity.com](mailto:shareholder.inquiries@nationalcity.com)  
[www.nationalcity.com/shareholderservices](http://www.nationalcity.com/shareholderservices)

### Outside Legal Counsel

Goodwin Procter LLP  
Boston, Massachusetts

### Independent Auditors

Grant Thornton LLP  
Boston, Massachusetts

### Form 10-K

The Cognex Annual Report on Form 10-K is incorporated in this report and has been filed with the Securities and Exchange Commission. Additional copies are available free of charge upon written request to the address below. Or, request information on-line at <http://www.cognex.com>.

Department of Investor Relations  
Cognex Corporation  
One Vision Drive  
Natick, Massachusetts 01760

### Board of Directors

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Cognex Corporation

**Patrick A. Alias**  
Senior Vice President  
Cognex Corporation

**Jerald G. Fishman**  
Chief Executive Officer and President  
Analog Devices

**Theodor Krantz**  
President  
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### Senior Management

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Chairman and Chief Executive Officer

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Surface Inspection Systems Division (SISD)

**Robert Willett**  
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Modular Vision Systems Division (MVSD)

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**Reuben Wasserman**  
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Research and Development

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Chief Financial Officer and Treasurer

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**Hisataka Shitara**  
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**William Silver**  
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**Justin Testa**  
Executive Vice President & Business  
Unit Manager, Vision Systems

This report, including the letter to shareholders, contains "forward-looking statements" within the meaning of the Securities Act of 1933 and the Securities Exchange Act of 1934. Please see the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations – Forward-Looking Statements" in this report for a discussion regarding risks associated with these statements.

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**COGNEX**

Cognex Corporation  
One Vision Drive  
Natick, MA 01760-2059  
[www.cognex.com](http://www.cognex.com)