Zacks Equity Research

March 1, 2011
Ken Nagy, CFA

www.zacks.com 111 North Canal Street, Chicago, IL 60606

inTEST Corp (INTT-NASDAQ)

INTT: Zacks Company Report - OUTPERFORM

Current Recommendation	**Outperform**
Prior Recommendation	N/A
Date of Last Change	07/27/2010
Current Price (02/28/11)	$4.24
Six- Month Target Price	**$7.00**

OUTLOOK

inTEST Corporation is a designer, manufacturer and marketer of mechanical, thermal and electrical products that are used by semiconductor manufacturers in conjunction with automatic test equipment, (ATE), in the testing of integrated circuits, (ICs). Beyond its blue chip portfolio of semiconductor manufacturers, the acquisition of Sigma has propelled the firm to diversify into non-semi thermal testing products. This has the effect of diversifying revenues and opens the company up to new markets. In the test equipment world change is good; be it the broad switch to mobile computing, the march to finer geometries, or the growth of electronic content in automobiles more chip content means more testing for inTEST.

SUMMARY DATA

52-Week High	**$4.54**
52-Week Low	**$1.40**
One-Year Return (%)	**188.46**
Beta	**1.23**
Average Daily Volume (sh)	**197,338**
Shares Outstanding (mil)	**10**
Market Capitalization ($mil)	**$44**
Short Interest Ratio (days)	**0.21**
Institutional Ownership (%)	**17**
Insider Ownership (%)	**22**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**-16.3**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**6.7**
P/E using 2010 Estimate	**6.3**
P/E using 2011 Estimate	**5.4**
Zacks Rank	**3**

Risk Level	**High,**
Type of Stock	**Small-Growth**
Industry	**Elec Msrng Inst**
Zacks Rank in Industry	**N/A**

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2008	11.3 A	11.5 A	9.2 A	6.8 A	38.8 A
2009	4.4 A	4.7 A	6.0 A	8.4 A	23.5 A
2010	9.5 A	15.3 A	11.3 A	10.0 E	46.1 E
2011	11.9 E	12.2 E	12.9 E	13.0 E	50.0 E

Earnings per Share
(EPS is operating earnings before non recurring items)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2008	-$0.14 A	-$0.14 A	-$0.20 A	-$0.29 A	-$0.77 A
2009	-$0.28 A	-$0.17 A	-$0.03 A	$0.04 A	-$0.44 A
2010	$0.11 A	$0.31 A	$0.17 A	$0.09 E	$0.68 E
2011	$0.17 E	$0.19 E	$0.20 E	$0.22 E	$0.78 E

Zacks Projected EPS Growth Rate - Next 5 Years % **12**

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WHATS NEW

inTEST will hold a conference call tomorrow at 5.00 pm eastern time to discuss fourth quarter and full year 2010 results.

Recall that on January 10th inTEST provided an update to the Company's outlook for the 2010 fourth quarter. The firm positively revised net revenue, bookings and pre-tax income for the fourth quarter 2010.

- Net revenue for the fourth quarter is now expected to be approximately $10.0 million. (Originally $8.8 million to $9.5 million)
- Bookings for the fourth quarter are now expected to be approximately $11.5 million, up significantly from the third quarter's bookings of $9.4 million.
- Pre-tax income is now expected to be in the range of $0.08 to $0.10 per diluted share. (subject to change per audit adjustment)

inTEST Corporation is a designer, manufacturer and marketer of mechanical, thermal and electrical products that are used by semiconductor manufacturers in conjunction with automatic test equipment, (ATE), in the testing of integrated circuits, (ICs). Beyond its blue chip portfolio of semiconductor manufacturers, the acquisition of Sigma has propelled the firm to diversify into non-semi thermal testing products. This has the effect of diversifying revenues and opens the company up to new markets. In the test equipment world change is good; be it the broad switch to mobile computing, the march to finer geometries, or the growth of electronic content in automobiles more chip content means more testing for inTEST.

It is important to note, despite the sequential pullback in orders and bookings (consistent with trends seen in the broader semiconductor equipment sector) the firm was able to maintain a 48% gross margin in the third quarter of 2010 (the same as the second quarter), despite the lower revenues. INTT benefited from a more favorable product mix and continued to manage product material costs as well as operating expenses quite well.

EXECUTIVE SUMMARY

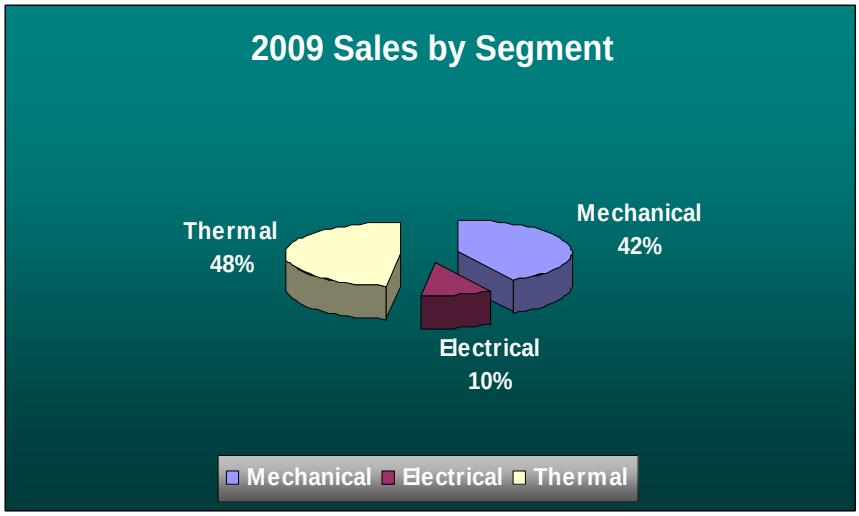
- With smaller more complex chips the testing environment is becoming more important and a bigger part of manufacturers costs.
- Semiconductor applications have grown exponentially as IC’s have found their way into Mobile, Automotive, Medical, and industrial markets.
- Intest has diversified its business into non-semiconductor markets.

Based in Cherry Hill New Jersey, inTEST is an independent designer, manufacturer and marketer of mechanical, thermal and electrical products that are used by semiconductor manufacturers in conjunction with automatic test equipment, or (ATE), in the testing of integrated circuits, (ICs). The firm’s high performance products are designed to enable semiconductor manufacturers to improve the efficiency of their IC test processes and, consequently, their profitability. INTT supplies test products worldwide to

major semiconductor manufacturers and semiconductor test subcontractors directly and through leading ATE manufacturers. The firm's largest customers include Analog Devices, Inc., Cypress Semiconductor Corporation, Emerson Electric Co., Freescale Semiconductor, Inc., Hakuto Co. Ltd., LTXCredence Corporation, Northrop Grumman Corporation, Teradyne, Inc., Texas Instruments Incorporated, and W.L. Gore & Associates, Inc.

The testing of devices is a critical step during the semiconductor production process. Typically, semiconductor companies test each device at two different stages during the manufacturing process to ensure its functional and electrical performance prior to shipment to the device user. These companies use semiconductor testing equipment to first test a device after it has been fabricated but before it has been packaged to eliminate non-functioning parts. Then, after the functioning devices are packaged, they are tested again to determine if they fully meet performance specifications. Testing is an important step in the manufacturing process because it allows devices to be fabricated at both maximum density and performance—a key to the competitiveness of semiconductor manufacturers.

In October of 2008 inTEST acquired Sigma Systems Corp., a manufacturer of thermal platforms, custom configured environmental chambers and other environmental test solutions for several industries including automotive, medical/pharmaceutical, electronic, aerospace/defense and ATE. Sigma allowed the firm to expand beyond the ATE market. The purchase price was approximately $3.5 million and was paid with $1.0 million in cash, 550,000 shares of common stock, and the issuance of non-negotiable promissory notes in an aggregate principal amount equal to $1.5 million



Foundry History

Historically semiconductor firms (also called integrated device manufacturers or IDMs) manufactured chips in their own fabs (chip fabrication plant). By the 1990's as chips grew smaller and more complex it was a natural that 'fabless' outsourced manufacturing began to emerge. Semiconductor devices are broadly divided into three categories—analog, digital and radio frequency (RF). Analog semiconductors condition and regulate real world information such as light, temperature, speed, pressure, power and electrical currents. Digital logic semiconductors process information in only two states. Mixed-signal

semiconductors combine both analog and digital technology into a single device. Typically, an analog sensor samples real world information, and then converts the input into an electronic analog signal, which is converted into a digital format for further digital processing. The analog and mixed-signal markets tend to be more varied and specialized, with customized products that have longer life cycles than the digital industry segment. There is an ongoing drive to decrease the number of discrete devices, lessen power requirements and shrink the size of the existing devices, which correspondingly increase performance and reliability. Consequently, a greater amount of functionality is being consolidated into increasingly smaller devices.

IC Test Process
Semiconductor manufacturers typically produce ICs in multiples of several hundred on a silicon wafer which is later separated or "diced" into individual ICs. Extended leads are then attached to the individual ICs, for later connection to other electrical components. In most cases, the ICs are then encapsulated in a plastic, ceramic or other protective housing. These process steps are called "packaging."

Wafers are tested before being diced and packaged, to ensure that only properly functioning ICs are packaged. This testing step has several names, including "front-end test," "wafer test," "wafer probe" or "wafer sort." In front-end test, an electronic handling device known as a wafer prober automatically positions the wafer under a probe card which is electronically connected to a "test head," which connects electrically to a test system. During front-end testing there is a growing trend of thermally conditioning the wafer during test, especially in the memory and automotive markets. Once the good ICs have been identified, they are packaged.

The packaged ICs also require testing, called "back-end test" or "final test," to determine if they meet design and performance specifications. Packaged ICs are tested after loading into another type of electronic handling device called a "package handler" or "handler," which then transfers the packaged ICs into a test socket which is attached to the test head. These handlers may be temperature controlled for testing.
Testers range in price from approximately $100,000 to over $3.0 million each, depending primarily on the complexity of the IC to be tested and the number of test heads (typically one or two) with which each tester is configured. Probers and handlers range in price from approximately $50,000 to $500,000. A typical test floor of a large semiconductor manufacturer may have 100 test heads and 100 probers or 250 handlers supplied by various vendors for use at any one time.

Test head manipulators, also referred to as positioners, facilitate the movement of the test head to the electronic device handler. Docking hardware mechanically connects the test head to the wafer prober or handler. Tester interface products provide the electrical connection between the test head and the wafer or packaged IC. Traditionally, temperature management products are used in back-end test to allow a manufacturer to test packaged ICs under the extreme temperature conditions in which the IC may be required to operate. However, the firm feels that temperature-controlled testing will be an increasingly important part of front-end wafer testing as more parameters traditionally tested for in back end-test are moved to front-end test.

As complexity increases so does the need for testing.
Historically, increases in unit production resulted primarily from the growth of the personal computer and growth of the telecommunications industry. It is our opinion that future unit production growth will be augmented by consumer electronics, the mobile internet, broadband network access, the increased use of digital signal processing (DSP) devices, and automotive and power management applications. These increases in unit production, in turn lead to a corresponding increase in the need for test equipment.

Designers and manufacturers of a variety of electronic and industrial products, such as cell phones, telecom and datacom systems, Internet access devices, computers, transportation and consumer electronics, require increasingly complex ICs to provide improved end-product performance demanded by their customers. Semiconductor manufacturers generally compete based on product performance and

price. Testing costs represent a significant portion of the total cost of manufacturing ICs. Semiconductor manufacturers remain under pressure to maximize production yields and reduce testing costs. At the same time, the growing complexity of ICs has increased the difficulty of maximizing test yields. In order to address these market trends, semiconductor manufacturers strive for more effective utilization of ATE, smaller test areas and increased wafer level testing. Two major areas of semiconductor content growth over the last 10 years are mobile computing and automotive.

Automotive

Automobiles today resemble “computers on wheels” because of the increasing number of digital systems under the hood and inside the passenger cabin. With each model year, vehicle manufacturers offer more sophisticated electronic systems addressing vehicle safety, telematics, and infotainment. The costs associated with these sophisticated systems are also rising. Automotive electronics now account for 22 percent of a vehicle's cost and are projected to increase to up to 40 percent by the end of 2010.

Mobile computing

The boom in usage of mobile broadband and mobile computing applications will continue for the foreseeable future according to the results of Cisco’s Visual Networking Index (VNI) Mobile Forecast for 2008-2013.The survey aimed to discover key findings on a variety of Internet Protocol (IP) networking trends and Cisco predicts that global mobile data traffic will increase 66-fold between 2008 and 2013 with a compound annual growth rate (CAGR) of 131% over that same period. Cisco believes that these projections reflect a transformation in the fourth-generation, or 4G, mobile Internet that will enable consumers to access an increased range of mobile broadband services including applications such as mobile video as used in teleconferencing applications. The VNI Mobile Forecast also calculated that global mobile data traffic reached one Exabyte per month in half the time that fixed data traffic and will exceed two Exabyte per month by 2013. Asia-Pacific will account for one-third of all mobile data traffic by 2013.The evolving 4G mobile Internet transformation is further diversifying how people access and experience the Internet and is causing an undeniable surge in bandwidth growth. The projected increase in mobile rich media points to the inevitable transition to 4G. This will shift the industry’s focus toward all-IP networks.

Foundry Spending picks up

Market Research firm ISuppli sees foundries spending 123% more on capital equipment in 2010 over 2009. Much of this spending is going toward developing advanced semiconductor manufacturing processes. Because of this, older semiconductor manufacturing processes in 2010 will continue to suffer capacity constraints. This also implies that Integrated Device Manufacturers (IDMs) hoping to achieve increased run rates for legacy technologies won’t find available capacity this year. Another market research firm, Gartner, has a similar view of the ATE market. The worldwide automated test equipment (ATE) market will grow by more than 133% in 2010. The ATE market bottomed in the first quarter of 2009 and has realized substantial quarterly gains since that time. Growth has accelerated through the first quarter of this year and is expected to make sizeable gains through the third quarter, bringing the overall test market its first growth year since 2006. While the ATE market will grow substantially this year, it fell to very low levels last year, with the memory test segment declining below the $200 million mark.

For the worldwide automated test equipment (ATE) Gartner believes this year will mark the first positive growth year since 2006. After bottoming out in Q1 2009, the ATE market has realized substantial quarterly gains and is expected to grow by more than 70% this year, the market research company said. Growth is expected to continue during the next several quarters as device demand improves, and Gartner's 2010 growth expectations are driven heavily by the expected transition to DDR3 memory devices.

Gartner feels the semiconductor equipment industry will experience a very strong growth spurt in 2010, as it emerges from the recession, and this growth is expected to continue throughout 2012. Interestingly, the firm expects this upturn to be one of the first in which the peak revenue in capital equipment does not surpass previous growth cycles, which may well help to mitigate the boom/bust scenario seen in the past.

	2009	2010	2011	2012	2013	2014
Semiconductor Capital Spending	25,934.9	40,429.9	51,291.5	61,898.6	54,167.5	52,953.2
Growth (%)	-41.1	55.9	26.9	20.7	-12.5	-2.2
Capital Equipment	16,677.1	29,372.6	36,413.3	42,919.6	35,694.2	35,965.5
Growth (%)	-45.6	76.1	24.0	17.9	-16.8	0.8
Wafer Fab Equipment	12,976.8	22,924.7	28,793.3	34,351.3	29,176.7	28,581.6
Growth (%)	-46.4	76.7	25.6	19.3	-15.1	-2.0
Automated Test Equipment	1,317.7	2,266.2	2,606.8	2,851.9	2,182.1	2,406.8
Growth (%)	-46.1	72.0	15.0	9.4	-23.5	10.3

Worldwide Semiconductor Capital Equipment Spending Forecast 2009 — 2014
(Millions of Dollars)

Source Gartner (March 2010)

Electrical Products (10% of 2009 Total Sales)
The firm uses a unique strategy in the Electrical Products unit in that it designs standard and modular interface products to address most possible tester/prober combinations. INTT employs a custom design service that will allow any of its customers to use any tester, prober or handler combination with any type of device, such as analog, digital, mixed signal and radio frequency. This has led to an estimated market share of 15%. This estimate is management's best guess since several of the competing firms are private.

The firm's tester interfaces can be used high speed, high frequency, digital or mixed signal testers used in testing more complex ICs. Tester interface products enable the tester to provide more reliable yield data, which reduce IC production costs.

Tester Interfaces are designed to provide flexibility and scalability through the use of replaceable signal modules which can be easily changed on the test floor as inTEST's customers testing requirements change.

These products range in price from approximately $1,000 to $60,000.

Mechanical Products (42% of 2009 Total Sales)
The firm offers four lines of manipulator products as well as docking products. The manipulator has an estimated 20% market share while the docking products enjoy an estimated 40% share. Estimates of market share are tough to come by as many market participants are private.

The four lines of manipulator products are the in2, the M Series, the Aero Series and the Cobal Series. These free-standing universal manipulators can hold a variety of test heads and enable an operator to reposition a test head for alternate use with any one of several probers or handlers on a test floor. Certain members of the Aero family are also available as a lower-cost solution for dedicated prober-only or handler-only test cell applications. Price ranges from $10,000 to $80,000.

Product	Industry	Use	Price
M400 & M500	Semiconductor	Compact and designed to handle test heads less than 550 pounds	$12,000 to $30,000
in2/ Cobal Series	Semiconductor	Balanced floating head design, Over 3000 pounds	$12,000 to $80,000
Aero 450H and 150P Manipulators	Semiconductor	Designed to handle test heads less than 1500 pounds	$10,000 to $30,000
Docking Hardware	Semiconductor	Ensures repeatable and precise alignment with test head and assembly	$2,000 to $25,000

INTT's docking hardware products protect the delicate interface contacts and ensure proper repeatable and precise alignment between the test head's interface board and the prober's probing assembly or the handler's test socket as they are brought together, or "docked." A simple cam action docks and locks the test head to the prober or handler, thus eliminating motion of the test head relative to the prober or handler. This minimizes deterioration of the interface boards, test sockets and probing assemblies which is caused by constant vibration during testing.

The firm's docking hardware products are used primarily with floating-head universal manipulators when maximum mobility and inter-changeability of handlers and probers between test heads is required. By using these docking hardware products, semiconductor manufacturers can achieve cost savings through improved ATE utilization, improved accuracy and integrity of test results, and reduced repairs and replacements of expensive ATE interface products. Docking hardware products range in price from approximately $2,000 to $25,000.

Thermal Products (48% of 2009 Total Sales)
INTT's Thermal Products are sold mainly to the environmental test market which encompasses a wide variety of industries including aerospace, automotive, communications, consumer electronics, defense, medical and semiconductor industries. The firm's thermal products allow a manufacturer to test semiconductor wafers and ICs, electronic components and assemblies, mechanical assemblies and electromechanical assemblies.

The firm's ThermoChuck precision vacuum platform assemblies, used primarily in the semiconductor industry, quickly change and stabilize the temperature of semiconductor wafers accurately and uniformly during testing without removing the wafer from its testing environment. Such temperatures can range from as low as -65 degrees Celsius to as high as +400 degrees Celsius. ThermoChuck technology is incorporated into wafer prober equipment for laboratory analysis and for in-line production testing of semiconductor wafers. Products in this area range in price from approximately $16,000 to $90,000.

ThermoStream products are used in the semiconductor industry as a stand-alone temperature management tool, or in a variety of electronic test applications as part of MobileTemp systems. ThermoStream products provide a source of heated and cooled air which can be directed over the component or device under test. These systems are capable of controlling temperatures to within +/- 0.1 degree Celsius over a range of -90 degrees Celsius to as high as +225 degrees Celsius within 1.0 degree Celsius of accuracy. As a stand-alone tool, ThermoStreams provide a temperature-controlled air stream to rapidly change and stabilize the temperature of packaged ICs and other devices.

MobileTemp Series combines ThermoStream products with its family of exclusive, high-speed ThermoChambers to offer thermal test systems with fast, uniform temperature control in a compact package enabling temperature testing at the test location. MobileTemp Systems are designed specifically for small thermal-mass applications beyond the semiconductor market and have found application in the automotive, electronic, fiber optic, medical and oil field service industries testing such things as electronic sub-assemblies, sensor assemblies, and printed circuit boards.

Traditionally, customers used ThermoStream products primarily in engineering, quality assurance and small-run manufacturing environments. However, increasingly, customers use ThermoStream products in longer-run production applications. ThermoStream and MobileTemp products range in price from approximately $6,000 to $50,000.

Product	Industry	Use	Price
ThermoChuck	Semiconductor	Change and Stabilize temperature of wafers without removing	$16,000 to $90,000
ThermoStream	Semiconductor	Stand-alone temperature management tool	
MobileTemp	Semi/ Auto, Medical, Oil Service Etc	Combines ThermoStream and ThermoChambers to offer quick testing	$6,000 to $50,000
Thermal & Humidity Chambers	Virtually Any Market	Temperature Control in Lab or production Environments	$10,000 to $60,000
Thermal Platforms	Virtually Any market	Temerature control in a flat environment	$6,500 to $45,000

Non-Semiconductor

On October 6, 2008, inTEST acquired Sigma, a manufacturer of thermal platforms, custom configured environmental chambers and other environmental test solutions for a variety of industries including automotive, medical/pharmaceutical, electronic, aerospace/defense and ATE. The purchase price was approximately $3.5 million and was paid with $1.0 million in cash, 550,000 shares of common stock, and the issuance of non-negotiable promissory notes in an aggregate principal amount equal to $1.5 million. In addition, during the closing of the transaction the firm repaid $303,000 of debt on the books of Sigma and incurred transaction costs of $226,000

The acquisition of Sigma Systems further solidified INTT's move into non-semiconductor business. This opened the firm up to non-semi areas such as Military and Aerospace, Industrial, and telecommunications markets. INTT is benefiting from manufacturers requirements to verify their products operate at set temperatures. In the second quarter of 2010 non-semi revenues were $2.1 million or 14% of total sales versus $1.3 million or 14% of total sales a quarter ago. Looking at bookings non-semi bookings were $2.9 million or 23% of total bookings versus $2.1 million or 15% of bookings in the previous quarter. The firm sees the non-semi as a way to diversify its revenue streams. Non-semi remains a way to mitigate the unforeseen changes in the semiconductor capital equipment cycle.

End Market	5 year CAGR
Consumer	5-7%
Computer	6-8%
Communication	5-8%
Industrial	10-12%
Automotive	11-13%
Medical	12-15%
Zacks Estimates	

Trends in 2010

Looking at the Mechanical bookings in the first half of 2009 versus 2010 customer mix and product mix changes makes it apparent that the industry has changed toward stonger sales for testers. Last year during the first half of 2009 90% of the firm's business was to end users and 10% to OEMs. This year that split is approximately 70-30 indicating the tester sales have rebounded. Yet another metric is change in the ratio of docking to manipulator sales. A year ago the ratio was 88% docking to 12% manipulators that ratio is now 70-30. Electrical and Mechanical bookings in the second quarter were down from the previous quarter. This was primarily the result of an order rush in the first quarter.

Thermal bookings were $5.7 million versus $4.1 million a quarter ago indicating the diversity the segment provides.

HISTORICAL ZACKS RECOMMENDATIONS



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