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UNITED STATES  
**SECURITIES AND EXCHANGE COMMISSION**  
Washington, DC 20549

**FORM 6-K**

**REPORT OF FOREIGN PRIVATE ISSUER  
PURSUANT TO RULE 13a-16 OR 15d-16 OF  
THE SECURITIES EXCHANGE ACT OF 1934**

January 10, 2011

Commission File No.: 000-30688

**NOVA MEASURING INSTRUMENTS LTD.**

(Translation of registrant's name into English)

**Building 22 Weizmann Science Park, Rehovot  
P.O.B 266  
Israel**

(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F  Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): \_\_\_\_\_

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): \_\_\_\_\_

Indicate by check mark whether by furnishing the information contained in this Form, the registrant is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes  No

Attached hereto and incorporated by way of reference herein are the slide presentations to be presented at the Registrant's investor and analyst day to be held on January 10, 2011.

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NOVA MEASURING INSTRUMENTS LTD.  
(Registrant)

By: /s/ Dror David

\_\_\_\_\_  
Dror David  
Chief Financial Officer

Date: January 10, 2011

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**NOVA**<sup>®</sup>

partnering for process control



## Sustaining Long-Term Profitable Growth

Presenting the Strategy for Taking Nova to the Next level

January 10, 2011 Analyst Day  
Gabi Seligsohn, President & CEO  
Dror David, CFO

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## Cautionary Statement Regarding Forward-Looking Statements

This presentation includes statements that constitute forward-looking statements within the meaning of safe harbor provisions of the Private Securities Litigation Reform Act of 1995 relating to future events or our future financial performance, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, level of activity, performance or achievements to be materially different than expressed or implied by these forward looking statements. You should not place undue reliance on forward-looking statements since they involve known and unknown risks, uncertainties and other factors which are in some cases beyond our control and which could materially affect actual results, level of activity, performance or achievements. These risks and other factors include but are not limited to: our dependency on two integrated process control product lines; the highly cyclical nature of the markets we target; our inability to reduce spending during a slowdown in the semiconductor industry; our ability to respond effectively on a timely basis to rapid technological changes; our dependency on OEM suppliers; risks associated with our dependence on a single manufacturing facility; our ability to expand our manufacturing capacity or marketing efforts to support our future growth; our dependency on a small number of large customers and small number of suppliers; risks related to our intellectual property; changes in customer demands for our products; new product offerings from our competitors; changes in or an inability to execute our business strategy; unanticipated manufacturing or supply problems; changes in tax requirements; changes in customer demand for our products ; risks related to currency fluctuations and risks related to our operations in Israel.

The matters discussed in this presentation also involve risks and uncertainties summarized under the heading "Risk Factors" in Nova's most recent Annual Report on Form 20-F filed with the Securities and Exchange Commission. These factors are updated from time to time through the filing of reports and registration statements with the Securities and Exchange Commission.

Any forward-looking statements contained in this presentation are made as of the presentation date and Nova Measuring Instruments Ltd. is under no obligation to revise or update these forward-looking statements.

Certain of the information contained herein concerning economic trends and performance is based upon or derived from information provided by third party consultants and other industry sources. We have not independently verified and cannot assure the accuracy of any data obtained by or from these sources.



## Why are we here today?

- We want to share our story of success:
  - Becoming a multi-product company
  - Expanding our customer base
  - Expanding our addressable markets
  - Delivering strong financial results
- We would like to share our views of the industry
- We would like to present our investment strategy for taking Nova to the next level:
  - Expanding our SAM in an expanding market which is expected to approach \$1B
  - Penetrating the emerging 3D-IC market relying on our existing customer base
- We would like to discuss our long term financial model:
  - Maintain strong operating margin on significantly higher revenues

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**NOVA®**

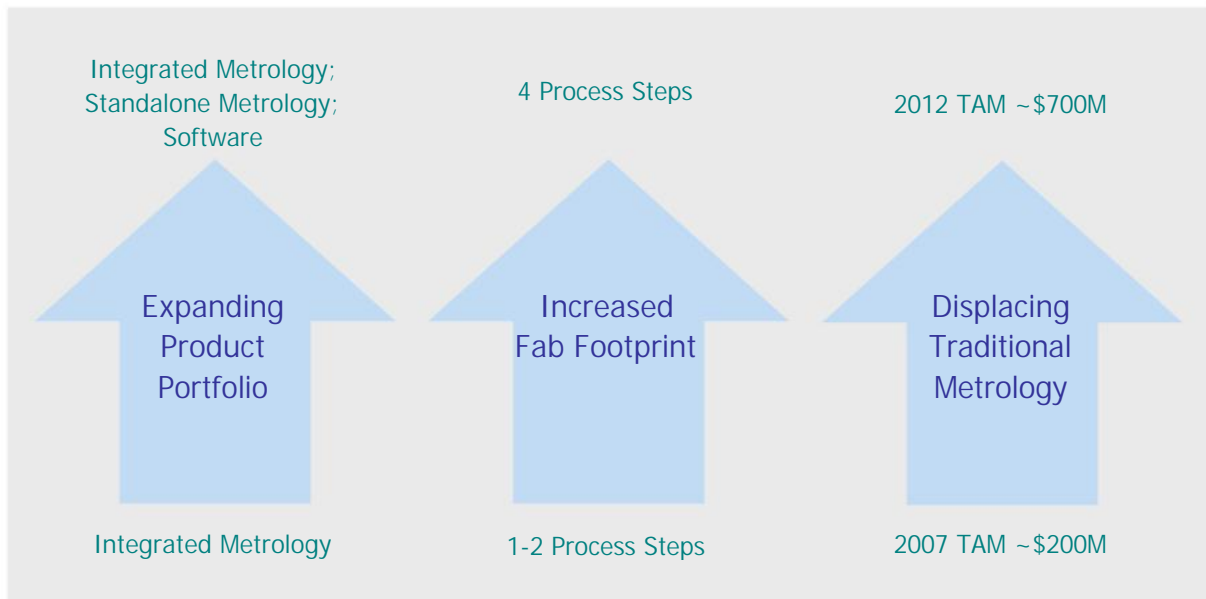
partnering for process control



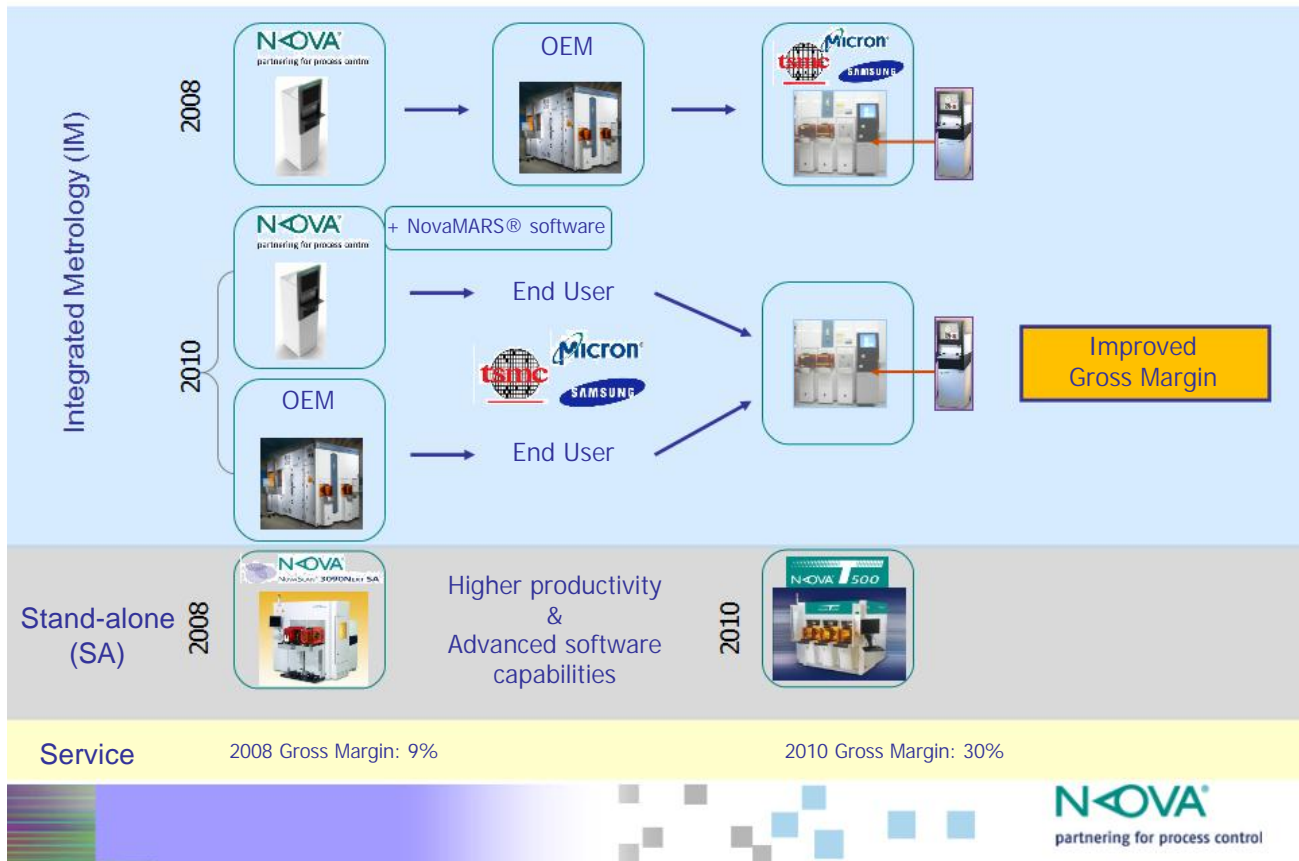
Achievements so far

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## Nova has executed well on its growth strategy



# Revolutionized Business Model Leads to Improved financial performance



# Well positioned in growing segments and applications

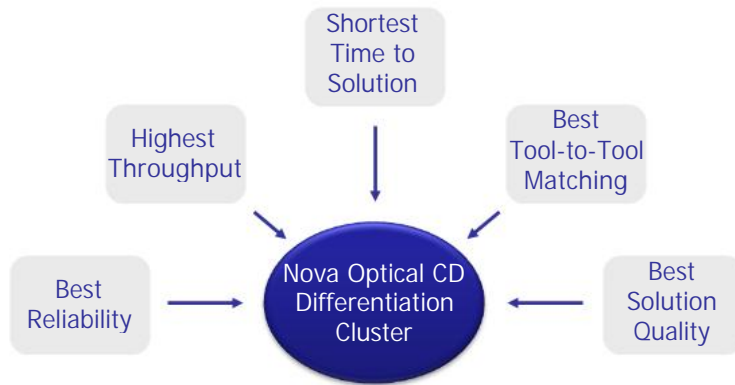
Nova Customer base includes most of world's leading IC manufacturers

Est. '10/'09 WFE  
Growth:



Source: Gartner Q2

## 2010 penetrations create more growth potential for 2011



At Year End	2005	2007	2009	2011
# Standalone Customers	2	5	7	14

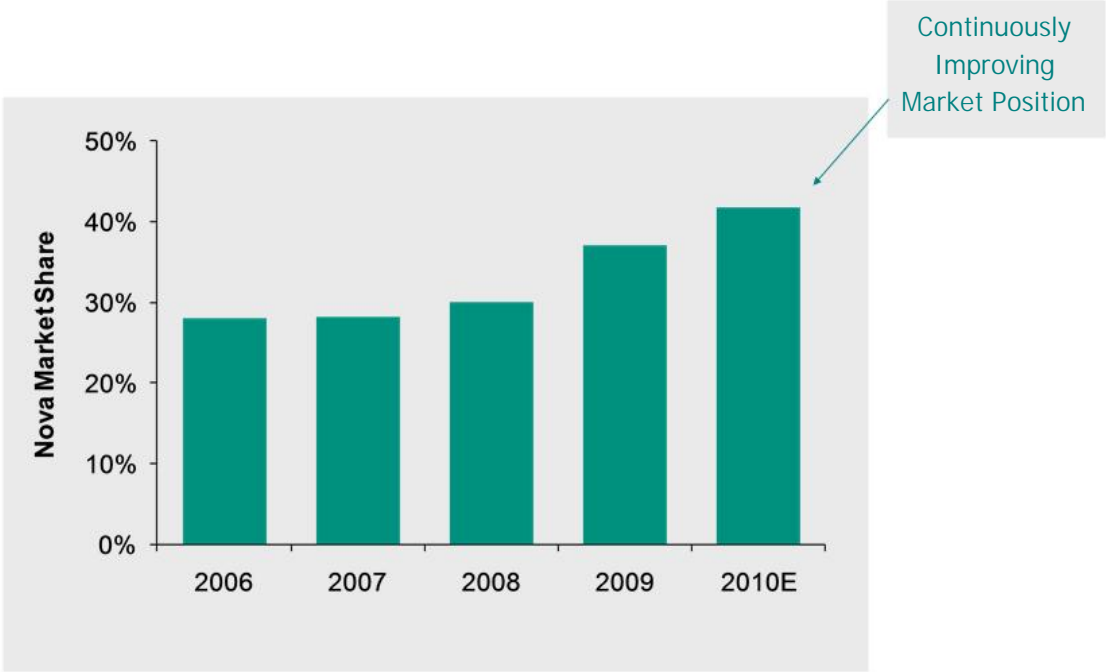
# Nova's Expansion Within the Fab



Notes:  
Based on Foundry with 100,000 wafer starts per month, <65nm, 10 layers



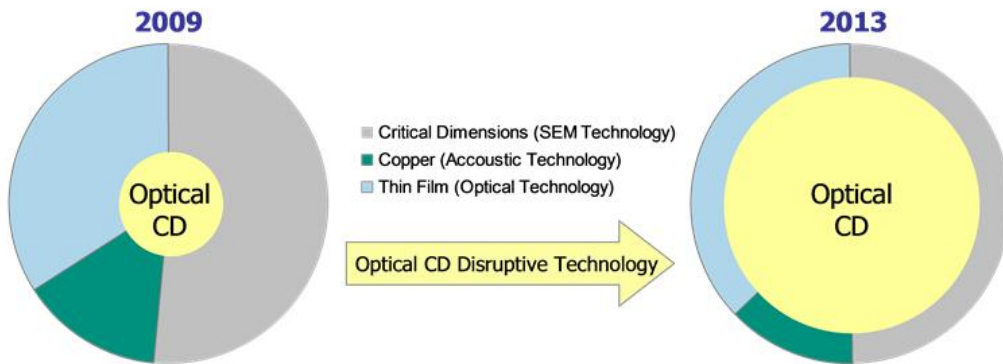
# Nova's Market Share in Optical CD (IM and SA)



Source: Gartner and Nova's estimates



## Metrology Market Moving to Optical Technology

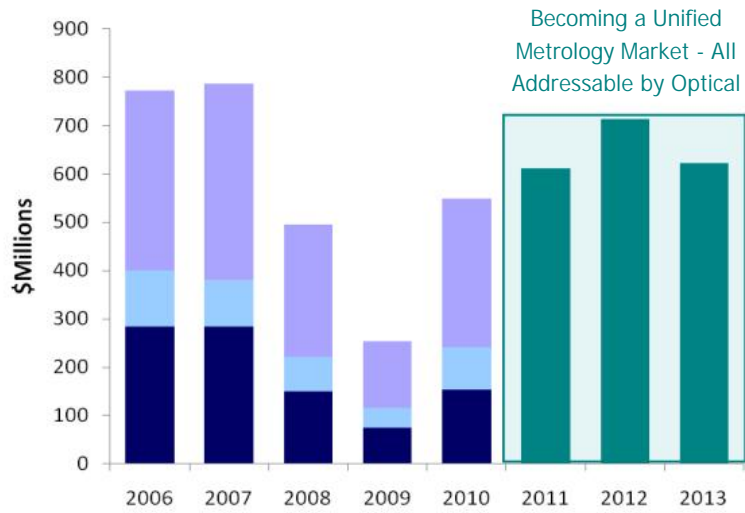


- Key 2009 Developments:
  - > We have taken the lead in the copper metrology market (2009 - 50% of our product revenues)
  - > 2009 was our first big year in Optical CD, taking share from market leaders (2009 - 28% of our product revenues)

Source: Gartner and Company Estimates

# Unification of the Metrology Market

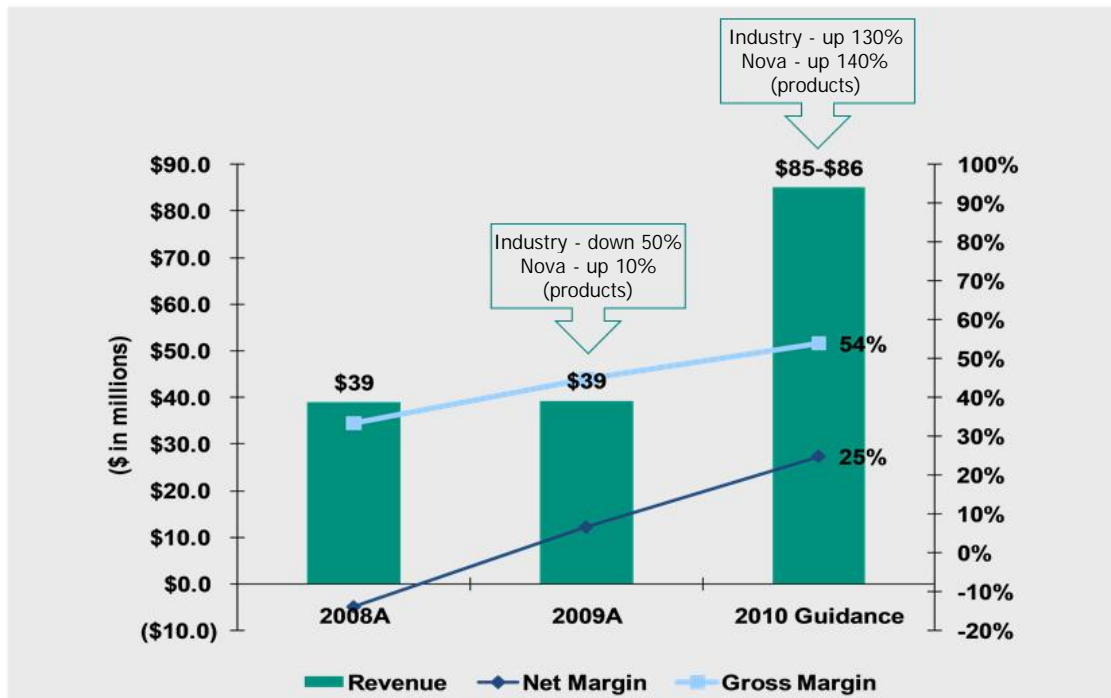
## From Multiple Technologies to Primarily Optical



Source: Gartner and Company Estimates



## Strong execution outperforming the industry for second consecutive year



Note:  
Based on published results and Q4/2010 Guidance

## Driving Profitability - Strong Momentum

	2009	2010E
Revenues	\$39M	\$85M-\$86M
Gross Margin Blended %	45%	55%
Gross Margin Products	56%	60%
Gross Margin Services %	7%	30%
Operating Expenses - % of Revenues	38%	30%
Net Margin %	7%	25%
Net Profit	\$3M	\$21M-\$22M
Earnings Per Share	\$0.13	\$0.80-\$0.85

Note:

2010E - based on published results and Q4/2010 Guidance



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partnering for process control



## Industry Review - 2011 and Beyond

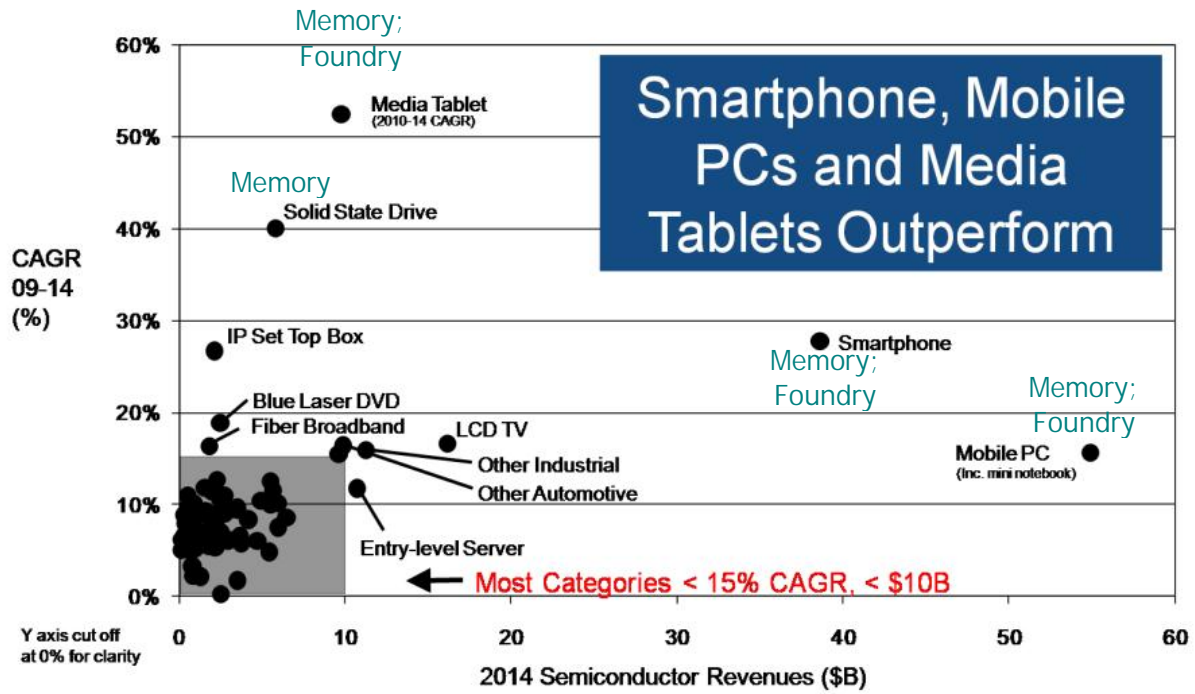
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# Process complexity is THE growth driver for process control



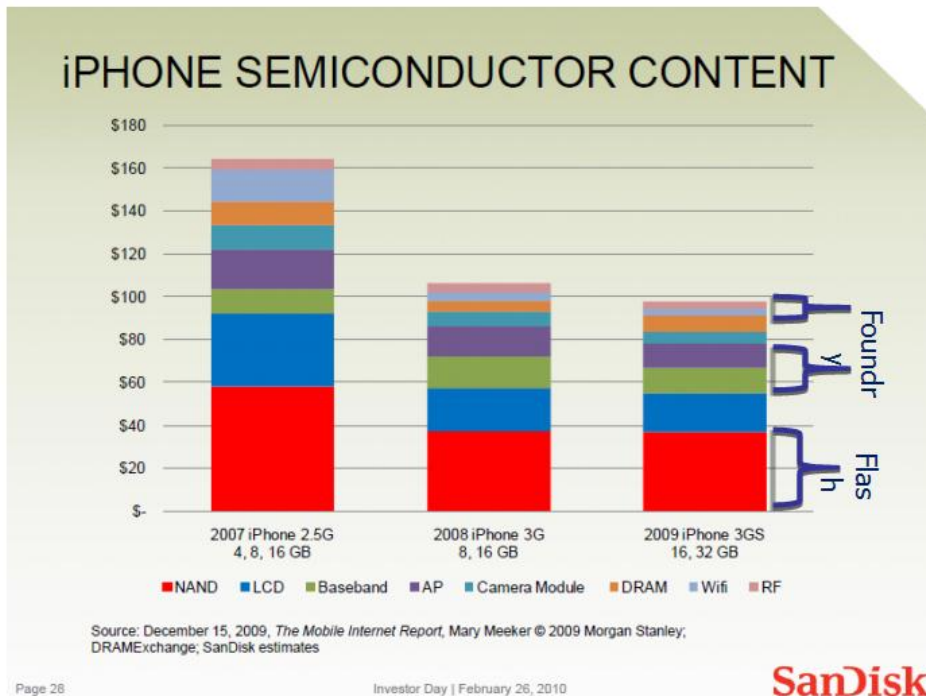
Source: Intel

# Applications driving growth through 2014



Source: Gartner

We are focused where the future is being created



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Investor Day | February 26, 2010

# Nova 2011 - Well positioned in growing segments and applications



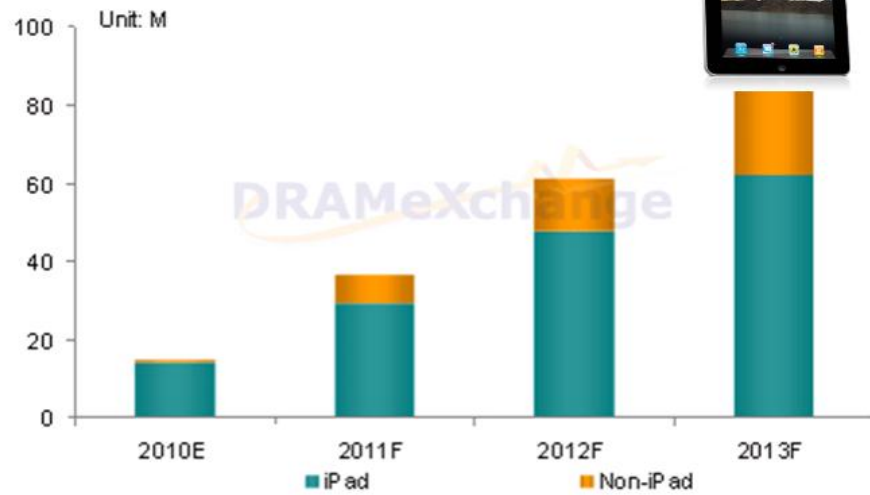
Item	Manufactured by NOVA Customer
NAND flash	✓
Mobile DDR DRAM	✓
NOR flash	✓
Serial flash	✓
WCDMA power amplifier	✓
GSM EDGA power amplifier	✓
Baseband	✓
A-GPS	✓
Bluetooth	✓
Power management IC	✓
3.2-megapixel CIS	
SAW (surface acoustic wave) filter	
Connector	
PCB	

\* Source: Industry sources in Taiwan, compiled by Digitimes, April 2009



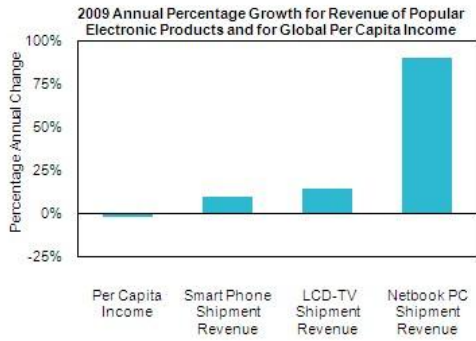
## Tablet PC market

Figure-2 2010-2013 WW Tablet PC forecast



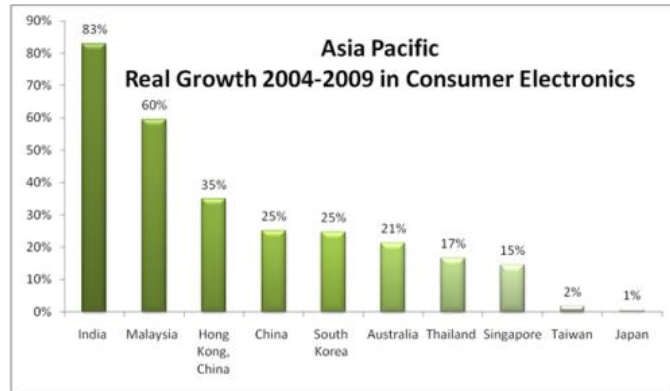
Largest yearly growth of any electronic system ever!

# The love for consumer electronics is growing

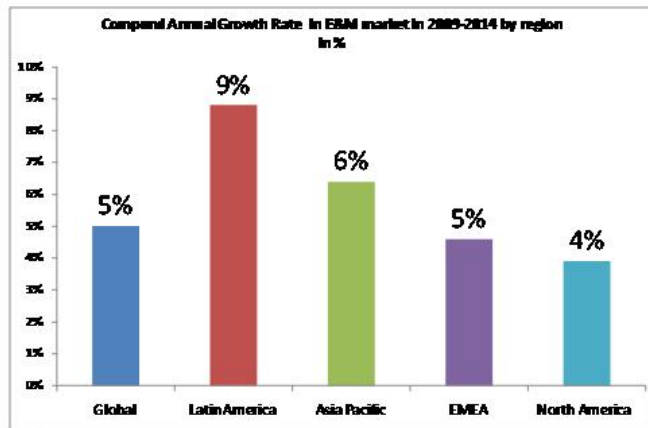


While per capita income shrunk consumer electronics spending grew significantly

Source: Euromonitor International from Trade Sources



Asia Pacific fastest growth rate of new cell subscribers - 210%  
By 2015 will have 3.1 Billion subscribers



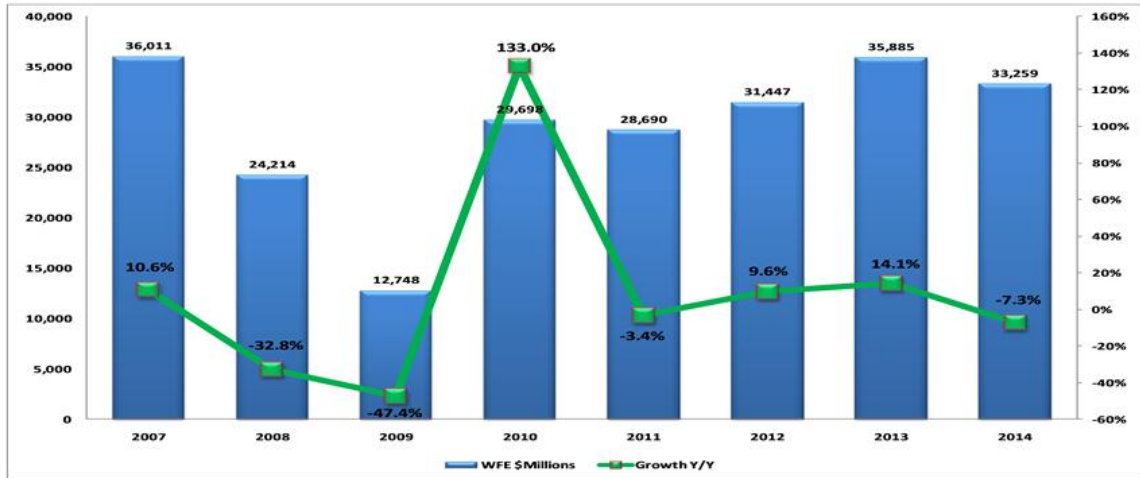
## The US Economy - plays a smaller role than before

Black Friday - the day after Thanksgiving  
212 million hit the streets or the Web  
and spent, on average, \$365.34 (~10% higher than last year)  
58% was spent on consumer electronics mostly handheld



"Americans' Spending on Consumer Electronics Up 12% from Last Year"  
Consumer Electronics Association January 5, 2011

# 2011 WFE forecast



Segment	2011/2010
Foundry	FLAT
NAND Flash	UP
DRAM	DOWN
IDM	FLAT

Analyst	WFE Growth 2011/2010
Gartner	-3.4%
VLSI Research	+5%
SEMI	+23.6%
Citi	0% to +10%
PiperJaffray	+10%



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Nova - 2011 and Beyond

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## Strategy for taking Nova to the next level

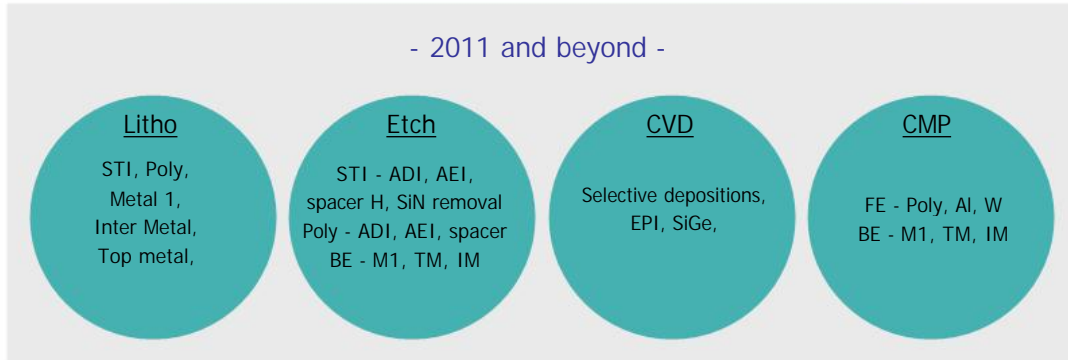
- Strategic focus has been on execution and expense control while maintaining adequate R&D to penetrate standalone market
- Main strategic goals for the next 12-18 months:
  - Expand SAM (Share of Addressable Market) in existing segments
  - Expand total addressable market by addressing emerging process technologies
  - Continue to focus on high value - high margin products
  - Generate substantial free cash flow while also investing to support the next phase of growth

Our products will continue to combine high reliability, low COO and advanced measurement capabilities

## Expanding Nova's SAM



Large scale proliferation still ahead of us

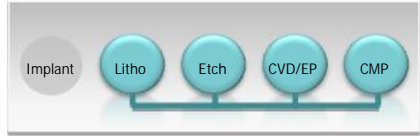


Capturing the expanded opportunity requires increase of R&D investments in 2011



# Leveraging Nova's Position to expand addressable market

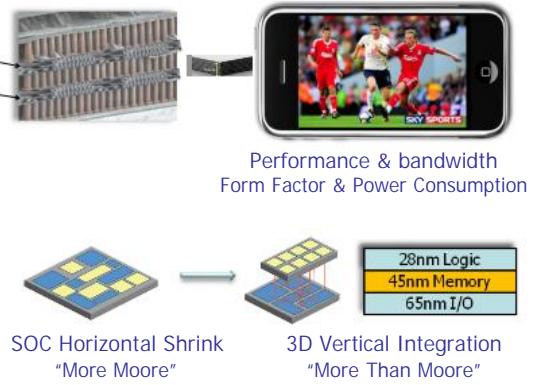
Existing Process Steps  
Front End IC  
manufacturing



**NOVA**  
Leading  
Metrology  
Solution Provider

The NOVA logo is at the top. Below it is a 3D perspective view of a multi-layered semiconductor chip.

New Process Steps  
3D Interconnect



Leveraging Customer Base (Foundry & Memory)



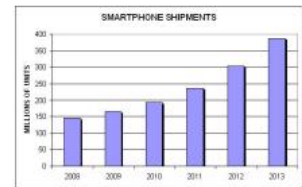
# The justifications for 3D IC are numerous



## SMARTPHONES AND MOBILE COMPUTING

3D IC enables:

- 15% footprint reduction
- 30% Thickness reduction
- 15%-30% less Power Consumption
- Reduced RC Delay
- Integration of Heterogeneous devices (with different design rules)



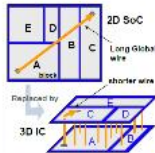
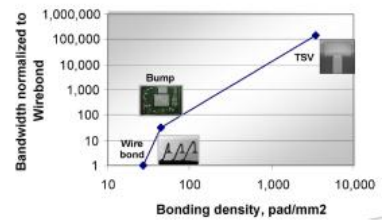
## DRAM



### Bandwidth for High Power Computing

Multi-core CPU are **starved** by lack of data (memory) available to them  
**Frequency - DDR3/DDR4** - wire length, heat, capacitance is becoming a bottleneck

## TSV Supports High Bandwidth

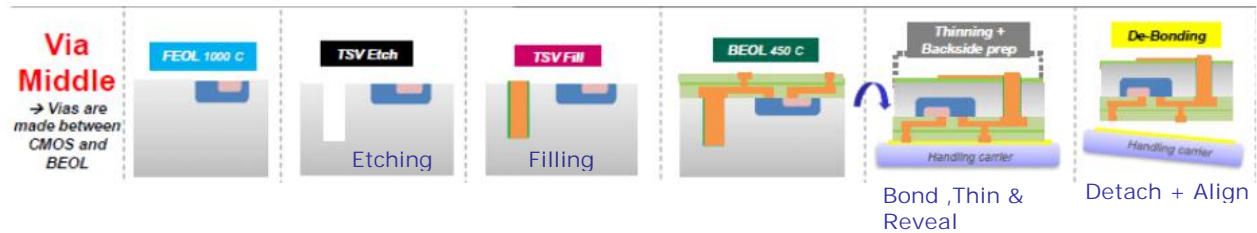


## HORIZONTAL SHRINK LIMIT

- EUV Litho is expensive and not ready
- Vertical integration becomes the cost effective alternative

# 3D IC main process steps

Several new challenges requiring extensive process control

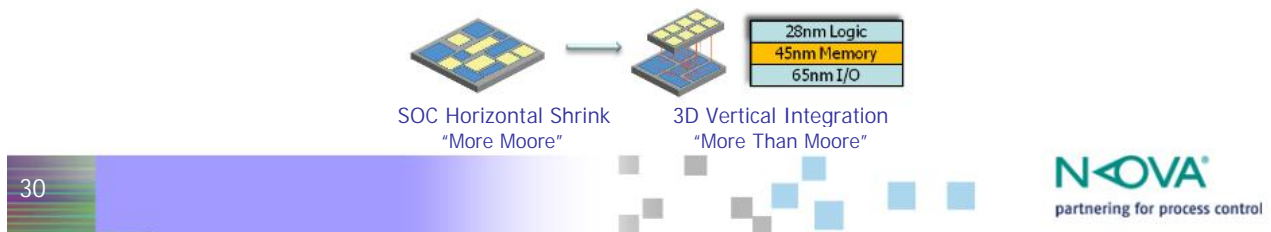


- The transition to 3D IC depends on several factors:
  - Making the process production worthy - currently estimated to be 18-24 months out
  - Cost considerations - market demands that added cost per wafer be <\$100 (currently much higher)
  - Alignment between semiconductor manufacturers to support chip stacking - several collaborations and consortiums have been formed to define standards
- As a result:
  - 3D IC production ramp is expected in 2013
  - Metrology and Inspection Market expected to be ~\$250M by 2013

## Strategy requires stepping up investments

- Existing markets - expand SAM by enhancing product capabilities:
  - Develop and role out highly competitive Next Generation Optical CD solution to expand the number of measurable applications at 3x/2x nodes
  - Improve sensitivity, productivity, time to solution and ease of use
  - Initial revenue shipments in 2011, significant transition in 2012
- 3D IC market:
  - Ship initial evaluation units to customers during 2011 - already actively engaged with several customers (all existing Nova customers)
  - Revenues expected to start in 2012 and significantly increase in 2013, as market starts to take off

Continue on path of success with Optical CD while aligning with customers' long term direction of vertical shrink



# Strategic Objective

## Expand business:

- Expand addressable market from ~\$700M to ~\$950M
- Continue to increase Optical CD market share by adding significant number of applications at existing customer sites
- Successful execution of strategy should result in:
  - Significant revenue increase from current quarterly revenue run rate of ~\$25M to ~\$40M in 2013
  - Maintaining target operating profit margins

## Near Term Financial Impact:

- Step up R&D expenses by \$1M-\$1.5M per quarter
- Incremental revenues from new products will begin to ramp in H2/11
- Increase in capital spending for infrastructure and tools to support new product role out and manufacturability and expand evaluations

## Financial Model

	<b>2010E <sup>(1)</sup></b> <b>\$85M-\$86M</b>	<b>Long-Term</b> <b>Target Model</b>
<b>Revenues</b>		
<b>Total Revenues</b>	<b>100%</b>	
Products Revenues	83%	
Services Revenues	17%	15%-20%
<b>Total Gross Margins</b>	<b>55%</b>	<b>55%+</b>
Products Margins	60%	
Services Margins	30%	30%+
<b>Total Operating Expenses</b>	<b>30%</b>	<b>30%-35%</b>
R&D, net	14%	16% - 19%
SG&A	16%	14%-16%
<b>Operating Margin</b>	<b>25%</b>	<b>20%-25%</b>

Notes:

(1) 2010E - based on published results and Q4/2010 guidance.

(2) Long-term tax rate - ~12%.



# Ability to continue growth is well founded

