

Intel Roadmap Overview

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Agenda

Server Roadmap

Client Roadmap

Netbook / Nettop

Ultra Mobile



Server Products



Intel® Xeon® Enterprise Roadmap

2008*

2009*


Expandable
7000 Sequence

Caneland Platform

65nm Quad-Core Intel® Xeon® 7300 Series	45nm 6-core (Dunnington) Intel® Xeon® 7400 Series
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Intel® 7300 Chipset & OEM

Boxboro-EX Platform

Nehalem-EX
Processor

Boxboro-EX Chipset


Workstation & HPC
5000 Sequence

Stoakley Platform

45nm Quad-Core & Dual-Core
Intel® Xeon® Processor
(shipping)

Intel® 5400 Chipsets

Tylersburg Platform

Nehalem-EP Processor

Tylersburg & Dual-IOH Chipsets


Efficient Performance
5000 Sequence

Bensley & Cranberry Lake Platforms

45nm Quad-Core & Dual-Core
Intel® Xeon® Processor
(shipping)

Intel® 5000 P/V and 5100 P/V Chipsets

Tylersburg Platform

Nehalem-EP Processor

Tylersburg Chipset


Entry
3000 Sequence

Garlow Platform

45nm Quad-Core & Dual-Core Intel® Xeon® Processor
(shipping)

Intel® 3000 P/V Chipsets

2009 Platform

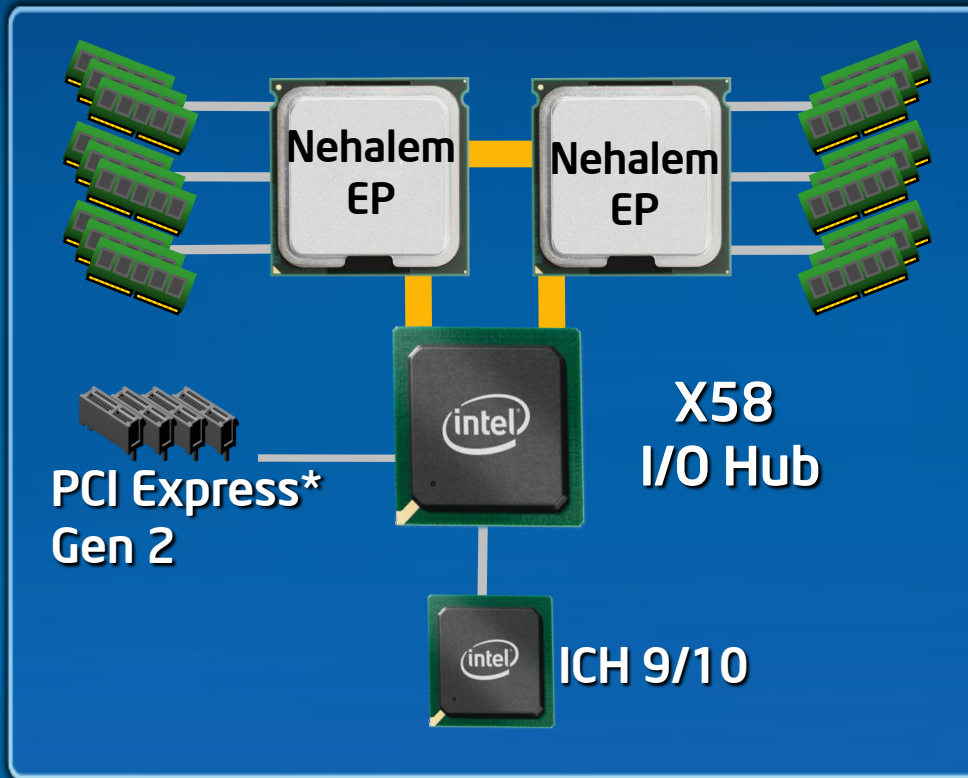
Lynnfield Processor
Havendale Processor

Ibex Peak Chipset

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Timeline refers to Intel component production dates



Enterprise: 2008 Nehalem Based Two Socket System Architecture



Intel® QuickPath Interconnect

Nehalem-EP Platform:

Two sockets each with Integrated Memory Controller

Turbo mode operation

Intel® QuickPath Architecture

DDR3 Memory: 3 Channel, 3 DIMMs per channel

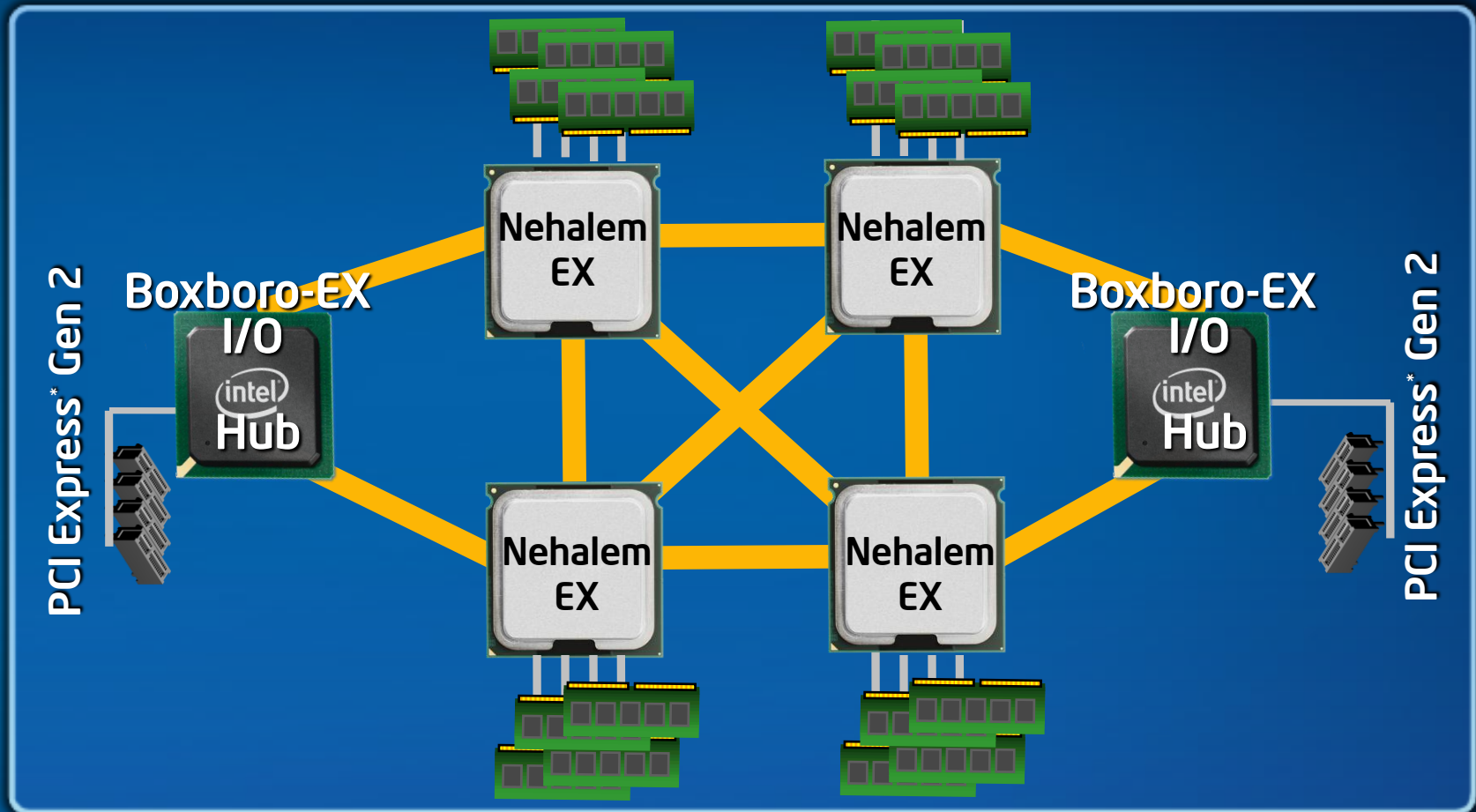
Intel® Virtualization Technology

PCI Express* Gen 2

World's Most Adaptable Server Platform



Enterprise: 2009 Nehalem Based Four Socket System Architecture



Boxboro-EX Platform:

Intel® QuickPath Interconnect

Four processors with Intel® QuickPath Interconnects
PCI Express® Gen 2, Integrated Memory Controller



Intel® Xeon® 7400-based Server Platform Dunnington Extends Caneland Technology Leadership

Latest Intel virtualization capabilities

6 cores, 16 MB L3 cache

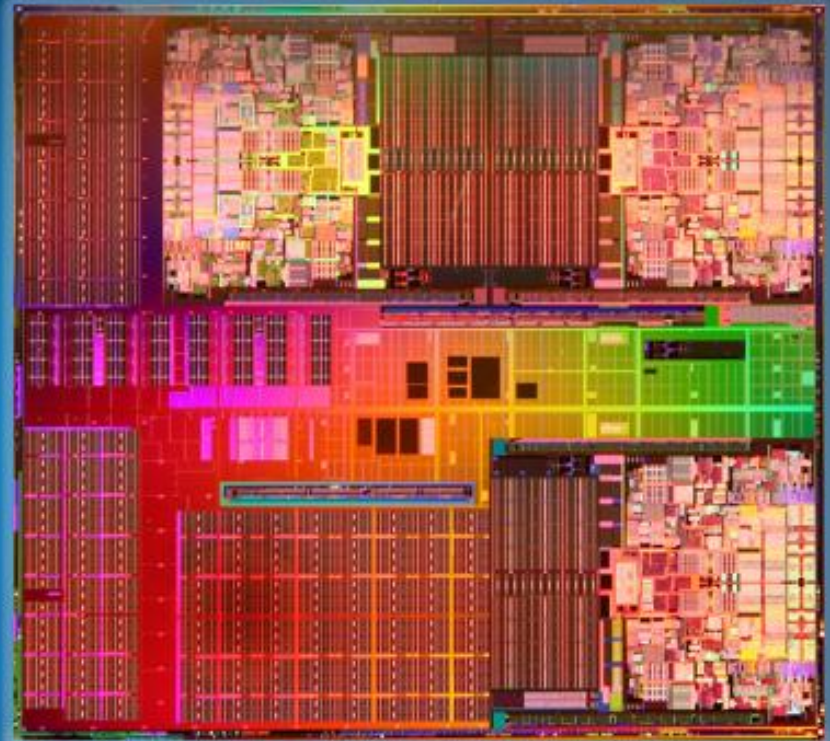
- 4-core/large cache versions available

Socket compatible with Caneland platform

45nm Hi-K technology

1.9 billion transistors

Introduction Sep. 2008



Caneland with Dunnington delivers higher virtualization performance for consolidation and data demanding applications offering more cores, cache and large memory footprint



Intel® Xeon® 7400 Series (Dunnington)

Best-of-class benchmark performance

First 1 million+ TPC-C result for Xeon!

8S TPC Benchmark* C - DB2
1,200,632 tpmC



8S/48C/48T, \$1.99/tpcC - Availability December 10, 2008

#1
4-socket

SPECjbb*2005 - Java HotSpot JVM
531,669 bops



4S/24C/24T, \$1.10/tpcC - Availability September 15, 2008

#1
4-socket

Benchmark* C - SQL Server*
634,825 tpmC



#1
4-socket

TPC Benchmark* E - SQL Server*
671.4 tpsE



4S/24C/24T, \$502/tpsE - Availability September 15, 2008

#1
4-socket

vConsolidate - VMware* ESX
39% better**



SPECint*_rate2006
277 peak score

**Intel Xeon X7460 (16M cache, 2.66GHz, 1066FSB) 6-Core compared to Intel Xeon X7350 (4M cache, 2.93GHz, 1066FSB) Quad-Core.

Expandable Server Leadership



Client Products



Intel Notebook / Desktop Roadmap

2008*

2009*

**Desktop Extreme /
High-End Desktop**

2007 and 2008 Desktop Platforms

45nm Intel® Core™2 Extreme proc.
45nm Intel® Core™2 Quad proc.
(shipping)

Intel® X48, X38, P45, and P35 Chipsets

X58 Platform

Intel® Core i7 Extreme Processor (4C/8T)
Intel® Core i7 Processor (4C/8T)

Intel® X58 Express Chipset

**Desktop
Performance /
Mainstream**

2007 & 2008 Desktop Platforms

45nm Intel® Core™2 Quad and Duo processors
(shipping)

Intel® 3 and 4 Series Chipsets

Piketon / Kings Creek Platforms

Lynnfield (4C/8T)
Havendale (2C/4T)
Ibex Peak

Mobile Extreme

Santa Rosa & Montevina Platforms

45nm Mobile Intel® Core™2 Extreme processors
(Dual-Core shipping today, Quad-Core Q3'08)

Intel® 96x and 4 Series Chipsets

Calpella Platform

Clarksfield Processor (4C/8T)

Ibex Peak-M

**Mobile
Performance /
Mainstream**

Santa Rosa & Montevina Platforms

45nm Intel® Core™2 Duo processors
(shipping)

Intel® 96x and 4 Series Chipsets

Calpella Platform

Clarksfield (4C/8T)
Auburndale (2C/4T)
Ibex Peak-M

Nehalem Drives Next Wave of Leadership in the Client

All products, dates, and programs are based on current expectations and subject to change without notice.

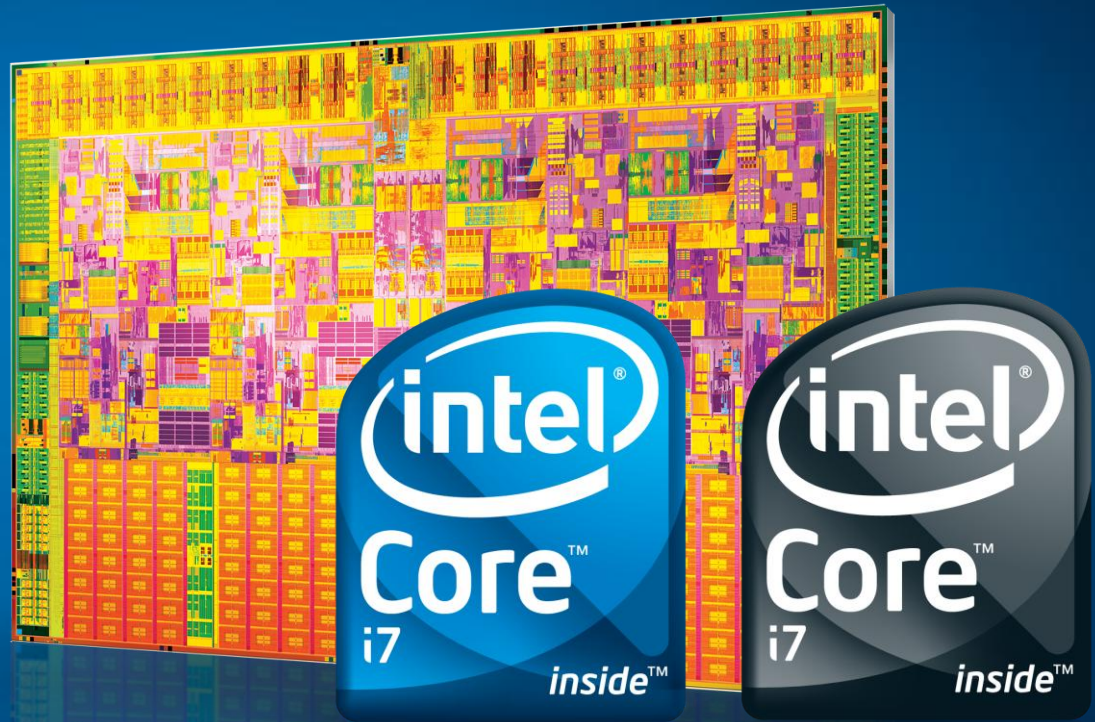
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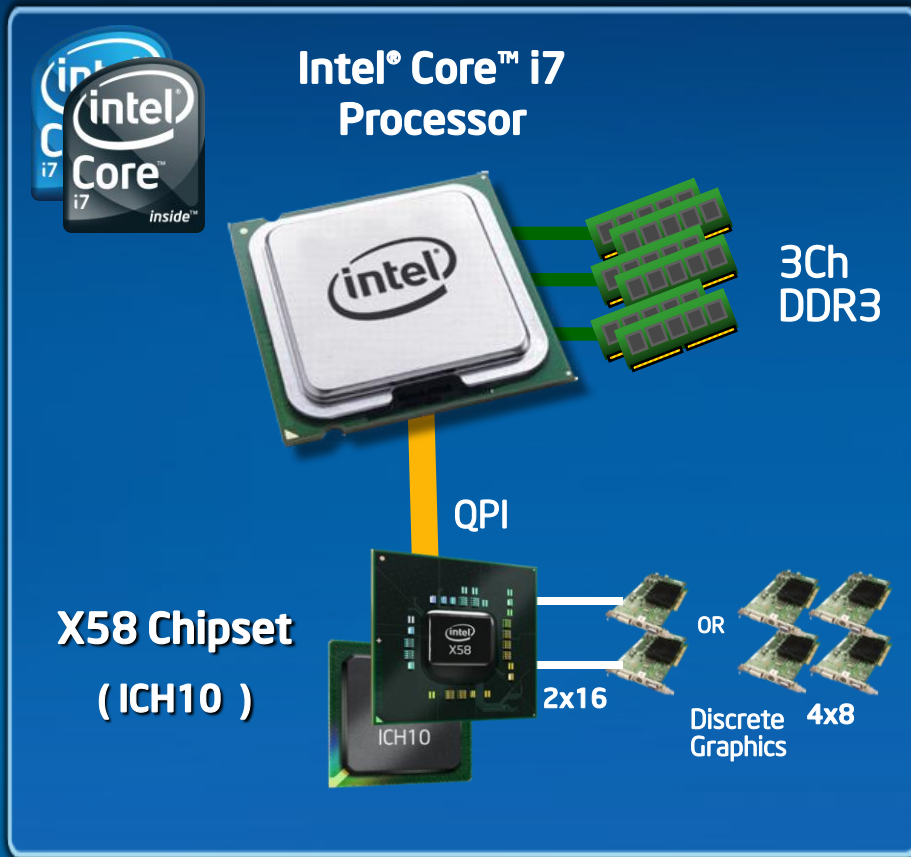
INTRODUCING

NEW INTEL® CORE™ PROCESSOR FAMILY

Intel's Most Advanced
Processors Ever!



2008 Nehalem Desktop Platform



Intel® Hyper-Threading Technology

- 4 cores, 8 threads

Turbo mode enabled

8M Intel® Smart Cache

Intel® QuickPath Interconnect

Extreme SKU has overspeed protection removed for overclocking¹

Integrated Memory Controller

- 3 Channels of DDR3 Memory
- 2 DIMMs per channel

Dual x16 PCI Express* Gen 2 configurable as quad x8

Intel QuickPath Interconnect

The Intel® Core™ i7 Desktop Platform Architecture Delivers New Levels of Performance and Bandwidth

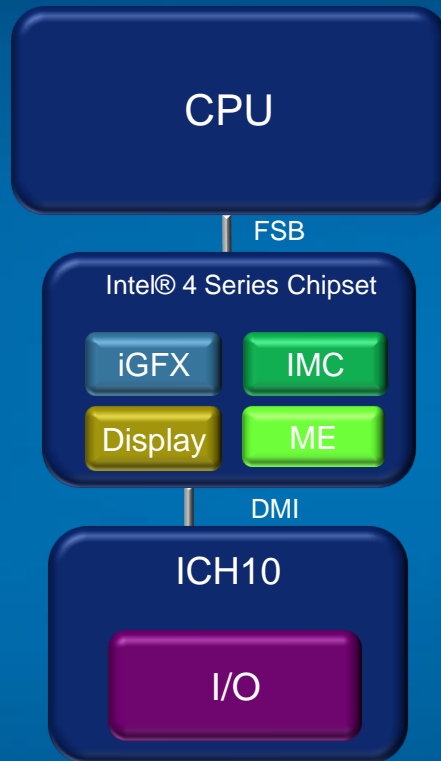
¹Warning: Altering clock frequency and/or voltage may (i) reduce system stability and useful life of the system and processor; (ii) cause the processor and other system components to fail; (iii) cause reductions in system performance; (iv) cause additional heat or other damage; and (v) affect system data integrity. Intel has not tested, and does not warrant, the operation of the processor beyond its specifications.

* Other names and brands may be claimed as the property of others

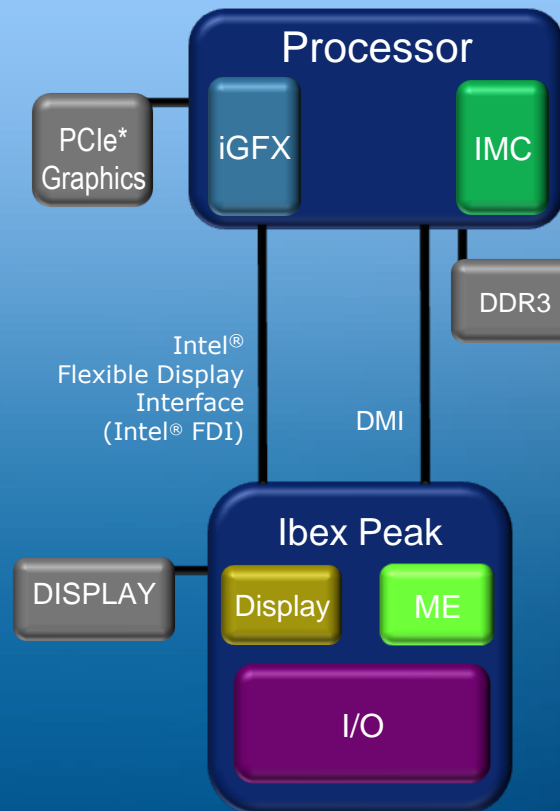


Mainstream Client Platform Partitioning

Today's 3-Chip Solution



New 2-Chip Solution



Graphics moves into Processor

Memory Controller moves into the Processor

Display moves into Ibex Peak

Intel® Manageability Engine moves into Ibex Peak

Smaller boards, lower power, simplified power delivery

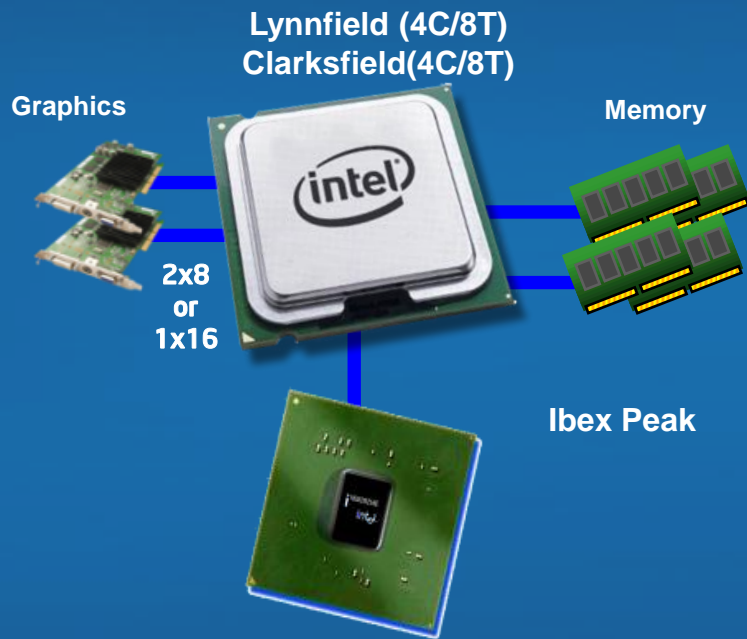
Greater performance via higher integration (igfx/IMC)



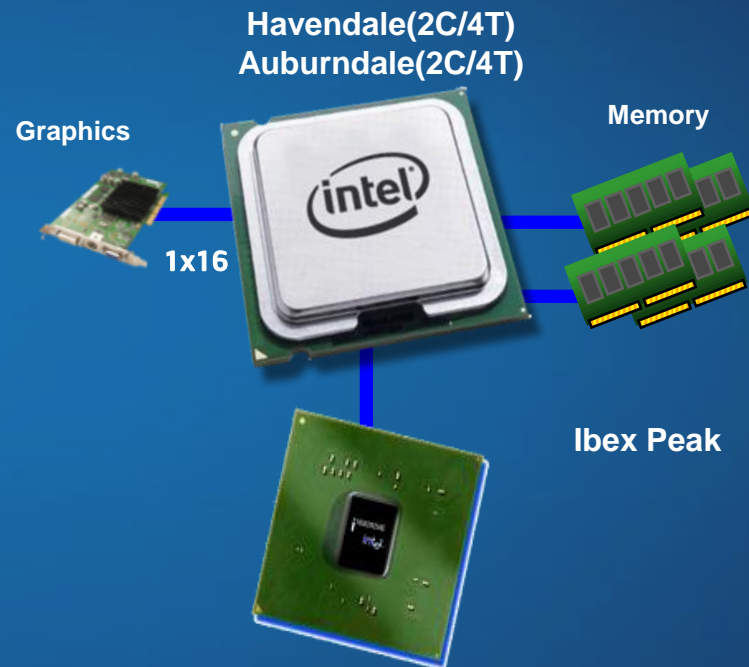
2009 Mainstream Client Processors

One Common Processor Socket & Platform

New 2 Chip: Discrete GPU



New 2 Chip: CPU/GPU OR Discrete GPU



Netbook / Nettop



A New Category of Devices

Want the "Best Internet Experience in Your Pocket"?

Get a Mobile Internet Device

MID: Infotainment, On The Go



Want a Simple Device for Internet Use?

Get a Netbook
OR
Nettop

Internet use

Target SPP

Netbook: ~\$249-349

Nettop: ~\$199-299



Want a Richer, Fuller Experience?

Get a Notebook
OR
Desktop

Entertainment, Productivity and Multitasking



Nettop / Netbook Roadmap



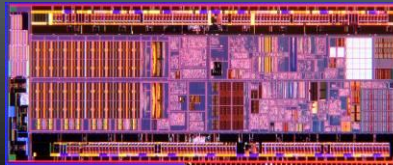
2007

Celeron 220
65nm
Low Cost
Purpose Built
Platform



2008

Intel® Atom
45nm
Nettop Solutions
Lower Power
Lower Cost
Single and Dual Core
Solutions



2009+

Continued
innovation at the
silicon and platform
level

All products, computer systems, dates, and figures specified are preliminary based on current expectations, and are subject to change without notice.

* DC on Nettop only



For Netbook and Nettop Platforms

Intel® Atom™ Processor Based Platform



- New low-power architecture designed from the ground up to enable simple, purpose-built devices for the Internet
- Manufactured using Intel's industry-leading Hi-K Metal Gate 45nm process technology
- Single core and Dual core proc*
- With Intel®945GC and 945GSE chipsets
- 50+ OEM & ODM design wins

Available Today!



* DC on Nettop only

Ultra Mobile



Ultra Mobile Roadmap



2008

45nm

Silverthorne and
Poulsbo

Responsive Internet
Experience

First Grounds Up
Low Power CPU and
Chipset

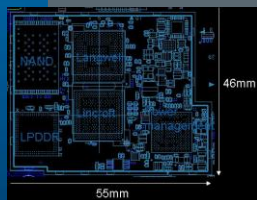


2009/2010

45nm

Projected >10X
Reduction In Idle
Power Compared to
2008 Platform

First Entry Into
Phone Form Factors



Future

32nm

Higher Levels Of
Integration

Continued Benefits
From Leading Edge
Process

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Thanks

Q & A



Intel's Tick Tock Development Model



Significant Market Opportunity For Netbooks and Nettops



Emerging Markets

Majority of households surveyed in emerging markets have zero PCs

Opportunity: First time buyer, primary device

Mature Markets

Minority of households surveyed in mature markets have > 1 PC

Opportunity: Nth time buyer, secondary device

Segment expected to grow to over 100Mu by 2011



**Survey limited to major cities in Emerging Markets and do not represent all emerging market populations*

Source: 2004-2006 Intel Consumer Tech Metrics Overview; Q4 2006 Results; Mercury Research, Jan 2008; Gartner Quarterly, Dec 2007; IDC Research, Dec 2007

Client: 2008 → 2009 Desktop Transition

2008

2009

Extreme
Performance

Mainstream

Value

Basic

Core i7 Extreme

Core i7

Intel® Core i7 (4C/8T)

Intel® X58

Core i7

Nehalem Based

Lynnfield (4C/8T)
Havendale (2C/4T)

Ibex Peak

Nehalem Based

Q9000 and E8000 Series

Core Micro-architecture on 45nm

Core Micro-architecture on 45nm

Diamondville
Integrated Board Solution

Higher Integration
Integrated Board Solution

