

## PRESS RELEASE

### Intel 32nm High-K Metal Gate (HKMG) Recognized as Most Innovative Logic Process

***UBM TechInsights Analysts Say Intel's Lead Sustained by 2<sup>nd</sup> Generation Process While Others Struggle to Deliver a 1<sup>st</sup> Generation HKMG Process in Production***

OTTAWA, July 26, 2010 /PR Newswire/ - UBM TechInsights has announced Intel Corporation as the winner of the Most Innovative Logic Process award in TechInsights' 9<sup>th</sup> Annual Insight Awards. Intel's 32nm process was utilized in the Clarkdale/Westmere processors analyzed by UBM TechInsights.

Carl Wintgens, Senior Process Analyst at UBM TechInsights showed in his [EETimes article](#) that Intel has continued to deliver their major process nodes at a schedule that adheres to Moore's Law despite the serious challenges in sub-sub-micron process technology. Competitors have also been able to conform to the law, so far, but it appears schedules are slipping and Intel's technology lead is increasing. Wintgens commented, "We completed the analysis of a 2<sup>nd</sup> generation HKMG process from Intel without having yet seen a 1<sup>st</sup> generation process in production from anyone else."

Far from being a simple shrink, there are noticeable improvements in Intel's 32nm devices over the 45nm generation, including transistor drive current (with PMOS approaching NMOS capabilities), reduced leakage current, and higher speed/performance all traced to process technology changes.

UBM TechInsights completed a [Logic Detailed Structural Analysis including Gate Dielectric Analysis of the Intel 32nm "Clarkdale/Westmere" CPU](#) and a [Multi-Temperature Transistor Characteristics Report](#) to consider the process for the award. Also, a [Process Comparison of the Intel 45nm "Penryn" and the 32nm "Clarkdale/Westmere" CPU](#) was created to point out the significant differences between the 1<sup>st</sup> and 2<sup>nd</sup> generation processes.

Some other nominees considered (and analyzed) for the logic process award include:

- 40nm TSMC ([AMD/ATI GPU from Radeon HD4770](#))
- 45nm Samsung process ([Apple A4](#) & Samsung S5PC110)
- 45nm Freescale process ([QorIQ Communications Processor](#))

UBM TechInsights annually recognizes companies for technical achievements in the semiconductor industry and has begun accepting nominations for the 10<sup>th</sup> Annual Insight Awards. The 10<sup>th</sup> annual awards will kick-off by recognizing the Most Innovative Mobile Processor late this summer. Please visit <http://www.ubmtechinsights.com/news-and-events/insight-awards/> for more information.



## PRESS RELEASE

### **About UBM TechInsights**

UBM TechInsights is the preeminent firm for the provision of sophisticated information and advice to technology companies. We assist in the management of their technology and intellectual property portfolios, ensuring the reduction of risk and maximizing return on investment. Our leadership position is founded upon our commitment to the utmost integrity, and sustained by the ongoing investment and acquisition of the knowledge and capabilities necessary to meet our clients' evolving needs. When companies need assistance in managing their most complex technology or IP challenges, they turn to UBM TechInsights for assured results. For more information about UBM TechInsights, go to <http://www.ubmtechinsights.com/>.

###

For more information contact: Mark Roberts, Director of Marketing  
+1-613-576-0174, <mailto:mroberts@ubmtechinsights.com>

**UBM TechInsights**  
3000 Solandt Road  
Ottawa ONK2K 2X2  
Canada

T: +1 613 599 6500

[www.ubmtechinsights.com](http://www.ubmtechinsights.com)