

Samsung Electronics Develops Wafer Level Package for Higher Chip Performance

July 5 2004

Samsung Electronics Co., Ltd., the world leader in advanced semiconductor memory technology, recently announced the industry's first wafer level package (WLP) for high-performance 512Megabit (Mb) DDR2 SDRAMs. WLP, unlike conventional package technology, builds the package layer directly on the wafer by incorporating fabrication process. This new approach enhances the electrical properties and reduces the physical space making WLP an optimal package solution for mobile environments and high-density memory modules.

The new package technology, WLP, is originated from the wafer level process. Two patterned inter-layer dielectrics (ILD), with insulating characteristics, and a metal layer replaces the conventional package substrate. Ball grids give the appearance of a chip scale package (CSP) that is truly scaled down to the actual die size.

The compact new package enhances electrical properties though shorter circuit-routing, reduces package size to die level and package process time, and brings higher productivity, especially to larger wafer sizes, with higher throughput and lower cost. The WLP also enhances environment protection measures as eliminating the conventional package removes need to acquire and treat the package or its remains making WLP a competitive choice over conventional packages.

Samsung's WLP supports the JEDEC specifications for DDR2 CSP. Without further modification the DDR2 WLP can easily replace the CSP form allowing system designers to facilitate the introduction of

WLP for DDR2 SDRAM applications.

The original press release can be found [here](#).

Citation: Samsung Electronics Develops Wafer Level Package for Higher Chip Performance (2004, July 5) retrieved 19 April 2024 from <https://phys.org/news/2004-07-samsung-electronics-wafer-package-higher.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.