

# Philips targets DDR2 memory modules with new high-speed registers

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## ***Designed to optimize memory performance, family includes fastest registers on the market***

As memory modules have evolved from slower single data rate (SDR) solutions to double data rate (DDR), the need for increasingly precise signal control has led to the increased use of registers. To address this design need, Royal Philips Electronics today announced a new family of high-speed registers for memory-intensive applications such as high-end servers and advanced computing. Optimized for DDR2 DIMM loads, the new registers maximize DDR2 registered memory module performance by precisely controlling the signals going to each DRAM on the module.

The memory module market is evolving toward the higher DDR2 speeds, a trend that requires registers to be optimized for speed and signal integrity. Many millions of DDR2 modules will be manufactured in 2005, and a significant percentage of them will be registered modules. Philips' registers are ideal for customers who require advanced and reliable performance, as they offer the highest speeds available with 1.8ns maximum propagation delay time (tPD), thereby exceeding industry standards for improved margin and high-speed operation. Two of the new devices also feature a parity checking function for increased reliability. All of the new products support or exceed the DDR2 standard defined by the Joint Electronic Device Engineering Council (JEDEC), ensuring compatibility with memory solutions from all major manufacturers.

"By providing one of the fastest available single die solutions, as well as including innovative features such as the parity checking, Philips enables us to create sophisticated, high-density low-profile memory module solutions in a wide range of configurations," said Ken Kledzik, executive vice president and CTO at Legacy Electronics Inc., a leading manufacturer of memory modules. "Many of these are high-speed, highly-

packed modules that utilize up to 36 DDR2 SDRAMs and incorporate our patented Canopy™ technology."

"As the performance requirements of workstations and servers increase, memory manufacturers need to develop solutions that operate at ever-faster speeds," said Pierre-Yves Lesaichere, general manager, Interface Products Business Line at Philips Semiconductors. "Designed to help computing companies and module makers meet this requirement, Philips' new registers set the bar in terms of speed, signal integrity and feature innovation."

All of the new devices are single die solutions, reducing the overall cost by avoiding hybrid assembly techniques and ensuring reliability. The products are available in either leaded or lead-free packaging in order to meet various customer requirements.

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