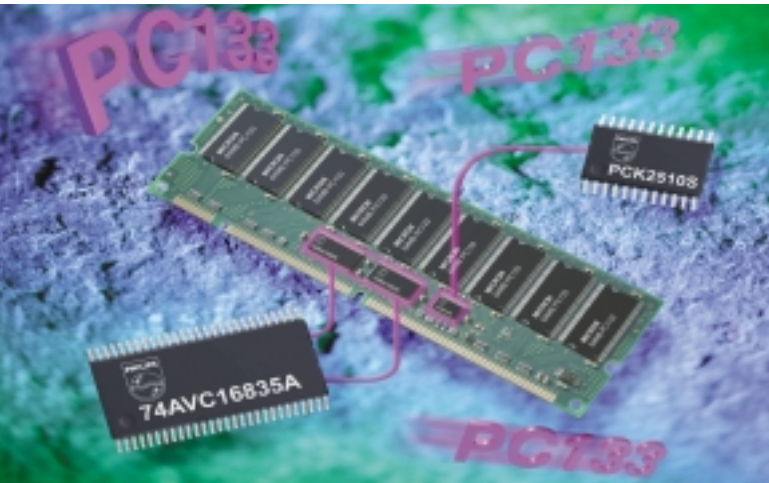


# Complete Memory Interface Solution for PC133 DIMMs



Together, the 74AVC[M]16[2]835A/ 74AVC[M]16[2]834A/ 74AVC16334A/ 74AVC[M]16[2]836A and the PCK2509S/ PCK2510S provide a complete memory interface solution for PC133 enabled applications.

**74AVC[M]16[2]835A/ 74AVC[M]16[2]834A**  
18-Bit Registered Driver/  
18-Bit Registered Driver with Inverted Register Enable

**74AVC16334A/ 74AVC[M]16[2]836A**  
16-Bit Registered Driver with Inverted Register Enable/  
20-Bit Registered Driver with Inverted Register Enable

**PCK2509S/ PCK2510S**  
50 - 167MHz 1:9/ 1:10 SDRAM Clock Drivers

## PC133 Memory Interface Solution

Philips AVC and AVCM registered drivers and tight jitter, low skew, single-ended Philips Clock (PCK) drivers enable registered PC133 memory by providing a 33% performance boost over PC100. Two to three 74AVC[M]16[2]835A/ 74AVC[M]16[2]834A/ 74AVC16334A/ 74AVC[M]16[2]836A and one PCK2509S or PCK2510S constitute the memory interface solution for registered Single Data Rate (SDR) PC133 SDRAM memory modules, as specified by the JEDEC 42.5 standard.

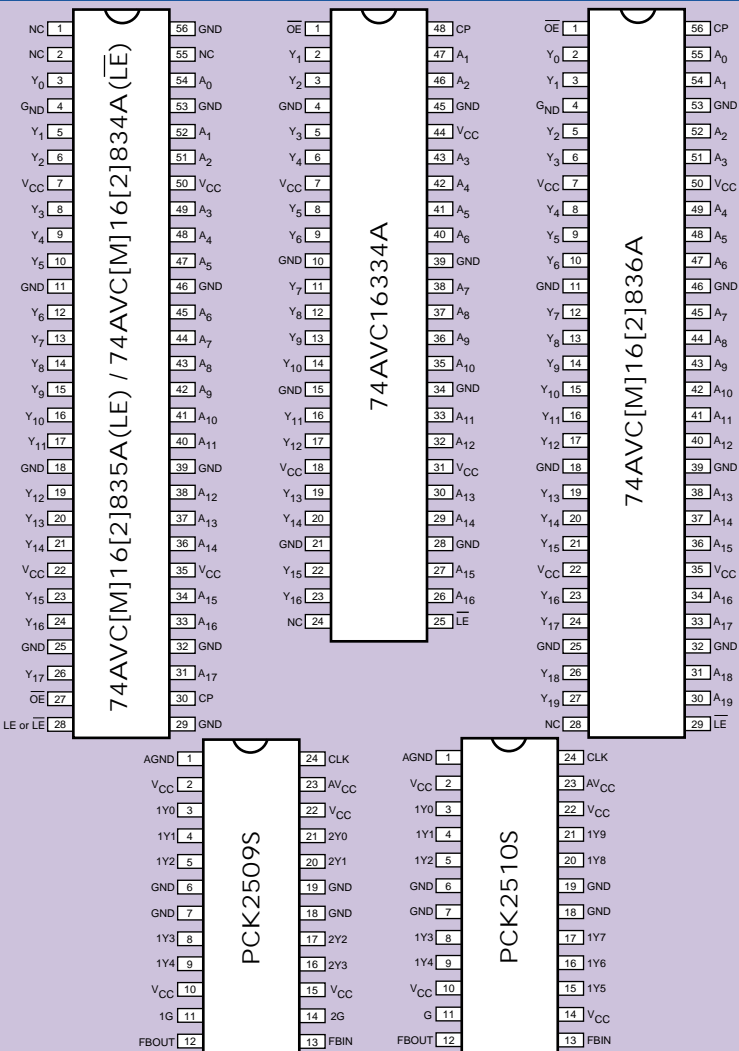
The 74AVC[M]16[2]835A is an 18-bit AVC or AVCM registered driver that provides address and control signals to SDR PC133 SDRAMs. The 74AVC[M]16[2]834A/ 74AVC16334A/ 74AVC[M]16[2]836A are 18-bit, 16-bit, and 20-bit AVC or AVCM registered drivers with inverted register enables. All AVC registered drivers have dynamic controlled outputs (DCO™) which reduce the output impedance during a transition to drive the load. DCO output structures then increase the output impedance before the end of a transition to minimize reflections. All AVC drivers have input diodes to clamp off undershoot and overshoot resulting from strong memory controller drivers. AVCM registered drivers have standard 15Ω termination resistors (indicated by a "2" in the part name) to minimize output overshoot and undershoot. The PCK2509S and PCK2510S are 50 - 167MHz 1:9/1:10 SDRAM clock drivers that provide SDR SDRAM clock signals. The PCK2509S is typically used in planar and unstacked memory configurations while the PCK2510S is typically used in stacked memory configurations.

## 74AVC[M]16[2]835A/ 74AVC[M]16[2]834A/ 74AVC16334A/ 74AVC[M]16[2]836A Advantages

- Drives registered advanced very low-voltage CMOS
- 1.8V, 2.5V, and 3.3V operation
- Typical propagation delay <1.7ns at 3.3V operation
- AVC input diode to accommodate strong drive inputs
- AVC Dynamic Controlled Output (DCO™)
- AVCM Integrated 15Ω termination resistors [2]
- Inverted register enable for 16[2]834A/ 16334A/ 16[2]836A
- 48-pin plastic TSSOP package for 74AVC[M]16334A
- 56-pin plastic TSSOP package for 74AVC[M]16[2]835A/ 74AVC[M]16[2]836A
- Optimized for use with PCK2509S/PCK2510S

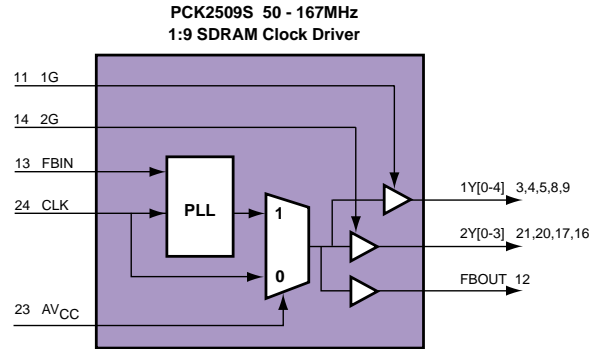
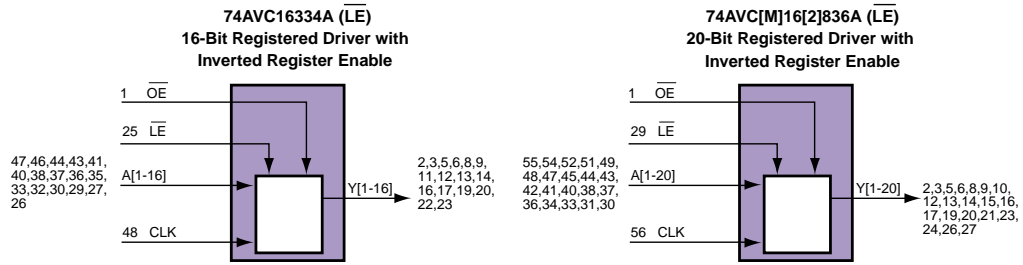
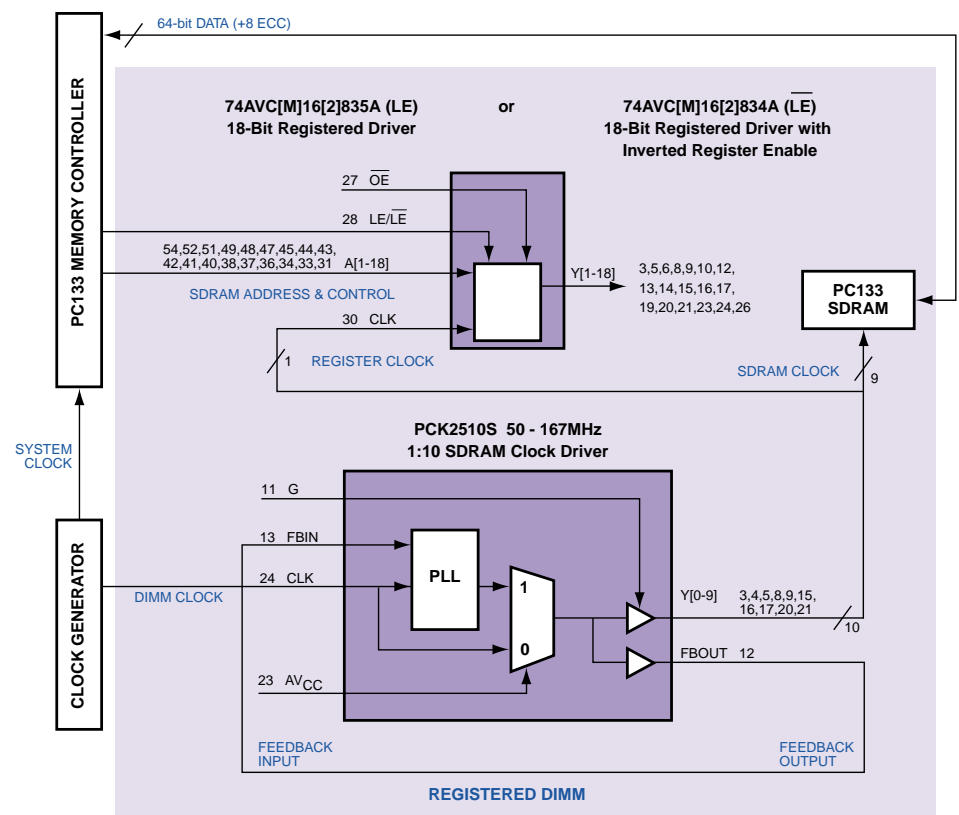
## PCK2509S/PCK2510S Advantages

- Supports single-ended frequencies up to 167MHz
- Integrates single-ended PLL with clock buffer
- Mixed 2.5V and 3.3V operation
- Backward compatible with PC100
- Cycle-to-cycle jitter <75ps
- Pin-to-pin skew <150ps
- Phase error <100ps
- Efficient power management mode
- Spread spectrum compliant
- 24-pin plastic TSSOP package
- Optimized for use with AVC, AVCM, ALVC register families



74AVC[M]16[2]835A  
 74AVC[M]16[2]834A  
 74AVC16334A  
 74AVC[M]16[2]836A  
 PCK2509S PCK2510S

74AVC[M]16[2]835A 74AVC16334A PCK2509S/ PCK2510S  
 74AVC[M]16[2]834A 74AVC[M]16[2]836A 50-167MHz 1:9/ 1:10 SDRAM Clock Drivers



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