

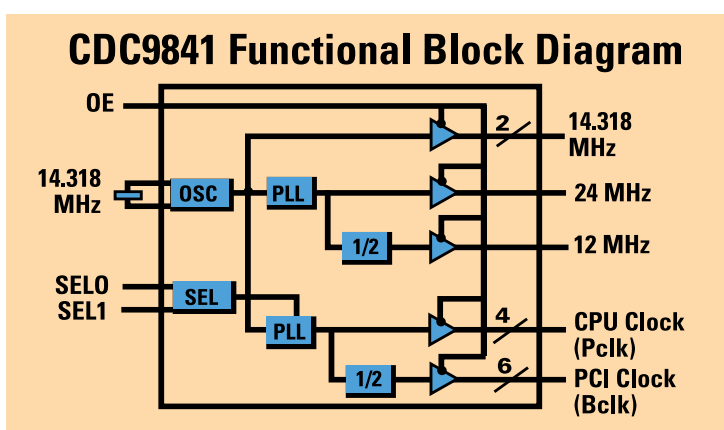
CDC984x family features

- Less than 250 ps skew between Pclk outputs
- Less than 500 ps skew between Bclk outputs
- ± 250 ps max CPU clock peak-to-peak jitter
- ± 350 ps maximum PCI clock peak-to-peak jitter
- 1 ns to 5 ns offset between Bclk and Pclk
- Operates at 3.3 Volt Vcc
- Minimum rise and fall slew rate of 1 V/ns
- LVTTTL compatible I/O

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Advanced System Logic SPOTLIGHT

Keeping high-frequency systems ticking with TI's PLL Clock-Distribution Circuits



High-performance processors and limited motherboard space are driving the need for today's high-performance system clocks. TI's new system clock synthesizers/drivers for Pentium™-class motherboards address system needs by providing designers with a highly integrated, all-in-one device that generates all required clock signals for these systems.

The CDC9841, CDC9842, and CDC9843 represent a new generation of clock drivers. These devices integrate all of the clocking functions normally implemented in separate components, including CPU/chipset clocks, PCI clocks, ISA reference clocks, Floppy Controller/Super I/O clock and Keyboard Controller or Universal Serial Bus (USB) clock. This frees up space on the motherboard for other functions like audio and graphics that used to reside on add-in cards. The highly integrated CDC984x family also meets the demanding frequency and timing requirements of processors like the Pentium and is specifically designed to run the Intel

Triton and Intel Mars Chipsets.

The CDC984x family provides less than 250 ps skew between CPU clock outputs and less than 500 ps skew between peripheral component interconnect (PCI) clock outputs. And with ± 250 ps max CPU peak-to-peak jitter, designers can be assured that the devices will meet their system jitter requirements.

All three devices operate from a 14.318 MHz crystal input, and all have four CPU clock outputs programmable to one of three frequencies (50 MHz, 60 MHz, 66 MHz.) The CDC9841 features fixed-

frequency outputs that provide a 24 MHz clock, a 12 MHz clock and two buffered copies of the 14.318 MHz input reference. The CDC9842 replaces the 24 MHz and 12 MHz outputs of the CDC9841 with a 48 MHz fixed-frequency output and an additional reference clock, while the CDC9843 only replaces the 12 MHz output with the 48 MHz fixed-frequency output.

The CDC984x family of devices are fabricated in TI's ultra-low power, state-of-the-art EPIC 3C™ process. Their reduced power consumption levels help designers get the most out of today's low-power desktop and notebook PC designs.

All three devices are available in 28-pin small-outline integrated circuit (SOIC) packages. With a maximum area of 192 square mm and a lead pitch of 1.27 mm, the packages are ideal for space-constrained board configurations.

The CDC9841, CDC9842, and CDC9843 are available today from Texas Instruments and authorized distributors. Suggested resale pricing in quantities of 1,000 is \$1.45.

CDC984x Family Clock Output Differences

Device	Clock Outputs					
	CPU Outputs	PCI Outputs	USB Clock	Super I/O or Floppy Controller Clock	Keyboard Controller Clock	ISA Reference Clocks
CDC9841	4 Programmable (50, 60 and 66 MHz)	6 (1/2x CPU)	N/A	1 (24 MHz)	1 (12 MHz)	2 (14.318 MHz)
CDC9842	4 Programmable (50, 60 and 66 MHz)	6 (1/2x CPU)	1 (48 MHz)	1 (24 MHz)	N/A	3 (14.318 MHz)
CDC9843	4 Programmable (50, 60 and 66 MHz)	6 (1/2x CPU)	1 (48 MHz)	1 (24 MHz)	N/A	2 (14.318 MHz)