

Product Preview

**PowerPC™ 603/604, Pentium™
Compatible Clock Synthesizer/Driver**

The MPC9159 device is a clock generator/distribution chip designed for personal computer applications using today's latest microprocessors. The device provides processor and PCI bus clocks for a typical PowerPC 603/604 or Pentium based PC motherboard, as well as two system bus clocks, a floppy disk clock and a keyboard clock. The device alleviates the need for several crystal oscillators, as well as fanout buffers, in a typical design.

The CPU clocks are programmable to synthesize 50, 60 or 66MHz frequencies from a 14.31818MHz crystal. The PCI bus clocks are always set at one half of the processor clock frequencies. A test mode can be selected which will allow the output buffers to be driven directly from the input source, thus bypassing the PLL for board level test or debug.

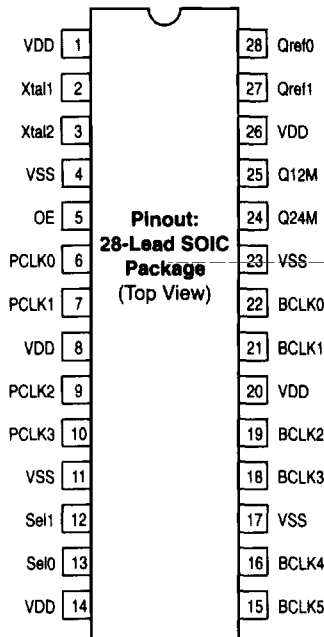
- Four Low Skew CPU Bus (PCLK) Clocks
- Six Low Skew PCI Bus (BCLK) Clocks
- Two 14.31818MHz Clocks
- 24MHz Disk Clock
- 12MHz Keyboard Clock
- Meets Requirements of Triton Chip Set
- Test Mode and Tristate Outputs for Board Level Test or Debug
- Output Duty Cycle 45–55%
- 3.3V V_{CC}
- PCI Clocks Delayed Relative to CPU Clocks (1–5ns)
- ±200ps Cycle-to-Cycle Jitter

MPC9159

**LOW VOLTAGE
PLL CLOCK DRIVER**



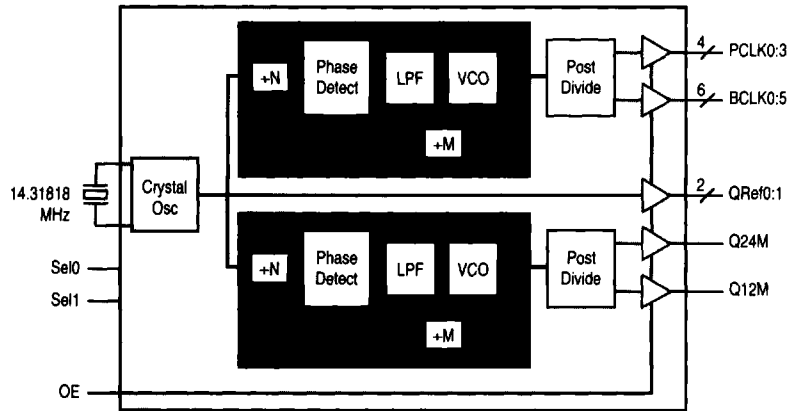
**DW SUFFIX
SOIC PACKAGE
CASE 751F-04**



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MPC9159 LOGIC DIAGRAM



OE	S0	S1	Xtal (MHz)	PCLK (MHz)	PCI_CLK (MHz)	Q14M (MHz)	Q24M (MHz)	Q12M (MHz)
0	X	X	14.31818	High Z	High Z	High Z	High Z	High Z
1	0	0	14.31818	50	25	14.31818	24	12
1	0	1	14.31818	60	30	14.31818	24	12
1	1	0	14.31818	66	33	14.31818	24	12
1	1	1	TCLK	TCLK/2	TCLK/4	TCLK	TCLK/4	TCLK/8