Using Pericom's PI6C104 Pentium II/Celeron 100 MHz Clock In Place of W48S111-14

Pericom's PI6C104 Motherboard Clock chip has all the features of W48S111-14 device. Both are pin-compatible, with the following two minor exceptions:

1. Pin 14

Condition	PI6C104	W48S111-14	Compatible?
During power-up, Pin 27 is "P14" input: If "P14" = 1 (a 10kΩ strapping resistor to V_{DD} from Pin 27)	Pin 14 is 24 MHz	Pin 14 is 24 MHz	Yes

Note:
If "P14" = 0 (a 10kΩ strapping resistor to ground for Pin 27), PI6C104 provides one additional REF clock output at pin 14. W48S111-14 provides one additional 48 MHz clock output at pin 14.

2. Frequency Selection and Spread Spectrum Selection by Byte 3 of I^2C

Note:
When bit 3 of Byte 3 = 1, frequency is controlled by Bits 6,5, and 4 of Byte 3. PI6C104 and W48S111-14 are **identical** for the following 100MHz and 66MHz Frequency Selections:

Byte 3 of I^2C				Frequency Selection		SSC Selection
Bit 1	Bit 6	Bit 5	Bit 4	CPU (MHz)	PCI (MHz)	
0	0	1	1	66.8	33.4	OFF
0	1	1	1	100	33.3	OFF
1	0	1	1	66.8	33.4	ON
1	1	1	1	100	33.3	ON

Other combinations of (Bit 1,Bit 6,Bit 5,Bit 4) produce different Frequency Selections. PI6C104 offers more frequency selections and additional choices of Spread Spectrum frequency spread.

Summary
- Both parts support Spread Spectrum clocks.
- The DC Electrical Characteristics and AC Electrical Characteristics of the two parts are the same.

PC motherboard applications find that PI6C104 and W48S111-14 are pin-compatible.