

Test Report :

**Digital I/O Response Time for PIO-DIO Series Cards**

Version: 1.01

<b>CPU</b>	<b>RAM</b>	<b>OS</b>
PII-300MHz x 1	256MB	DOS, Windows 2000(SP4)
<b>Oscilloscope</b>	<b>Tester</b>	<b>Cards</b>
Tektronix TDS 220	Gary Lin	PIO-D24, PIO-D48, PIO-D56, PIO-D64 PIO-D96, PIO-D144, PIO-D168

**Summary:**

The PIO-DIO series cards' I/O response time is about **0.77 micro-seconds**. (Frequency is about **1.3 MHz**)

The test result is depending on the system environments, such as CPU speed and operating system used. Users may get a better response time by using a faster CPU. The response time of digital-input is the same as the digital-output.

**Details:**

Test PIO-D24 D/O response time, no loop used.

<b>Program Code</b>	<b>PIO-D24 Test Results</b>
OutputByte(Address, 0xFF) OutputByte(Address, 0)  ... x10 times	DOS + TC 3.0: TDS 220 shows 1.67MHz.  Windows 2000 (SP4) + VC 6.0: TDS 220 shows 1.31MHz.

Test PIO-D24 D/O response time, use loops.

<b>Program Code</b>	<b>PIO-D24 Test Results</b>
For-Loop { OutputByte(Address, 0xFF) OutputByte(Address, 0) }	DOS + TC 3.0: TDS 220 shows 1.47MHz.  Windows 2000 (SP4) + VC 6.0: TDS 220 shows 1.31MHz.

Test PIO-D24 D/O response time, use loops and a little computation.

<b>Program Code</b>	<b>PIO-D24 Test Results</b>
<pre>For-Loop {   OutputByte(Address, wDO);   wDO = (wDO == 0? 0xFF : 0 ); }</pre>	DOS + TC 3.0: TDS 220 shows 1.38MHz.  Windows 2000 (SP4) + VC 6.0: TDS 220 shows 1.31MHz.

Test PIO-DIO series card's D/O response time under DOS + TC 3.0, use loops and a little computation.

<b>Program Code</b>	<b>Test Results</b>
<pre>For-Loop {   OutputByte(Address, wDO);   wDO = (wDO == 0? 0xFF : 0 ); }</pre>	PIO-D24/D56 = 1.38MHz. PIO-D48 = 1.38MHz. PIO-D64 = 1.38MHz. PIO-D96 = 1.38MHz. PIO-D144 = 1.38MHz. PIO-D168 = 1.38MHz.

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