Testing the D/O response time for the PIO-D48U D/O, use loops.

Program Code	Test Results for the PIO-D48U

For-Loop
{
OutputByte(Address, 0xFF)
OutputByte(Address, 0)
}
	DOS + BC3.1:
	The TDS 2014B displays 1.13MHz.
	
	Windows XP(SP3) + VB 6.0:
	The TDS 2014B displays 1.04MHz.

Testing the D/O response time for the PEX-D4, no loop used.

Program Code	Test Results for the PEX-D48
OutputByte(Address, 0xFF) OutputByte(Address, 0) ... x10 times	DOS + BC3.1: The TDS 2014B displays 555kHz. Windows XP(SP3) + VB 6.0: The TDS 2014B displays 510kHz.

Testing the D/O response time for the PEX-D4, use loops.

Program Code	Test Results for the PEX-D48

For-Loop
{
OutputByte(Address, 0xFF)
OutputByte(Address, 0)
}
	DOS + BC3.1:
	The TDS 2014B displays 526kHz.
	
	Windows XP(SP3) + VB 6.0:
	The TDS 2014B displays 500kHz.

PIO-DIO series cards	**PEX-DIO series cards**
PIO-D24U	PEX-D24
PIO-D56U	PEX-D48
PIO-D48U	PEX-D56
PIO-D48SU	PEX-D96S
PIO-D64U	PEX-D144LS
PIO-D96U	
PIO-D96SU	
PIO-D144U	
PIO-D144LU	
PIO-D168U	
PIO-D64HU	

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分類/Classification	☐ tDS ☐ tGW ☐ PETL/tET/tPET ☐ DS/PDS/PPDS ☐ tM-752N ☑ I/O Card ☐ VXC Card ☐ VxComm ☐ Other				
作者/Author	Albert	日期/Date	2015-09-04	編號/No.	FAQ-010

Q: What is the DIO response time for PIO/-PEX-DIO Series cards?

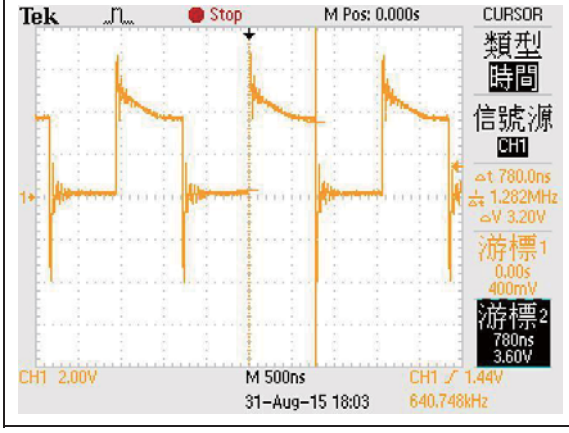
A: The I/O response time for PIO-DIO Series cards is about 1 microsecond when the frequency is around 1 MHz. The I/O response for PEX-DIO Series cards is about 2 microseconds when the frequency is around 500 kHz.

The test results depend on the system environments, such as the CPU speed and the operating system being used. A better response time may be achieved by using a faster CPU. The response time for the Digital Input is the same as for the Digital Output.

Testing Environment Details:

Motherboard	CPU	RAM
SIMATIC IPC547eco	Core2Duo E5300 @2.6GHz	1GB
Operating System	**Oscilloscope**	**Cards**
Windows XP(SP3), DOS 6.2 VB6.0/BC3.1	Tektronix TDS 2014B	PIO/PEX-DIO Series Cards

Testing the D/O response time for the PIO-D48U, no loop used.

Program Code	Test Results for the PIO-D48U
OutputByte(Address, 0xFF) OutputByte(Address, 0) ... x10 times	DOS + BC3.1: The TDS 2014B displays 1.28MHz. Windows XP(SP3) + VB 6.0: The TDS 2014B displays 1.11MHz.
	Response time: The interval between the two Digital Output signals.

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