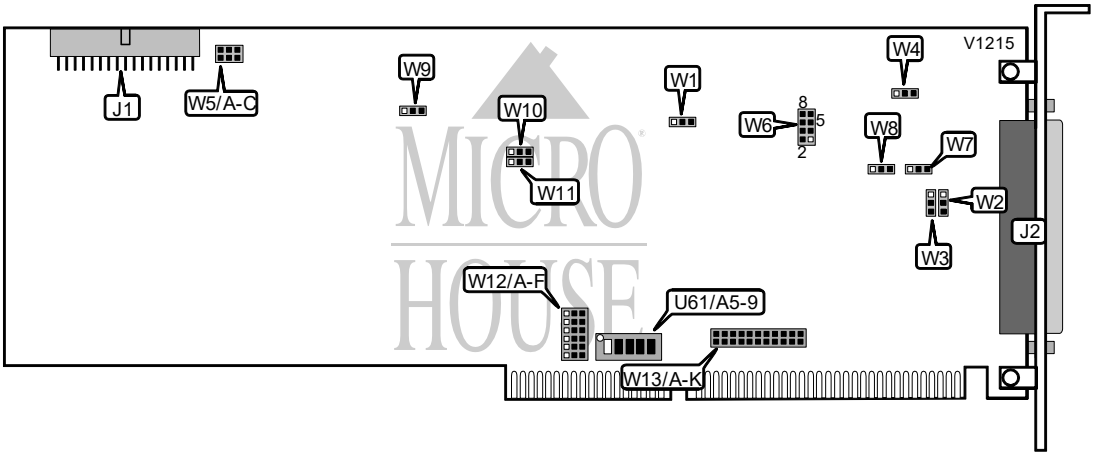
NATIONAL INSTRUMENTS
A T - M I O - 1 6

Card Type Analog to digital timing converter
Chipset Controller Unidentified
I/O Options Analog input, analog output, digital input, digital output
Maximum DRAM N/A



CONNECTIONS			
Pu pose	Lc ation	Pu pose	Lc :ation
34-pin interface connector	J1	100-pin I/O connector	J2

BASE I/O ADDRESS SELECTION					
Address	U61/A5	U61/A6	U61/A7	U61/A8	U61/A9
í 220h	Off	On	On	On	Off
180h	On	On	Off	Off	On
1A0h	Off	On	Off	Off	On
1C0h	On	Off	Off	Off	On
1E0h	Off	Off	Off	Off	On
200h	On	On	On	On	Off
360h	Off	Off	On	Off	Off
380h	On	On	Off	Off	Off
3A0h	Off	On	Off	Off	Off
3C0h	On	Off	Off	Off	Off
3E0h	Off	Off	Off	Off	Off

Note: A total of 255 base address settings are available. The switches are a binary representation of the decimal memory addresses. Switch A9 is the Most Significant Bit and switch A5 is the Least Significant Bit. The switches have the following decimal values: switch A9=512, A8=256, A7=128, A6=64, A5=32. Turn On the switches and add the values of the switches that are On to obtain the correct memory address. (Off=1, On=0)

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DMA CHANNEL SELECTION (DMA 1)						
DMA	W12/A	W12/B	W12/C	W12/D	W12/E	W12/F
í 6	Open	Open	Pins 1 & 2	Pins 1 & 2	Open	Open
5	Open	Open	Open	Open	Pins 1 & 2	Pins 1 & 2
7	Pins 1 & 2	Pins 1 & 2	Open	Open	Open	Open
Disabled	Open	Open	Open	Open	Open	Open
Note: Pins designated are in the closed position.						

DMA CHANNEL SELECTION (DMA 2)						
DMA	W12/A	W12/B	W12/C	W12/D	W12/E	W12/F
í 7	Pins 2 & 3	Pins 2 & 3	Open	Open	Open	Open
5	Open	Open	Open	Open	Pins 2 & 3	Pins 2 & 3
6	Open	Open	Pins 2 & 3	Pins 2 & 3	Open	Open
Disabled	Open	Open	Open	Open	Open	Open
Note: Pins designated are in the closed position.						

INTERRUPT SELECTION (MIO-16 CIRCUITRY)						
IRQ	W13/A	W13/B	W13/C	W13/D	W13/E	W13/F
í 10	Open	Open	Open	Open	Open	Open
2/9	Open	Open	Open	Open	Open	1 & 2
3	1 & 2	Open	Open	Open	Open	Open
4	Open	1 & 2	Open	Open	Open	Open
5	Open	Open	1 & 2	Open	Open	Open
6	Open	Open	Open	1 & 2	Open	Open
7	Open	Open	Open	Open	1 & 2	Open
11	Open	Open	Open	Open	Open	Open
12	Open	Open	Open	Open	Open	Open
14	Open	Open	Open	Open	Open	Open
15	Open	Open	Open	Open	Open	Open
Disabled	Open	Open	Open	Open	Open	Open
Note: Pins designated are in the closed position.						

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INTERRUPT SELECTION (MIO-16 CIRCUITRY CON'T)					
IRQ	W13/G	W13/H	W13/I	W13/J	W13/K
í 10	Closed	Open	Open	Open	Open
2/9	Open	Open	Open	Open	Open
3	Open	Open	Open	Open	Open
4	Open	Open	Open	Open	Open
5	Open	Open	Open	Open	Open
6	Open	Open	Open	Open	Open
7	Open	Open	Open	Open	Open
11	Open	Closed	Open	Open	Open
12	Open	Open	Closed	Open	Open
14	Open	Open	Open	Closed	Open
15	Open	Open	Open	Open	Closed
Disabled	Open	Open	Open	Open	Open
Note: Pins designated are in the closed position.					

ANALOG INPUT CONFIGURATION		
Type	W6	W9
í DIFF	Pins 1 & 3, 2 & 4, 5 & 6 closed	Pins 1 & 2 closed
RSE	Pins 1 & 2, 3 & 4, 7 & 8 closed	Pins 2 & 3 closed
NRSE	Pins 1 & 2, 3 & 5, 7 & 8 closed	Pins 2 & 3 closed

ANALOG INPUT POLARITY & RANGE CONFIGURATION			
Range	Polarity	W1	W4
í -10 to +10V	Bipolar input	Pins 1 & 2 closed	Pins 2 & 3 closed
0 to +10V	Unipolar input	Pins 2 & 3 closed	Pins 1 & 2 closed
-5 to +5V	Bipolar input	Pins 2 & 3 closed	Pins 2 & 3 closed

ANALOG OUTPUT CONFIGURATION		
Type	W2 (Channel 1)	W3 (Channel 0)
í Internal	Pins 2 & 3 closed	Pins 2 & 3 closed
External	Pins 1 & 2 closed	Pins 1 & 2 closed

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ANALOG OUTPUT POLARITY CONFIGURATION		
Type	W7 (Channel 1)	W8 (Channel 0)
í Bipolar	Pins 1 & 2 closed	Pins 1 & 2 closed
Unipolar	Pins 2 & 3 closed	Pins 2 & 3 closed
Note: Use this table in conjunction with the table below to set jumpers for Bipolar & Unipolar mode selection.		

BIPOLAR & UNIPOLAR OUTPUT MODE CONFIGURATION		
Mode	W10 (Channel 0)	W11 (Channel 1)
í Two's Complement	Pins 1 & 2 closed	Pins 1 & 2 closed
Straight Binary (Unipolar)	Pins 2 & 3 closed	Pins 2 & 3 closed
Note: Bipolar can use both modes, while Unipolar uses the straight binary mode only.		

RTSI BUS CLOCK CONFIGURATION			
Setting	W5/A	W5/B	W5/C
í Use local oscillator board	Open	Closed	Closed
Receive the RTSI bus signal	Closed	Open	Closed
Drive RTSI bus & board/OSC	Closed	Closed	Open