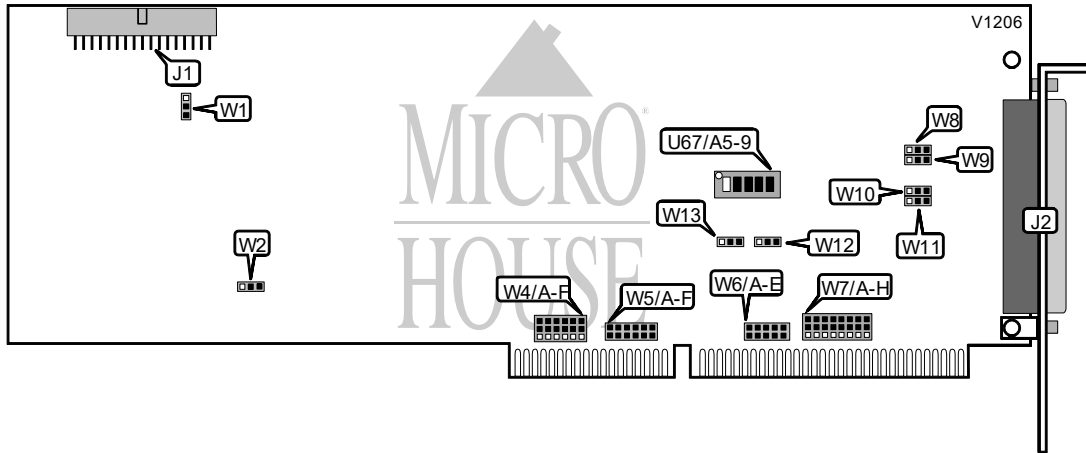


# NATIONAL INSTRUMENTS AT-MIO-16F-5

**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			
Pt pose	Location	Pt pose	Location
34-pin interface connector	J1	50-pin I/O connector	J2

BASE I/O ADDRESS SELECTION					
Address	U67/A5	U67/A6	U67/A7	U67/A8	U67/A9
000h	Off	On	On	On	Off
020h	On	On	On	On	On
040h	Off	On	On	On	On
060h	On	Off	On	On	On
080h	Off	Off	On	On	On
0A0h	On	On	Off	On	On
0C0h	Off	On	Off	Off	Off
0E0h	On	Off	Off	Off	Off
100h	Off	Off	Off	Off	Off
120h	On	On	On	On	On
140h	Off	On	On	On	On
160h	On	Off	On	On	On
180h	Off	Off	On	On	On
1A0h	On	On	Off	On	On
1C0h	Off	On	Off	Off	Off
1E0h	On	Off	Off	Off	Off
200h	Off	Off	Off	Off	Off
220h	On	On	On	On	On
240h	Off	On	On	On	On
260h	On	Off	On	On	On
280h	Off	Off	On	On	On
2A0h	On	On	Off	On	On
2C0h	Off	On	Off	Off	Off
2E0h	On	Off	Off	Off	Off
300h	Off	Off	Off	Off	Off
320h	On	On	On	On	On
340h	Off	On	On	On	On
360h	On	Off	On	On	On
380h	Off	Off	On	On	On
3A0h	On	On	Off	On	On
3C0h	Off	On	Off	Off	Off
3E0h	On	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 off the switches and add the values of the switches that are off to obtain the correct memory address. (Off=1, On=0)

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DMA CHANNEL SELECTION (DMA A)						
DMA	W4/A	W4/B	W4/C	W4/D	W4/E	W4/F
í 6	Open	Open	Pins 1 & 2	Pins 1 & 2	Open	Open
0	Open	Open	Open	Open	Open	Open
1	Open	Open	Open	Open	Open	Open
2	Open	Open	Open	Open	Open	Open
3	Open	Open	Open	Open	Open	Open
5	Pins 1 & 2	Pins 1 & 2	Open	Open	Open	Open
7	Open	Open	Open	Open	Pins 1 & 2	Pins 1 & 2
Disabled	Open	Open	Open	Open	Open	Open

Note: Pins designated are in the closed position.

DMA CHANNEL SELECTION (DMA A CON'T)								
DMA	W7/A	W7/B	W7/C	W7/D	W7/E	W7/F	W7/G	W7/H
í 6	Open	Open	Open	Open	Open	Open	Open	Open
0	1 & 2	1 & 2	Open	Open	Open	Open	Open	Open
1	Open	Open	1 & 2	1 & 2	Open	Open	Open	Open
2	Open	Open	Open	Open	1 & 2	1 & 2	Open	Open
3	Open	Open	Open	Open	Open	Open	1 & 2	1 & 2
5	Open	Open	Open	Open	Open	Open	Open	Open
7	Open	Open	Open	Open	Open	Open	Open	Open
Disabled	Open	Open	Open	Open	Open	Open	Open	Open

Note: Pins designated are in the closed position.

DMA CHANNEL SELECTION (DMA B)						
DMA	W4/A	W4/B	W4/C	W4/D	W4/E	W4/F
í 7	Open	Open	Open	Open	Pins 2 & 3	Pins 2 & 3
0	Open	Open	Open	Open	Open	Open
1	Open	Open	Open	Open	Open	Open
2	Open	Open	Open	Open	Open	Open
3	Open	Open	Open	Open	Open	Open
5	Pins 2 & 3	Pins 2 & 3	Open	Open	Open	Open
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.

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DMA CHANNEL SELECTION (DMA B CONT)								
DMA	W7/A	W7/B	W7/C	W7/D	W7/E	W7/F	W7/G	W7/H
i 7	Open	Open	Open	Open	Open	Open	Open	Open
0	2 & 3	2 & 3	Open	Open	Open	Open	Open	Open
1	Open	Open	2 & 3	2 & 3	Open	Open	Open	Open
2	Open	Open	Open	Open	2 & 3	2 & 3	Open	Open
3	Open	Open	Open	Open	Open	Open	2 & 3	2 & 3
5	Open	Open	Open	Open	Open	Open	Open	Open
6	Open	Open	Open	Open	Open	Open	Open	Open
Disabled	Open	Open	Open	Open	Open	Open	Open	Open

Note: Pins designated are in the closed position.

INTERRUPT SELECTION						
IRQ	W5/A	W5/B	W5/C	W5/D	W5/E	W5/F
i 10	Open	Open	Open	Open	Closed	Open
2/9	Open	Open	Open	Open	Open	Closed
3	Open	Open	Open	Open	Open	Open
4	Open	Open	Open	Open	Open	Open
5	Open	Open	Open	Open	Open	Open
6	Open	Open	Open	Open	Open	Open
7	Open	Open	Open	Open	Open	Open
11	Open	Open	Open	Closed	Open	Open
12	Open	Open	Closed	Open	Open	Open
14	Open	Closed	Open	Open	Open	Open
15	Closed	Open	Open	Open	Open	Open
Disabled	Open	Open	Open	Open	Open	Open

Note: Pins designated are in the closed position.

INTERRUPT SELECTION (CON'T)					
IRQ	W6/A	W6/B	W6/C	W6/D	W6/E
i 10	Open	Open	Open	Open	Open
2/9	Open	Open	Open	Open	Open
3	Pins 1 & 2	Open	Open	Open	Open
4	Open	Pins 1 & 2	Open	Open	Open
5	Open	Open	Pins 1 & 2	Open	Open
6	Open	Open	Open	Pins 1 & 2	Open
7	Open	Open	Open	Open	Pins 1 & 2
11	Open	Open	Open	Open	Open
12	Open	Open	Open	Open	Open
14	Open	Open	Open	Open	Open
15	Open	Open	Open	Open	Open
Disabled	Open	Open	Open	Open	Open

Note: Pins designated are in the closed position.

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ANALOG OUTPUT CONFIGURATION		
Type	W8 (Channel 1)	W11 (Channel 0)
Internal	Pins 1 & 2 closed	Pins 1 & 2 closed
External	Pins 2 & 3 closed	Pins 2 & 3 closed

ANALOG OUTPUT POLARITY CONFIGURATION		
Type	W9 (Channel 1)	W10 (Channel 0)
Bipolar	Pins 2 & 3 closed	Pins 2 & 3 closed
Unipolar	Pins 1 & 2 closed	Pins 1 & 2 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	W12 (Channel 1)	W13 (Channel 0)
Two's Complement	Pins 1 & 2 closed	Pins 1 & 2 closed
Straight Binary	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	W1	W2
Use local oscillator board signal	Pins 2 & 3 closed	Pins 2 & 3 closed
Receive the RTSI bus signal	Pins 1 & 2 closed	Pins 1 & 2 closed
Drive RTSI bus & board/OSC	Pins 1 & 2 closed	Pins 2 & 3 closed