

# MFX-PCI1262 Connector Pinout – July 25, 2006

Connector J1 (Analog Command Axis 1, Pulse Command Axis 2, Dig. inputs 1-4, Dig. outputs 1-4, A/D inputs 1 & 2)

VHDCI Pin #	Digital I/O Channel #	Circuit Type	Description (default configuration)	Adam-3968 Pin #
J1 - 1			Axis 1 Servo Command (+/- 10V)	1
J1 - 35			Axis 1 return / Analog Ground	35
J1 - 2			Reserved	2
J1 - 36			Reserved	36
J1 - 3				3
J1 - 37				37
J1 - 4	53	Output - open collector driver (sinking)	Axis 2 Amp. Enable output	4
J1 - 38			+5 VDC	38
J1 - 5	49	Output - open collector driver (sinking)	Axis 1 Amp. Enable output	5
J1 - 39			+5 VDC	39
J1 - 6	51	Output - open collector driver (sinking)	Axis 2 Step / CCW Pulse	6
J1 - 40			+5 VDC	40
J1 - 7	55	Output - open collector driver (sinking)	Axis 2 Direction / CW Pulse	7
J1 - 41			+5 VDC	41
J1 - 8				8
J1 - 42				42
J1 - 9			+12 VDC	9
J1 - 43			+12 VDC	43
J1 - 10			Axis 1/2 Encoder Ref. (1.5V)	10
J1 - 44			Axis 1/2 Encoder Ref. (1.5V)	44
J1 - 11			Axis 1 Encoder Phase A+	11
J1 - 45			Axis 1 Encoder Phase A-	45
J1 - 12			Axis 1 Encoder Phase B+	12
J1 - 46			Axis 1 Encoder Phase B-	46
J1 - 13			Axis 1 Encoder Phase Z+	13
J1 - 47			Axis 1 Encoder Phase Z -	47
J1 - 14			Axis 2 Encoder Phase A+	14
J1 - 48			Axis 2 Encoder Phase A-	48
J1 - 15			Axis 2 Encoder Phase B+	15
J1 - 49			Axis 2 Encoder Phase B-	49
J1 - 16			Axis 2 Encoder Phase Z+	16
J1 - 50			Axis 2 Encoder Phase Z -	50
J1 - 17			Reserved	17
J1 - 51			Reserved	51
J1 - 18			Reserved	18
J1 - 52			Reserved	52
J1 - 19	33	Output - TTL	Digital Output #1	19
J1 - 53			+5 VDC	53
J1 - 20	34	Output - TTL	Digital Output #2 (Axis 2 Cylinder	20
J1 - 54			+5 VDC	54
J1 - 21	35	Output - TTL	Digital Output #3 (Axis 5 Cylinder	21
J1 - 55			+5 VDC	55
J1 - 22	36	Output - TTL	Digital Output #4 (Axis 6 Cylinder	22
J1 - 56			+5 VDC	56
J1 - 23	1	Input - TTL	Digital Input #1 (Amplifier Fault)	23
J1 - 57			Ground	57
J1 - 24	2	Input - TTL	Digital Input #2 / Axis 2 Capture	24
J1 - 58			Ground	58
J1 - 25	3	Input - TTL	Digital Input #3 / Axis 5 Capture	25
J1 - 59			Ground	59
J1 - 26	4	Input - TTL	Digital Input #4 / Axis 6 Capture	26
J1 - 60			Ground	60
J1 - 27	17	Input - opto isolated (bi-directional)	Axis 1 Coarse Home	27
J1 - 61			Axis 1 Coarse Home return / supply	61
J1 - 28	21	Input - opto isolated (bi-directional)	Axis 2 Home	28
J1 - 62			Axis 2 Home return / supply	62
J1 - 29	18	Input - opto isolated (bi-directional)	Axis 1 Limit +	29
J1 - 63			Axis 1 Limit + return / supply	63
J1 - 30	22	Input - opto isolated (bi-directional)	Axis 2 Limit +	30
J1 - 64			Axis 2 Limit + return / supply	64
J1 - 31	19	Input - opto isolated (bi-directional)	Axis 1 Limit -	31
J1 - 65			Axis 1 Limit - return / supply	65
J1 - 32	23	Input - opto isolated (bi-directional)	Axis 2 Limit -	32
J1 - 66			Axis 2 Limit - return / supply	66
J1 - 33			Analog Input #1 (option)	33
J1 - 67			Analog In #1 return / An. Ground	67
J1 - 34			Analog Input #2 (option)	34
J1 - 68			Analog In #2 return / An. Ground	68

# MFX-PCI1262 Connector Pinout (continued)

Connector J2 (Analog Command Axis 3, Pulse Command Axis 4, Dig. inputs 5-8, Dig. outputs 5-8, A/D inputs 3 & 4)

VHDCI Pin #	Digital I/O Channel #	Circuit Type	Description (default configuration)	Adam-3968 Pin #
J2 - 1			Axis 3 Servo Command (+/- 10V)	1
J2 - 35			Axis 3 return / Analog Ground	35
J2 - 2			Reserved	2
J2 - 36			Reserved	36
J2 - 3				3
J2 - 37				37
J2 - 4	61	Output - open collector driver (sinking)	Axis 4 Amp. Enable output	4
J2 - 38			+5 VDC	38
J2 - 5	57	Output - open collector driver (sinking)	Axis 3 Amp. Enable output	5
J2 - 39			+5 VDC	39
J2 - 6	59	Output - open collector driver (sinking)	Axis 4 Step / CCW Pulse	6
J2 - 40			+5 VDC	40
J2 - 7	63	Output - open collector driver (sinking)	Axis 4 Direction / CW Pulse	7
J2 - 41			+5 VDC	41
J2 - 8				8
J2 - 42				42
J2 - 9			+12 VDC	9
J2 - 43			+12 VDC	43
J2 - 10			Axis 3/4 Encoder Ref. (1.5V)	10
J2 - 44			Axis 3/4 Encoder Ref. (1.5V)	44
J2 - 11			Axis 3 Encoder Phase A+	11
J2 - 45			Axis 3 Encoder Phase A-	45
J2 - 12			Axis 3 Encoder Phase B+	12
J2 - 46			Axis 3 Encoder Phase B-	46
J2 - 13			Axis 3 Encoder Phase Z+	13
J2 - 47			Axis 3 Encoder Phase Z -	47
J2 - 14			Axis 4 Encoder Phase A+	14
J2 - 48			Axis 4 Encoder Phase A-	48
J2 - 15			Axis 4 Encoder Phase B+	15
J2 - 49			Axis 4 Encoder Phase B-	49
J2 - 16			Axis 4 Encoder Phase Z+	16
J2 - 50			Axis 4 Encoder Phase Z -	50
J2 - 17			Reserved	17
J2 - 51			Reserved	51
J2 - 18			Reserved	18
J2 - 52			Reserved	52
J2 - 19	37	Output - TTL	Digital Output #5	19
J2 - 53			+5 VDC	53
J2 - 20	38	Output - TTL	Digital Output #6 (Axis 4 Cylinder Descend)	20
J2 - 54			+5 VDC	54
J2 - 21	39	Output - TTL	Digital Output #7 (Axis 7 Cylinder Descend)	21
J2 - 55			+5 VDC	55
J2 - 22	40	Output - TTL	Digital Output #8 (Axis 8 Cylinder Descend)	22
J2 - 56			+5 VDC	56
J2 - 23	5	Input - TTL	Digital Input #5	23
J2 - 57			Ground	57
J2 - 24	6	Input - TTL	Digital Input #6 / Axis 4 Capture	24
J2 - 58			Ground	58
J2 - 25	7	Input - TTL	Digital Input #7 / Axis 7 Capture	25
J2 - 59			Ground	59
J2 - 26	8	Input - TTL	Digital Input #8 / Axis 8 Capture	26
J2 - 60			Ground	60
J2 - 27	25	Input - opto isolated (bi-directional)	Axis 3 Coarse Home	27
J2 - 61			Axis 3 Coarse Home return / supply	61
J2 - 28	29	Input - opto isolated (bi-directional)	Axis 4 Home	28
J2 - 62			Axis 4 Home return / supply	62
J2 - 29	26	Input - opto isolated (bi-directional)	Axis 3 Limit +	29
J2 - 63			Axis 3 Limit + return / supply	63
J2 - 30	30	Input - opto isolated (bi-directional)	Axis 4 Limit +	30
J2 - 64			Axis 4 Limit + return / supply	64
J2 - 31	27	Input - opto isolated (bi-directional)	Axis 3 Limit -	31
J2 - 65			Axis 3 Limit - return / supply	65
J2 - 32	31	Input - opto isolated (bi-directional)	Axis 4 Limit -	32
J2 - 66			Axis 4 Limit - return / supply	66
J2 - 33			Analog Input #3 (option)	33
J2 - 67			Analog In #3 return / An. Ground	67
J2 - 34			Analog Input #4 (option)	34
J2 - 68			Analog In #4 return / An. Ground	68

# MFX-PCI1262 Connector Pinout (continued)

Connector J3 (Pulse Command Axes 5 & 6, Dig. inputs 9-12, Dig. outputs 9-12, A/D inputs 5 & 6)

VHDCI Pin #	Digital I/O Channel #	Circuit Type	Description (default configuration)	Adam-3968 Pin #
J3 - 1	50	Output - open collector driver (sinking)	Axis 5 All Windings Off output	1
J3 - 35			+5 VDC	35
J3 - 2		Output - open collector driver (sinking)	Axis 5 Step / CCW Pulse	2
J3 - 36			+5 VDC	36
J3 - 3		Output - open collector driver (sinking)	Axis 5 Direction / CW Pulse	3
J3 - 37			+5 VDC	37
J3 - 4			Reserved	4
J3 - 38			+5 VDC	38
J3 - 5			Reserved	5
J3 - 39			+5 VDC	39
J3 - 6	54	Output - open collector driver (sinking)	Axis 6 All Windings Off output	6
J3 - 40			+5 VDC	40
J3 - 7		Output - open collector driver (sinking)	Axis 6 Step / CCW Pulse	7
J3 - 41			+5 VDC	41
J3 - 8		Output - open collector driver (sinking)	Axis 6 Direction / CW Pulse	8
J3 - 42			+5 VDC	42
J3 - 9			+12 VDC	9
J3 - 43			+12 VDC	43
J3 - 10			Axis 5/6 Encoder Ref. (1.5V)	10
J3 - 44			Axis 5/6 Encoder Ref. (1.5V)	44
J3 - 11			Axis 5 Encoder Phase A+	11
J3 - 45			Axis 5 Encoder Phase A-	45
J3 - 12			Axis 5 Encoder Phase B+	12
J3 - 46			Axis 5 Encoder Phase B-	46
J3 - 13			Axis 5 Encoder Phase Z+	13
J3 - 47			Axis 5 Encoder Phase Z -	47
J3 - 14			Axis 6 Encoder Phase A+	14
J3 - 48			Axis 6 Encoder Phase A-	48
J3 - 15			Axis 6 Encoder Phase B+	15
J3 - 49			Axis 6 Encoder Phase B-	49
J3 - 16			Axis 6 Encoder Phase Z+	16
J3 - 50			Axis 6 Encoder Phase Z -	50
J3 - 17	20	Input - opto isolated (bi-directional)	Axis 5 Home	17
J3 - 51			Axis 5 Home supply / return	51
J3 - 18	24	Input - opto isolated (bi-directional)	Axis 6 Home	18
J3 - 52			Axis 6 Home supply / return	52
J3 - 19	41	Output - TTL	Digital Output #9	19
J3 - 53			+5 VDC	53
J3 - 20	42	Output - TTL	Digital Output #10	20
J3 - 54			+5 VDC	54
J3 - 21	43	Output - TTL	Digital Output #11	21
J3 - 55			+5 VDC	55
J3 - 22	44	Output - TTL	Digital Output #12	22
J3 - 56			+5 VDC	56
J3 - 23	9	Input - TTL	Digital Input #9 / Axis 5 Lim +	23
J3 - 57			Ground	57
J3 - 24	10	Input - TTL	Digital Input #10 / Axis 5 Lim -	24
J3 - 58			Ground	58
J3 - 25	11	Input - TTL	Digital Input #11 / Axis 6 Lim +	25
J3 - 59			Ground	59
J3 - 26	12	Input - TTL	Digital Input #12 / Axis 6 Lim -	26
J3 - 60			Ground	60
J3 - 27			Reserved	27
J3 - 61			Reserved	61
J3 - 28			Reserved	28
J3 - 62			Reserved	62
J3 - 29			Reserved	29
J3 - 63			Reserved	63
J3 - 30			Reserved	30
J3 - 64			Reserved	64
J3 - 31			Reserved	31
J3 - 65			Reserved	65
J3 - 32			Reserved	32
J3 - 66			Reserved	66
J3 - 33			Analog Input #5 (option)	33
J3 - 67			Analog In #5 return / An. Ground	67
J3 - 34			Analog Input #6 (option)	34
J3 - 68			Analog In #6 return / An. Ground	68

# MFX-PCI1262 Connector Pinout (continued)

Connector J4 (Pulse Command Axes 7 & 8, Dig. inputs 13-16, Dig. outputs 13-16, A/D inputs 7 & 8)

VHDCI Pin #	Digital I/O Channel #	Circuit Type	Description (default configuration)	Adam-3968 Pin #
J4 - 1	58	Output - open collector driver (sinking)	Axis 7 All Windings Off output	1
J4 - 35			+5 VDC	35
J4 - 2		Output - open collector driver (sinking)	Axis 7 Step / CCW Pulse	2
J4 - 36			+5 VDC	36
J4 - 3		Output - open collector driver (sinking)	Axis 7 Direction / CW Pulse	3
J4 - 37			+5 VDC	37
J4 - 4			Reserved	4
J4 - 38			+5 VDC	38
J4 - 5			Reserved	5
J4 - 39			+5 VDC	39
J4 - 6	62	Output - open collector driver (sinking)	Axis 8 All Windings Off output	6
J4 - 40			+5 VDC	40
J4 - 7		Output - open collector driver (sinking)	Axis 8 Step / CCW Pulse	7
J4 - 41			+5 VDC	41
J4 - 8		Output - open collector driver (sinking)	Axis 8 Direction / CW Pulse	8
J4 - 42			+5 VDC	42
J4 - 9			+12 VDC	9
J4 - 43			+12 VDC	43
J4 - 10			Axis 7/8 Encoder Ref. (1.5V)	10
J4 - 44			Axis 7/8 Encoder Ref. (1.5V)	44
J4 - 11			Axis 7 Encoder Phase A+	11
J4 - 45			Axis 7 Encoder Phase A-	45
J4 - 12			Axis 7 Encoder Phase B+	12
J4 - 46			Axis 7 Encoder Phase B-	46
J4 - 13			Axis 7 Encoder Phase Z+	13
J4 - 47			Axis 7 Encoder Phase Z -	47
J4 - 14			Axis 8 Encoder Phase A+	14
J4 - 48			Axis 8 Encoder Phase A-	48
J4 - 15			Axis 8 Encoder Phase B+	15
J4 - 49			Axis 8 Encoder Phase B-	49
J4 - 16			Axis 8 Encoder Phase Z+	16
J4 - 50			Axis 8 Encoder Phase Z -	50
J4 - 17	28	Input - opto isolated (bi-directional)	Axis 7 Home	17
J4 - 51			Axis 7 Home supply / return	51
J4 - 18	32	Input - opto isolated (bi-directional)	Axis 8 Home	18
J4 - 52			Axis 8 Home supply / return	52
J4 - 19	45	Output - TTL	Digital Output #13	19
J4 - 53			+5 VDC	53
J4 - 20	46	Output - TTL	Digital Output #14	20
J4 - 54			+5 VDC	54
J4 - 21	47	Output - TTL	Digital Output #15	21
J4 - 55			+5 VDC	55
J4 - 22	48	Output - TTL	Digital Output #16	22
J4 - 56			+5 VDC	56
J4 - 23	13	Input - TTL	Digital Input #13 / Axis 7 Lim +	23
J4 - 57			Ground	57
J4 - 24	14	Input - TTL	Digital Input #14 / Axis 7 Lim -	24
J4 - 58			Ground	58
J4 - 25	15	Input - TTL	Digital Input #15 / Axis 8 Lim +	25
J4 - 59			Ground	59
J4 - 26	16	Input - TTL	Digital Input #16 / Axis 8 Lim -	26
J4 - 60			Ground	60
J4 - 27			Reserved	27
J4 - 61			Reserved	61
J4 - 28			Reserved	28
J4 - 62			Reserved	62
J4 - 29			Reserved	29
J4 - 63			Reserved	63
J4 - 30			Reserved	30
J4 - 64			Reserved	64
J4 - 31			Reserved	31
J4 - 65			Reserved	65
J4 - 32			Reserved	32
J4 - 66			Reserved	66
J4 - 33			Analog Input #7 (option)	33
J4 - 67			Analog In #7 return / An. Ground	67
J4 - 34			Analog Input #8 (option)	34
J4 - 68			Analog In #8 return / An. Ground	68