Connector Pinout - *MFX-PCI1802*

Connector J1 (Axes 1 & 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				1
J1 – 35				35
J1 – 2				2
J1 – 36				36
J1 – 3				3
J1 – 37				37
J1 – 4	53	Output - open collector driver	Axis 2 Amp. Enable output	4
J1 – 38			+5 VDC	38
J1 – 5	49	Output - open collector driver	Axis 1 Amp. Enable output	5
J1 – 39			+5 VDC	39
J1 – 6	51	Output - open collector driver	#1 PWM output	6
J1 – 40			+5 VDC	40
J1 – 7	55	Output - open collector driver	#2 PWM output	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	20	Input - opto isolated (bi-	Axis 1 Amp. Fault input (shared by Axis 5 Amp	17
J1 – 51			Axis 1/5 Amp Fault supply / return	51
J1 – 18	24	Input - opto isolated (bi-	Axis 2 Amp. Fault input (shared by Axis 6 Amp	18
J1 – 52			Axis 2/6 Amp Fault supply / return	52
J1 – 19	33	Output - TTL	Digital Output #1 / Axis 1 - 4 Compare	19
J1 – 53			+5 VDC	53
J1 – 20	34	Output - TTL	Digital Output #2	20
J1 – 54			+5 VDC	54
J1 – 21	35	Output - TTL	Digital Output #3	21
J1 – 55			+5 VDC	55
J1 – 22	36	Output - TTL	Digital Output #4	22
J1 – 56			+5 VDC	56
J1 – 23	1	Input - TTL	Dig. Input #1 / Axis 1 & 2 Position Capture	23
J1 – 57			Ground	57
J1 – 24	2	Input - TTL	Digital Input #2	24
J1 – 58			Ground	58
J1 – 25	3	Input - TTL	Digital Input #3	25
J1 – 59			Ground	59
J1 – 26	4	Input - TTL	Digital Input #4	26
J1 – 60			Ground	60
J1 – 27	17	Input - opto isolated (bi-	Axis 1 Coarse Home (shared by Axis 5 Coarse	27
J1 – 61			Axis 1/5 Coarse Home / Home return / supply	61
J1 – 28	21	Input - opto isolated (bi-	Axis 2 Coarse Home (shared by Axis 6 Coarse	28
J1 – 62			Axis 2/6 Coarse Home / Home return / supply	62
J1 – 29	18	Input - opto isolated (bi-	Axis 1Limit + (shared by Axis 5 Limit +)	29
J1 – 63			Axis 1/5 Limit + return / supply	63
J1 – 30	22	Input - opto isolated (bi-	Axis 2 Limit + (shared by Axis 6 Limit +)	30
J1 – 64			Axis 2/6 Limit + return / supply	64
J1 – 31	19	Input - opto isolated (bi-	Axis 1 Limit - (shared by Axis 5 Limit -)	31
J1 – 65			Axis 1/5 Limit - return / supply	65
J1 – 32	23	Input - opto isolated (bi-	Axis 2 Limit - (shared by Axis 6 Limit -)	32
J1 – 66			Axis 2/6 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

Connector Pinout - *MFX-PCI1802 (continued)*

Connector J2 (Axes 3 & 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				1
J2 – 35				35
J2 – 2				2
J2 – 36				36
J2 – 3				3
J2 – 37				37
J2 – 4	61	Output - open collector driver	Axis 4 Amp. Enable output	4
J2 – 38			+5 VDC	38
J2 – 5	57	Output - open collector driver	Axis 3 Amp. Enable output	5
J2 – 39			+5 VDC	39
J2 – 6	59	Output - open collector driver	#3 PWM output	6
J2 – 40			+5 VDC	40
J2 – 7	63	Output - open collector driver	#4 PWM output	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	28	Input - opto isolated (bi-directional)	Axis 3 Amp. Fault input (shared by Axis 7 Amp	17
J2 – 51			Axis 4/8 Amp Fault supply / return	51
J2 – 18	32	Input - opto isolated (bi-directional)	Axis 3 Amp. Fault input (shared by Axis 8 Amp	18
J2 – 52			Axis 4/8 Amp Fault supply / return	52
J2 – 19	37	Output - TTL	Digital Output #5	19
J2 – 53			+5 VDC	53
J2 – 20	38	Output - TTL	Digital Output #6	20
J2 – 54			+5 VDC	54
J2 – 21	39	Output - TTL	Digital Output #7	21
J2 – 55			+5 VDC	55
J2 – 22	40	Output - TTL	Digital Output #8	22
J2 – 56			+5 VDC	56
J2 – 23	5	Input - TTL	Dig. Input #5 / Axis 3 & 4 Position Capture (Latch)	23
J2 – 57			Ground	57
J2 – 24	6	Input - TTL	Digital Input #6	24
J2 – 58			Ground	58
J2 – 25	7	Input - TTL	Digital Input #7	25
J2 – 59			Ground	59
J2 – 26	8	Input - TTL	Digital Input #8	26
J2 – 60			Ground	60
J2 – 27	25	Input - opto isolated (bi-directional)	Axis 3 Coarse Home (shared by Axis 7 Coarse	27
J2 – 61			Axis 3/7 Coarse Home / Home return / supply	61
J2 – 28	29	Input - opto isolated (bi-directional)	Axis 4 Coarse Home (shared by Axis 8 Coarse	28
J2 – 62			Axis 4/8 Coarse Home / Home return / supply)	62
J2 – 29	26	Input - opto isolated (bi-directional)	Axis 3 Limit + (shared by Axis 7 Limit +)	29
J2 – 63			Axis 3/7 Limit + return / supply	63
J2 – 30	30	Input - opto isolated (bi-directional)	Axis 4 Limit + (shared by Axis 8 Limit +)	30
J2 – 64			Axis 4/8 Limit + return / supply	64
J2 – 31	27	Input - opto isolated (bi-directional)	Axis 3 Limit - (shared by Axis 7 Limit -)	31
J2 – 65			Axis 3/7 Limit - return / supply	65
J2 – 32	31	Input - opto isolated (bi-directional)	Axis 4 Limit - (shared by Axis 8 Limit -)	32
J2 – 66			Axis 4/8 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

Connector Pinout - *MFX-PCI1802 (continued)*

Connector J3 (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		1
J3 – 35			+5 VDC	35
J3 – 2	51	Output - open collector driver	Axis 5 PWM output	2
J3 – 36			+5 VDC	36
J3 – 3	52	Output - open collector driver	Axis 5 Amp Enable output	3
J3 – 37			+5 VDC	37
J3 – 4	51	Output - open collector driver	Axis 1 PWM output	4
J3 – 38			+5 VDC	38
J3 – 5	55	Output - open collector driver	Axis 2 PWM output	5
J3 – 39			+5 VDC	39
J3 – 6	54	Output - open collector driver		6
J3 – 40			+5 VDC	40
J3 – 7	55	Output - open collector driver	Axis 6 PWM output	7
J3 – 41			+5 VDC	41
J3 – 8	56	Output - open collector driver	Axis 6 Amp Enable output	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 Amp Fault input (shared by Axis 1 Amp	17
J3 – 51			Axis 1/5 Amp Fault supply / return	51
J3 – 18	24	Input - opto isolated (bi-directional)	Axis 6 Amp Fault input (shared by Axis 2 Amp	18
J3 – 52			Axis 2/6 Amp Fault supply / return	52
J3 – 19	41	Output - TTL	Digital Output #9 / Axis 5 - 8 Position Compare	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	Dig. Input #9 / Axis 5 & 6 Position Capture (Latch)	23
J3 – 57			Ground	57
J3 – 24	10	Input - TTL	Digital Input #10	24
J3 – 58			Ground	58
J3 – 25	11	Input - TTL	Digital Input #11	25
J3 – 59			Ground	59
J3 – 26	12	Input - TTL	Digital Input #12	26
J3 – 60			Ground	60
J3 – 27	17	Input - opto isolated (bi-directional)	Axis 5 Home (shared by Axis 1 Coarse Home)	27
J3 – 61			Axis 1/5 Coarse Home / Home return / supply	61
J3 – 28	21	Input - opto isolated (bi-directional)	Axis 6 Home (shared by Axis 2 Coarse Home)	28
J3 – 62			Axis 2/6 Coarse Home / Home return / supply	62
J3 – 29	18	Input - opto isolated (bi-directional)	Axis 5 Limit + (shared by Axis 1 Limit +)	29
J3 – 63			Axis 1/5 Limit + return / supply	63
J3 – 30	22	Input - opto isolated (bi-directional)	Axis 6 Limit + (shared by Axis 2 Limit +)	30
J3 – 64			Axis 2/6 Limit + return / supply	64
J3 – 31	19	Input - opto isolated (bi-directional)	Axis 5 Limit - (shared by Axis 1 Limit -)	31
J3 – 65			Axis 1/5 Limit - return / supply	65
J3 – 32	23	Input - opto isolated (bi-directional)	Axis 6 Limit - (shared by Axis 2 Limit -)	32
J3 – 66			Axis 2/6 Limit - return / supply	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

Connector Pinout - *MFX-PCI1802(continued)*

Connector J4 (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		1
J4 – 35			+5 VDC	35
J4 – 2	59	Output - open collector driver	Axis 7 PWM output	2
J4 – 36			+5 VDC	36
J4 – 3	60	Output - open collector driver	Axis 7 Amp Enable output	3
J4 – 37			+5 VDC	37
J4 – 4	59	Output - open collector driver	Axis 3 PWM output	4
J4 – 38			+5 VDC	38
J4 – 5	63	Output - open collector driver	Axis 4 PWM output	5
J4 – 39			+5 VDC	39
J4 – 6	62	Output - open collector driver		6
J4 – 40			+5 VDC	40
J4 – 7	63	Output - open collector driver	Axis 8 PWM output	7
J4 – 41			+5 VDC	41
J4 – 8	64	Output - open collector driver	Axis 8 Amp Enable output	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-	Axis 7 Amp Fault input (shared by Axis 3 Amp	17
J4 – 51			Axis 3/7 Amp Fault supply / return	51
J4 – 18	32	Input - opto isolated (bi-	Axis 8 Amp. Fault input (shared by Axis 4 Amp	18
J4 – 52			Axis 4/8 Amp Fault 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	Dig. Input #13 / Axis 7 & 8 Position Capture	23
J4 – 57			Ground	57
J4 – 24	14	Input - TTL	Digital Input #14	24
J4 – 58			Ground	58
J4 – 25	15	Input - TTL	Digital Input #15	25
J4 – 59			Ground	59
J4 – 26	16	Input - TTL	Digital Input #16	26
J4 – 60			Ground	60
J4 – 27	25	Input - opto isolated (bi-	Axis 7 Home (shared by Axis 3 Coarse Home)	27
J4 – 61			Axis 3/7 Coarse Home / Home return / supply	61
J4 – 28	29	Input - opto isolated (bi-	Axis 8 Home (shared by Axis 4 Coarse Home)	28
J4 – 62			Axis 4/8 Coarse Home / Home return / supply	62
J4 – 29	26	Input - opto isolated (bi-	Axis 7 Limit + (shared by Axis 3 Limit +)	29
J4 – 63			Axis 3/7 Limit + return / supply	63
J4 – 30	30	Input - opto isolated (bi-	Axis 8 Limit + (shared by Axis 4 Limit +)	30
J4 – 64			Axis 4/8 Limit + return / supply	64
J4 – 31	27	Input - opto isolated (bi-	Axis 7 Limit - (shared by Axis 7 Limit -)	31
J4 – 65			Axis 3/7 Limit - return / supply	65
J4 – 32	31	Input - opto isolated (bi-	Axis 8 Limit - (shared by Axis 8 Limit -)	32
J4 – 66			Axis 4/8 Limit - return / supply	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