

ADAM-3955

50-pin SCSI DIN-rail Wiring Board

Overview

The ADAM-3955 terminal board provides convenient and reliable signal wiring for PCI-1220U/1240U/1245/1245E/1245L/1265 with 50-pin SCSI-II connector. Its D-SUB 26P type connectors give you the quick and easy way to connect to the Panasonic A5/MINAS A, Yaskawa Sigma 5, Mitsubishi J3S and Delta A2 servo motors.

Features

1. DIN-rail wiring board for PCI-1220U/1240U/ PCI-1245/1245E/1245L/1265 application.
2. Dimensions (W x L x H): 103 x 120 x 45mm (4.12" x 4.8" x 1.8")
3. DB-26 connector
4. LED indicators

Declaration of Conformity

FCC Class A

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CE

This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend the use of shielded cables. This kind of cable is available from Advantech. Please contact your local supplier for ordering information.

Notes

For more information on this and other Advantech products, please visit our websites at:

<http://www.advantech.com>

<http://www.advantech.com/eAutomation>

For technical support and service:

<http://support.advantech.com/>

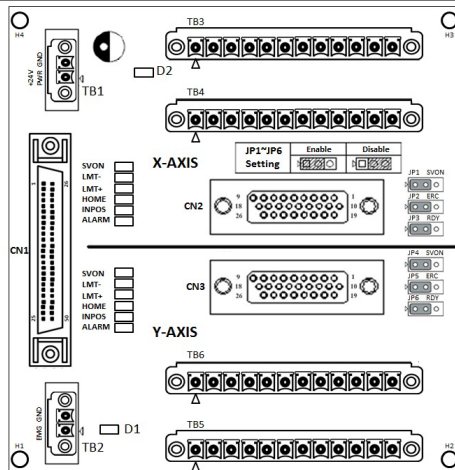
This startup manual is for the ADAM-3955

Part No: 2003395500

2nd Edition

January 2014

Board Components



Note:

1. PIN 1 on TB3(TB5) is "power source" and PIN 1 on TB4(TB6) is "pulse output".

If connecting "power source" to "pulse output", the current will damage the line driver & related components on the motion card connected to ADAM-3955.

2. Using **protection key** which is included in package to avoid the accident to damage the motion board.

The assembly method is described in the end of this manual.

Optional Cables

PCL-10251-1E 100-pin SCSI to Two 50-pin SCSI Cable, 1m

PCL-10251-3E 100-pin SCSI to Two 50-pin SCSI Cable, 1m

PCL-10152-1E 50-pin SCSI Cable, 1m

PCL-10152-3E 50-pin SCSI Cable, 3m

PCL-10153PA5-2E DB26 to SCSI-50 Cable for Panasonic A5, 2m

PCL-10153PA5LS-2E DB26 to SCSI-50 Cable for Panasonic MINAS A, 2m

PCL-10153YS5-2E DB26 to SCSI-50 Cable for Yatsukawa Sigma 5, 2m

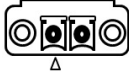
PCL-10153MJ3-2E DB26 to SCSI-50 Cable for Mitsubishi J3S, 2m

PCL-10153DA2-2E DB26 to SCSI-50 Cable for Delta A2, 2m

Component Descriptions and Settings (PCI-1220U)

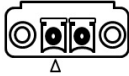
Note:The pin function is determined by the connected motion card.

TB1 External Power Input Connector



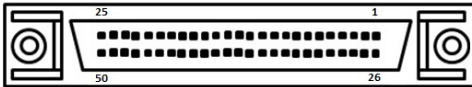
PIN	Name	Description
1	PWR	24V Power Input
2	GND	---

TB2 Emergency Stop Input Connector



PIN	Name	Description
1	EMG	Emergency Input
2	GND	---

CN1 SCSI Connector (F) 50P



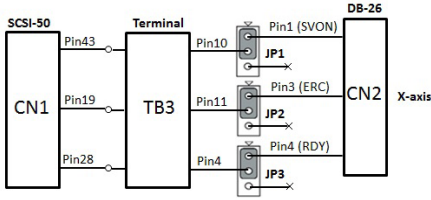
Pin	Name
1	VEX
2	XLMT+
3	XINO
4	XORG (X HOME)
5	YLMT-
6	YIN1 (Y RDY)
7	XINPOS
8	XECAP
9	XECBP
10	XEZ+
11	YINPOS
12	YECAP
13	YECBP
14	YEZ+
15	XEXOP+
16	YEXOP+
17	GND
18	XOUT1
19	XOUT3 (X ERC)

20	XP+N
21	XP-N
22	YOUT0
23	YOUT2 (Y SVON)
24	YP+P
25	YP-P
26	EMG
27	XLMT-
28	XIN1 (X RDY)
29	YLMT+
30	YINO
31	YORG (Y HOME)
32	XALARM
33	XECAN
34	XECBN
35	XEZ-
36	YALARM
37	YECAN
38	YECBN
39	YEZ-
40	XEXOP-
41	YEXOP-
42	XOUT0
43	XOUT2 (X SVON)
44	XP+P
45	XP-P
46	GND
47	YOUT1
48	YOUT3 (Y ERC)
49	YP+N
50	YP-N

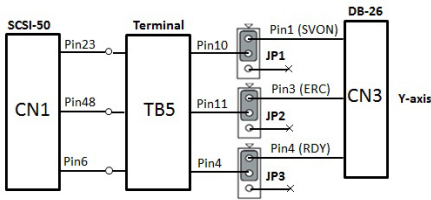
*All GND pins are connected with each other.

Jumper Settings

Function: Enable **SVON/ERC/RDY** of CN2.(default)



Function: Enable **SVON/ERC/RDY** of CN3.(default)



TB3, TB5 Detachable Screw Terminals



Note: n= X or Y

Pin	Name	Description
1	VEX	Power 24V from TB1
2	GND	Ground
3	nIN0	General Input
4	nIN1/RDY	Servo Ready (n RDY)
5	nORG	Home Signal(n HOME)
6	GND	Ground
7	GND	Ground
8	nOUT0	General Output
9	nOUT1	General Output
10	nOUT2/SVON	Server on
11	nOUT3/ERC	Servo Error Clear
12	GND	Ground

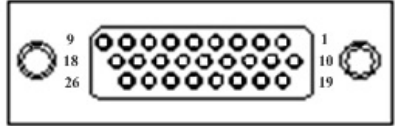
TB4, TB6 Detachable Screw Terminals

Pin	Name	Description
1	nP- P	Output pulse CCW/DIR+
2	nP- N	Output pulse CCW/DIR-
3	nP+P	Output pulse CW/Pulse+
4	nP+N	Output pulse CW/ Pulse-
5	GND	Ground
6	nLMT+	+ Direction Limit
7	nLMT-	- Direction Limit
8	nEXOP+	Jog at the + Direction
9	nEXOP-	Jog at the - Direction
10	GND	Ground
11	nBRK+	External Break Signal+
12	nBRK-	External Break Signal-

LED Description

Label	Description	Color
PWR	24V Power Input	Green
EMG	Emergency Input	Red
INPOS	Servo In Position	Green
SVON	Servo On	Green
ALARM	Servo Error Alarm	Red
HOME	Home Signal Input	Green
LMT+	Plus End Limit	Red
LMT-	Minus End Limit	Red

CN2, CN3 D-SUB Connector (F) 26P



Pin	Name	Description
1	nSVON	Server on (Connected by jumper)
2	nINPOS	Servo In Position
3	nERC	Servo Error Clear (Connected by jumper)
4	nRDY	Servo Ready (Connected by jumper)
5	nP+N	Output pulse CW/ Pulse-
6	nP+P	Output pulse CW/Pulse+
7	nECAN	Encoder Phase A-
8	nECAP	Encoder Phase A+
9	nBRK+	External Break Signal+
10	---	---
11	nALARM	Servo Error Alarm
12	VEX	Power 24V from TB1
13	GND	Ground
14	nBRK-	External Break Signal-
15	GND	Ground
16	nECBN	Encoder Phase B-
17	nECBP	Encoder Phase B+
18	GND	Ground
19	EMG	Emergency
20	GND	Ground
21	GND	Ground
22	GND	Ground
23	nP-N	Output pulse CCW/DIR-
24	nP-P	Output pulse CCW/DIR+
25	nINON	Encoder Phase Z-
26	nINOP	Encoder Phase Z+

Note: n= X or Y

Component Descriptions and Settings (PCI-1240U)

Note:The pin function is determined by the connected motion card.

TB1 External Power Input Connector



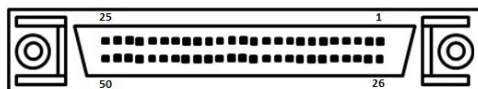
PIN	Name	Description
1	PWR	24V Power Input
2	GND	---

TB2 Emergency Stop Input Connector



PIN	Name	Description
1	EMG	Emergency Input
2	GND	---

CN1 SCSI Connector (F) 50P



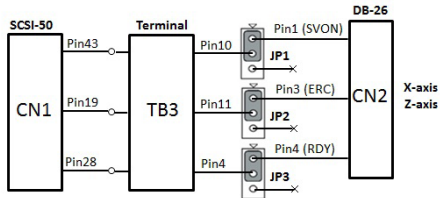
Pin	Name
1	VEX
2	X/Z_LMT+
3	X/Z_IN1
4	X/Z_IN3 (HOME)
5	Y/U_LMT-
6	Y/U_IN2 (RDY)
7	X/Z_INPOS
8	X/Z_ECAB
9	X/Z_ECBP
10	X/Z_INOP
11	Y/U_INPOS
12	Y/U_ECAB
13	Y/U_ECBP
14	Y/U_INOP
15	X/Z_EXOP+
16	Y/U_EXOP+
17	GND
18	X/Z_OUT5

19	X/Z_OUT7 (ERC)
20	X/Z_P+N
21	X/Z_P-N
22	Y/U_OUT4
23	Y/U_OUT6 (SVON)
24	Y/U_P+P
25	Y/U_P-P
26	EMG
27	X/Z_LMT-
28	X/Z_IN2 (RDY)
29	Y/U_LMT+
30	Y/U_IN1
31	Y/U_IN3 (HOME)
32	X/Z_ALARM
33	X/Z_ECAN
34	X/Z_ECBN
35	X/Z_INON
36	Y/U_ALARM
37	Y/U_ECAN
38	Y/U_ECBN
39	Y/U_INON
40	X/Z_EXOP-
41	Y/U_EXOP-
42	X/Z_OUT4
43	X/Z_OUT6 (SVON)
44	X/Z_P+P
45	X/Z_P-P
46	GND
47	Y/U_OUT5
48	Y/U_OUT7 (ERC)
49	Y/U_P+N
50	Y/U_P-N

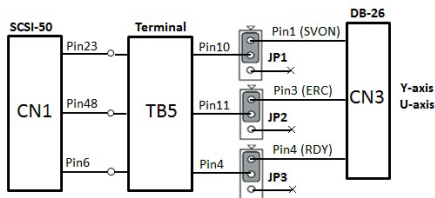
*All GND pins are connected with each other.

Jumper Settings

Function: Enable **SVON/ERC/RDY** of CN2.(default)



Function: Enable **SVON/ERC/RDY** of CN3.(default)



TB3, TB5 Detachable Screw Terminals



Note: n= X, Y, Z or U

Pin	Name	Description
1	VEX	Power 24V from TB1
2	GND	Ground
3	n IN1	General Input*
4	n IN2/RDY	Servo Ready
5	n IN3/ORG	Home Signal
6	GND	Ground
7	GND	Ground
8	nOUT4	General Output
9	nOUT5	General Output
10	nOUT6/SVON	Server on
11	nOUT7/ERC	Servo Error Clear
12	GND	Ground

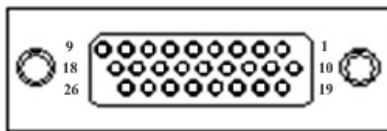
* Pin3 of TB3 and TB5 can be used as LTC input.

Pin	Name	Description
1	nP- P	Output pulse CCW/DIR+
2	nP- N	Output pulse CCW/DIR-
3	nP+P	Output pulse CW/Pulse+
4	nP+N	Output pulse CW/ Pulse-
5	GND	Ground
6	nLMT+	+ Direction Limit
7	nLMT-	- Direction Limit
8	nEXOP+	Jog at the + Direction
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HOME	Home Signal Input	Green
LMT+	Plus End Limit	Red
LMT-	Minus End Limit	Red

CN2, CN3 D-SUB Connector (F) 26P



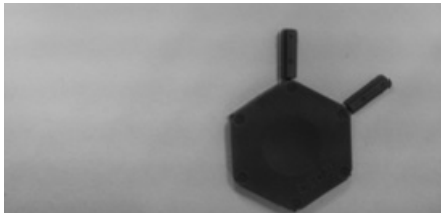
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4	nRDY	Servo Ready (Connected by jumper)
5	nP+N	Output pulse CW/ Pulse-
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7	nECAN	Encoder Phase A-
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12	VEX	Power 24V from TB1
13	GND	Ground
14	nBRK-	External Break Signal-
15	GND	Ground
16	nECBN	Encoder Phase B-
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18	GND	Ground
19	EMG	Emergency
20	GND	Ground
21	GND	Ground
22	GND	Ground
23	nP-N	Output pulse CCW/DIR-
24	nP-P	Output pulse CCW/DIR+
25	nINON	Encoder Phase Z-
26	nINOP	Encoder Phase Z+

Note: n = X, Y, Z, or U

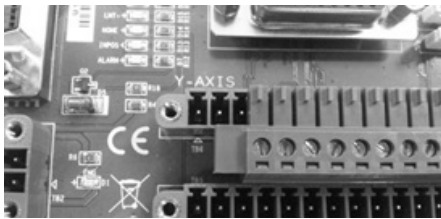
Protection Key Assembly Method

Follow the following 4 steps to avoid damaging the motion board

Step1: The protection key is included in the package of ADAM-3955



Step2: Users can see the key way on the male connector



Step3: Insert the protection key in the key way



Step4: Cut the original matching key

