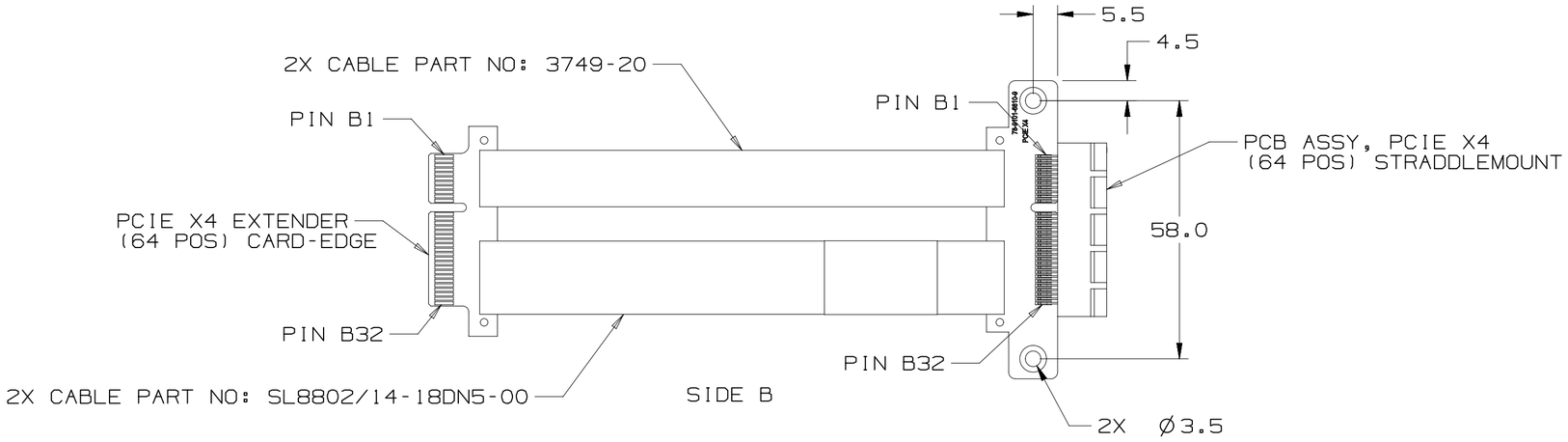
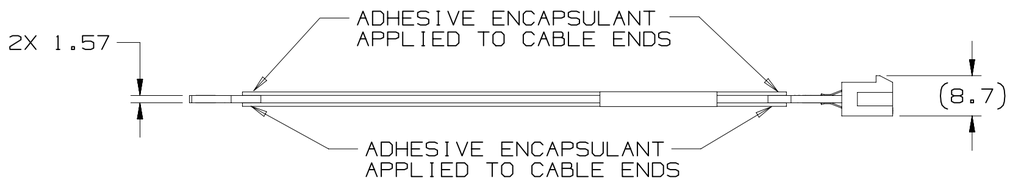
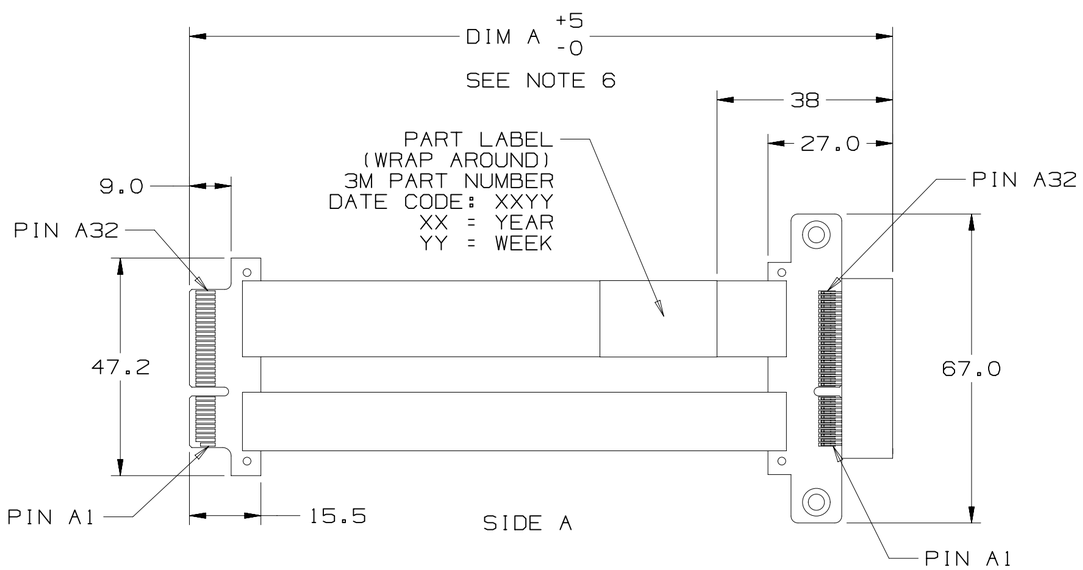
3M™ TWIN AXIAL CABLE ASSEMBLY FOR PCIe X4 EXTENDER CARD APPLICATIONS







BILL OF MATERIALS			
	ITEM	DESCRIPTION	QTY
1.0	PBA	PCB ASSY, PADDLECARD, PCIE X4	1
1.1	PCB	PCIE X4 (64 POS) STRADDLEMOUNT 3M P/N: 78-9101-6810-9	1
1.2	CONN	CONNECTOR, PCIE 64 POSITION, FEMALE SOCKET	1
2.0	PCB	PCIE X4 EXTENDER (64 POS) CARD-EDGE 3M P/N: 78-9101-6809-1	1
3.0	CABLE	RIBBON TWIN AX CABLE 3M P/N: SL8802/14-18DN5-00	2
4.0	CABLE	RIBBON CABLE, 20 POSITION 3M P/N: 3749-20	2
5.0	STRAIN RELIEF	ADHESIVE	AS REQUIRED

NOTES

1. DIMENSIONS ARE IN MILLIMETERS.
2. 3M™ RIBBON TWINAX DESCRIPTION:
   30 AWG, SILVER PLATED SIGNAL WIRE
   IMPEDANCE: 85 ±5 OHM
   OVERALL RIBBON WIDTH: 24.90 MM
   OVERALL RIBBON THICKNESS: 0.75 MM
3. ROHS COMPLIANT. SEE REGULATORY INFORMATION APPENDIX IN "ROHS COMPLIANCE" SECTION AT WWW.3MCONNECTORS.COM (E1 & C1 APPLY)
4. THIS CABLE CONSTRUCTION HAS A THIN ALUMINUM INNER LAYER EXPOSED AT EACH EDGE. USERS SHOULD ASSESS WHETHER THE EXPOSED EDGE PRESENTS A SHORTING RISK IN THEIR SPECIFIC APPLICATION. INSULATING TAPE MAY BE APPLIED AT THE CABLE ASSEMBLY LEVEL, AS NEEDED, TO COVER THE EXPOSED EDGE IN RISK AREAS.
5. APPLICABLE SPECIFICATIONS:
   PRODUCT SPECIFICATION NUMBER:
6. ORDER BY APPLICABLE 3M PART NUMBER:
   8KJ1-0727-XXXX

   XXXX = DIM 'A' IN MILLIMETERS
   (1000 = 1 METER)

STANDARD LENGTH	(DIM 'A')
8KJ1-0727-0250	(250 MM)
8KJ1-0727-0500	(500 MM)

   NON-STANDARD LENGTHS AVAILABLE UPON SPECIAL REQUEST. MAY REQUIRE HIGHER MOQS AND LONGER LEAD TIMES. 150 MM MINIMUM LENGTH.
7. FLAMMABILITY RATING:
   TWIN AX CABLE: UL94 HB
   PCBS: UL94V-0
   ADHESIVE STRAIN RELIEF: UL94 HB, (TBV)
8. PADDLECARD FINGER GOLD THICKNESS:
   0.76 μm [30 μ"] MIN ELECTROLYTIC HARD GOLD OVER 1.27 μm [50 μ"] MIN ELECTROLYTIC NICKEL.

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
B	42467	AUG 06,2012 REVISED NOTE 6	LDS	TS
A	40795	JUN 18,2012 INITIAL RELEASE	LDS	TS

DESIGN REFERENCE — NEXT ASSEMBLY

DISTRIBUTION CODES

DIVISION — DIVISION CODE

DO NOT SCALE DRAWING — SCALE 1/1

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 1994

MAX SURFACE ROUGHNESS 125 ☐ ALL SURFACES ☒ MARKED ONLY

TOLERANCES EXCEPT AS NOTED

INCHES
.0 ±
.00 ±
.000 ±
.0000 ±

MILLIMETERS
0 ± 1
.0 ± .5
.00 ± .05
.000 ± .005

ANGLES ± 1 °

DRFT	DATE	MFG	DATE
L SCHMIDT	APR 09,2012		
CHKD	DATE	APPVL	DATE

3M Center St. Paul, MN 55144

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TITLE
8KJ1-0727-XXXX, CABLE ASSY, PCIE X4 BY PCIE X4 EXTENDER

CAGE NUMBER	SIZE	DRAWING NO.	REV.
	C	78-5100-2521-2	B

MODEL — DET. LISTS ☐ YES ☒ NO — SHT 1 OF 2

REVISION B
DRAWING NUMBER 78-5100-2521-2

3M 3749-20 Cable	
Wire #	Pin Attachment #
01	Ground Layer
02	B01 - B02
03	B01 - B02
04	B01 - B02
05	B01 - B02
06	B01 - B02
07	B01 - B02
08	Ground Layer
09	B05
10	B06
11	Ground Layer
12	B08
13	B08
14	B09
15	B10
16	B10
17	Ground Layer
18	B11
19	Ground Layer
20	B12

3M SL8802 Cable	
Wire #	Pin Attachment #
GND	Ground Layer
pr_01	B14
pr_01	B15
pr_02	B17
pr_02	Ground Layer
pr_03	B19
pr_03	B20
pr_04	B23
pr_04	B24
GND	Ground Layer
pr_05	B27
pr_05	B28
pr_06	Ground Layer
pr_06	Ground Layer
pr_07	B30
pr_07	B31
GND	Ground Layer

PCI-Express X4 Pin-Out			
Pin #	Side B Description	Side A Description	Pin #
B01	+12 volt power	Hot plug presence detect	A01
B02	+12 volt power	+12 volt power	A02
B03	+12 volt power	+12 volt power	A03
B04	Ground	Ground	A04
B05	SMBus clock	TCK	A05
B06	SMBus data	TDI	A06
B07	Ground	TDO	A07
B08	+3.3 volt power	TMS	A08
B09	+TRST#	+3.3 volt power	A09
B10	3.3v volt power	+3.3 volt power	A10
B11	Link Reactivation	Power Good	A11
Mechanical Key			
B12	Reserved	Ground	A12
B13	Ground	Reference Clock	A13
B14	Transmitter Lane 0,	Differential pair	A14
B15	Differential pair	Ground	A15
B16	Ground	Receiver Lane 0,	A16
B17	Hotplug detect	Differential pair	A17
B18	Ground	Ground	A18
B19	Transmitter Lane 1,	Reserved	A19
B20	Differential pair	Ground	A20
B21	Ground	Receiver Lane 1,	A21
B22	Ground	Differential pair	A22
B23	Transmitter Lane 2,	Ground	A23
B24	Differential pair	Ground	A24
B25	Ground	Receiver Lane 2,	A25
B26	Ground	Differential pair	A26
B27	Transmitter Lane 3,	Ground	A27
B28	Differential pair	Ground	A28
B29	Ground	Receiver Lane 3,	A29
B30	Reserved	Differential pair	A30
B31	Hot plug detect	Ground	A31
B32	Ground	Reserved	A32

3M 3749-20 Cable	
Pin Attachment #	Wire #
Ground Layer	01
A01	02
Ground Layer	03
A02 - A03	04
A02 - A03	05
A02 - A03	06
A02 - A03	07
Ground Layer	08
A05	09
A06	10
A07	11
A08	12
Ground Layer	13
A09 - A10	14
A09 - A10	15
A09 - A10	16
A09 - A10	17
Ground Layer	18
Ground Layer	19
A11	20

3M SL8802 Cable	
Pin Attachment #	Wire #
Ground Layer	GND
A13	pr_01
A14	pr_01
A16	pr_02
A17	pr_02
Ground Layer	pr_03
A19	pr_03
A21	pr_04
A22	pr_04
Ground Layer	GND
A25	pr_05
A26	pr_05
A29	pr_06
A30	pr_06
A32	pr_07
Ground Layer	pr_07
Ground Layer	GND

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
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.000 ±
.0000 ±

MILLIMETERS
0 ± 1
.0 ± .5
.00 ± .05
.000 ± .005

ANGLES ± 1°

3M 3M Center St. Paul, MN 55144

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8KJ1-0727-XXXX, CABLE ASSY, PCIE X4 BY PCIE X4 EXTENDER

CAGE NUMBER | SIZE C | DRAWING NO. 78-5100-2521-2 | REV. B

MODEL | DET. LISTS ☐ YES ☒ NO | SHT 2 OF 2

78-5100-2521-2 | B REVISION