

PRODUCT NUMBER	DESCRIPTION	NOTES
10117947-XXXXLF	NON-HF	SEE SHT. 3
10117947-XXXXHLF	HALOGEN FREE (H)	SEE SHT. 3



dr	Deborah Ingram	2011/05/23	projection	mm	size	A3	scale	1:1	
eng	Tommy Lin	2014/01/06			ecn no	ELX-N-16648-1			
chr	-	-			rel level	Released			
appr	Roger Cheng	2014/01/07	product family	MiniSAS/SATA	rev	D			
		title	MINI SAS HD 8X TO 2 MINI SAS 2.1		dwg no	10117947		cat. no.	-
www.fci.com		Product - Customer Drw		sheet 1 of 5					

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END P1
MINI SAS HD 8X
ISOMETRIC VIEW



END P2 & END P3
MINI SAS
ISOMETRIC VIEW



KEY 3 & KEY SLOT 2, 4 & 6
○◇ UNIVERSAL PORT

END P2 & END P3
MINI SAS

dr	Deborah Ingram	2011/05/23	projection 	mm 	size	A3	scale	4:5
eng	Tommy Lin	2014/01/06			ecn no	ELX-N-16648-1		
chr	-	-			rel level	Released		
appr	Roger Cheng	2014/01/07	product family	C&A				
		title		MINI SAS HD 8X TO 2 MINI SAS 2.1	dwg no	10117947	rev	D
www.fci.com		cat. no.	-	Product - Customer Drw	sheet 2 of 5			



PRODUCT NUMBER	DESCRIPTION	NOTES
10117947-XXXXLF	NON-HF	SEE SHT. 3
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PRODUCT NUMBER (NON-HALOGEN FREE) SEE NOTE 16	AWG	"DIM L" LENGTH (Meters)	"DIM M" HEIGHT (mm)
10117947-5020LF	24 AWG	2 M	(20.1)
10117947-5030LF	24 AWG	3 M	(20.1)
10117947-5040LF	24 AWG	4 M	(20.1)
10117947-5050LF	24 AWG	5 M	(20.1)
10117947-5060LF	24 AWG	6 M	(20.1)
10117947-5070LF	24 AWG	7 M	(20.1)
10117947-5080LF	24 AWG	8 M	(20.1)
10117947-5090LF	24 AWG	9 M	(20.1)
10117947-5100LF	24 AWG	10 M	(20.1)
10117947-4020LF	26 AWG	2 M	(20.1)
10117947-4030LF	26 AWG	3 M	(20.1)
10117947-4040LF	26 AWG	4 M	(20.1)
10117947-4050LF	26 AWG	5 M	(20.1)
10117947-4060LF	26 AWG	6 M	(20.1)
10117947-4070LF	26 AWG	7 M	(20.1)
10117947-4080LF	26 AWG	8 M	(20.1)
10117947-3010LF	28 AWG	1 M	(17.3)
10117947-3020LF	28 AWG	2 M	(17.3)
10117947-3030LF	28 AWG	3 M	(17.3)
10117947-3040LF	28 AWG	4 M	(17.3)
10117947-3050LF	28 AWG	5 M	(17.3)
10117947-3060LF	28 AWG	6 M	(17.3)
10117947-2005LF	30 AWG	0.5 M	(17.3)
10117947-2010LF	30 AWG	1 M	(17.3)
10117947-2020LF	30 AWG	2 M	(17.3)
10117947-2030LF	30 AWG	3 M	(17.3)
10117947-2040LF	30 AWG	4 M	(17.3)

PRODUCT NUMBER (HALOGEN FREE) SEE NOTE 9 AND 16	AWG	"DIM L" LENGTH (Meters)	"DIM M" HEIGHT (mm)
10117947-5020HLF	24 AWG	2 M	(20.1)
10117947-5030HLF	24 AWG	3 M	(20.1)
10117947-5040HLF	24 AWG	4 M	(20.1)
10117947-5050HLF	24 AWG	5 M	(20.1)
10117947-5060HLF	24 AWG	6 M	(20.1)
10117947-5070HLF	24 AWG	7 M	(20.1)
10117947-5080HLF	24 AWG	8 M	(20.1)
10117947-5090HLF	24 AWG	9 M	(20.1)
10117947-5100HLF	24 AWG	10 M	(20.1)
10117947-4020HLF	26 AWG	2 M	(20.1)
10117947-4030HLF	26 AWG	3 M	(20.1)
10117947-4040HLF	26 AWG	4 M	(20.1)
10117947-4045HLF	26 AWG	5 M	(20.1)
10117947-4060HLF	26 AWG	6 M	(20.1)
10117947-4070HLF	26 AWG	7 M	(20.1)
10117947-4080HLF	26 AWG	8 M	(20.1)
10117947-3010HLF	28 AWG	1 M	(17.3)
10117947-3020HLF	28 AWG	2 M	(17.3)
10117947-3030HLF	28 AWG	3 M	(17.3)
10117947-3040HLF	28 AWG	4 M	(17.3)
10117947-3050HLF	28 AWG	5 M	(17.3)
10117947-3060HLF	28 AWG	6 M	(17.3)
10117947-2005HLF	30 AWG	0.5 M	(17.3)
10117947-2010HLF	30 AWG	1 M	(17.3)
10117947-2020HLF	30 AWG	2 M	(17.3)
10117947-2030HLF	30 AWG	3 M	(17.3)
10117947-2040HLF	30 AWG	4 M	(17.3)

dr	Deborah Ingram	2011/05/23	projection 	size A3	scale 1:1
eng	Tommy Lin	2014/01/06			
chr	-	-			
appr	Roger Cheng	2014/01/07			
product family			C&A	ecn no	ELX-N-16648-1
rel level			Released	rev	
 MINI SAS HD 8X TO 2 MINI SAS 2.1 TRAINED UNIVERSAL FINAL ASSEMBLY (6Gb/s)			dwg no 10117947	rev D	
www.fci.com	cat. no.	-	Product - Customer Drw	sheet 3 of 5	

PRODUCT NUMBER	DESCRIPTION	NOTES
10117947-XXXXLF	NON-HF	SEE SHT. 3
10117947-XXXXHLF	HALOGEN FREE (H)	SEE SHT. 3



VIEW A
SCALE: 2:1



VIEW B
SCALE: 2:1

LEGEND:



HIGH-SPEED SERIAL
DIFFERENTIAL PAIRS



SIGNAL RETURN



POWER AND MANAGEMENT
INTERFACE

WIRING LIST (SEE NOTE 7)

END P1 (B) MINI SAS HD		CONDUCTOR #	END P2 (MINI SAS)	
SIGNAL	PIN#		PIN#	SIGNAL
GND	A9	PAIR 2	B7	GND
Rx 1-	A5		B6	Tx 1-
Rx 1+	A4		B5	Tx 1+
GND	A3	PAIR 4	B4	GND
Rx 3-	A8		B12	Tx 3-
Rx 3+	A7		B11	Tx 3+
GND	A6		B13	GND
N/C	A1	NO THRU CONNECTION		
Interrupt	A2			
GND	B9	PAIR 1		GND
RX 0-	B5		B3	TX 0-
RX 0+	B4		B2	TX 0+
GND	B3	PAIR 3	B1	GND
RX 2-	B8		B9	TX 2-
RX 2+	B7		B8	TX 2+
GND	B6		B10	GND
N/C	B1	NO THRU CONNECTION		
Mod_PRS_L (GND)	B2			
GND	C9		A7	GND
TX 1-	C5	PAIR 2	A6	RX 1-
TX 1+	C4		A5	RX 1+
GND	C3		A4	GND
TX 3-	C8	PAIR 4	A12	RX 3-
TX 3+	C7		A11	RX 3+
GND	C6		A13	GND
SCL	C1	NO THRU CONNECTION		
SDA	C2			
GND	D9			GND
TX 0-	D5	PAIR 1	A3	RX 0-
TX 0+	D4		A2	RX 0+
GND	D3		A1	GND
TX 2-	D8	PAIR 3	A9	RX 2-
TX 2+	D7		A8	RX 2+
GND	D6		A10	GND
N/C	D1	NO THRU CONNECTION		
V+3.3 for EEPROM	D2			
SHELL		BRAID		SHELL

SHIELD-----SHIELD

WIRING LIST (SEE NOTE 7)

END P1 (A) MINI SAS HD		CONDUCTOR #	END P3 (MINI SAS)	
SIGNAL	PIN#		PIN#	SIGNAL
GND	A9	PAIR 2	B7	GND
Rx 1-	A5		B6	Tx 1-
Rx 1+	A4		B5	Tx 1+
GND	A3	PAIR 4	B4	GND
Rx 3-	A8		B12	Tx 3-
Rx 3+	A7		B11	Tx 3+
GND	A6		B13	GND
N/C	A1	NO THRU CONNECTION		
Interrupt	A2			
GND	B9	PAIR 1		GND
RX 0-	B5		B3	TX 0-
RX 0+	B4		B2	TX 0+
GND	B3	PAIR 3	B1	GND
RX 2-	B8		B9	TX 2-
RX 2+	B7		B8	TX 2+
GND	B6		B10	GND
N/C	B1	NO THRU CONNECTION		
Mod_PRS_L (GND)	B2			
GND	C9		A7	GND
TX 1-	C5	PAIR 2	A6	RX 1-
TX 1+	C4		A5	RX 1+
GND	C3		A4	GND
TX 3-	C8	PAIR 4	A12	RX 3-
TX 3+	C7		A11	RX 3+
GND	C6		A13	GND
SCL	C1	NO THRU CONNECTION		
SDA	C2			
GND	D9			GND
TX 0-	D5	PAIR 1	A3	RX 0-
TX 0+	D4		A2	RX 0+
GND	D3		A1	GND
TX 2-	D8	PAIR 3	A9	RX 2-
TX 2+	D7		A8	RX 2+
GND	D6		A10	GND
N/C	D1	NO THRU CONNECTION		
V+3.3 for EEPROM	D2			
SHELL		BRAID		SHELL

SHIELD-----SHIELD

dr	Deborah Ingram	2011/05/23	projection	mm	size	A3	scale	1:2
eng	Tommy Lin	2014/01/06			ecn no	ELX-N-16648-1	rel level	Released
chr	-	-						
appr	Roger Cheng	2014/01/07	product family	C&A				
			MINI SAS HD 8X TO 2 MINI SAS 2.1		dwg no		10117947	
www.fci.com			cat. no.		-		Product - Customer Drw	
			sheet 4 of 5				rev	
			D					

PRODUCT NUMBER	DESCRIPTION	NOTES
10117947-XXXXLF	NON-HF	SEE SHT. 3
10117947-XXXXHLF	HALOGEN FREE (H)	SEE SHT. 3

NOTES:

- MATERIALS MINI SAS HD (END P1)
BACK SHELLS: ZINC DIE CAST/ COPPER UNDER PLATE/NICKEL OVER PLATE
PULL TAB: THERMOPLASTIC POLYMER
LATCH: STAINLESS STEEL
FERRULE: BRASS
EMI GASKETS: STAINLESS STEEL
LOCTITE
HEAT SHRINK: HIGH POLYMER
PADDLE CARD: PRINTED CIRCUIT SUBSTRATE

- MATERIALS MINI SAS (END P2 & END P3)
BACK SHELLS: ZINC DIE CAST
PULL TAB: THERMOPLASTIC POLYMER
LATCH: STAINLESS STEEL
JET MELT: POLYAMIDE POLYMER
HEAT SHRINK: POLYOLEFIN
PADDLE CARD: PRINTED CIRCUIT SUBSTRATE



**PEND RADIUS
TOP VIEW OF CONNECTOR**

MINI SAS HD P1 MINIMUM CABLE BEND TABLE		
CABLE	("DIM Y") HF	("DIM Y") NON-HF
24 AWG	101.1	100.6
26 AWG	100.0	99.7
28 AWG	99.1	98.7
30 AWG	98.5	97.9

MINI SAS 2.1 P2 & P3 MINIMUM CABLE BEND TABLE PER CONNECTOR		
CABLE	("DIM Y") HF	("DIM Y") NON-HF
24 AWG	90.6	88.3
26 AWG	85.3	82.9
28 AWG	79.3	76.9
30 AWG	75.7	72.1

- ELECTRICAL PERFORMANCE PER CURRENT REVISION: T10/SAS-2.1

- THIS PRODUCT MEETS THE RESTRICTION OF HAZARDOUS SUBSTANCES IN ELECTRICAL AND ELECTRONIC EQUIPMENT (RoHS) DIRECTIVE (2011/65/EU)

- PRODUCT SPECIFICATIONS: Mini SAS HD GS-12-651, MINI SAS 2.1 GS-12-548

- UNLESS OTHERWISE SPECIFIED ASSEMBLED LENGTH TOLERANCE IS TO BE:
"DIM L" < 1 METERS = ±25mm
"DIM L" 1 METER TO 10 METER = 2% OF "DIM L"

- LABEL DETAILS:

FCI CHINA
FCI P/N
FCI CUSTOMER DRAWING REVISION
FCI SERIAL NUMBER

FONT SHALL BE CLEARLY VISIBLE AND BLACK IN COLOR

LABEL EXAMPLE

FCI CHINA
10117947-5020LF
REV.D
CN1323HG205L0001

FCI SERIAL NUMBER IS ONLY FOR TRACKING PRODUCT, DEFINED AS BELOW:



- ALL CABLE ASSEMBLIES SHALL BE 100% TESTED FOR CONTINUITY AS DEFINED IN WIRING LIST.

- PACKAGING OF LEAD FREE PRODUCTS MEETS LABELING AND PACKAGING PER SPECIFICATION GS-14-920. PACKAGE CABLE ASSEMBLIES PER GS-14-1272. DUST COVER IS TO BE APPLIED TO MINI SAS HD CONNECTOR PRIOR TO SHIPPING. FCI PACKAGE TRACKING BAG LABEL IS ONLY FOR REFERENCE.

- "H" PRODUCT NUMBERS DESIGNATE THE USE OF HALOGEN FREE RAW CABLE.

- THIS DIMENSION IS A FINISHED PRODUCT LENGTH.

- A "D" SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW, OR NOTE WHICH HAS BEEN MODIFIED WITH THE CURRENT DRAWING REVISION. THE CURRENT REVISION WILL BE SHOWN IN THE SYMBOL.

- MEETS ELECTRICAL PERFORMANCE REQUIREMENTS OF SAS 2.1.

- MATES WITH SERIES: MINI SAS HS - 100112627 or 10112628
MINI SAS 2.1 - BOARD CONNECTOR 100988870 AND CAGE 10098872

- PLACE A CABLE TIE EVERY 0.5 METERS ON ASSEMBLIES. IN THE CASE OF A 0.5 METER CABLE LENGTH, PLACE THE CABLE TIE MIDWAY BETWEEN CONNECTORS.



NOTES CONTINUED

- EEPROM INFORMATION OF MSHD SIDE REFER TO FCI LATEST PRODUCT SPEC. GS-12-651

- CABLE IS OPTIONAL, WHICH HAD BEEN QUALIFIED BY FCI AND MEET FCI PRODUCT SPEC. GS-12-651/548

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eng	Tommy Lin	2014/01/06			ecn no			
chr	-	-			ELX-N-16648-1			
appr	Roger Cheng	2014/01/07	product family	-	rel level			
www.fci.com			MINI SAS HD 8X TO 2 MINI SAS 2.1 TRAINED UNIVERSAL FINAL ASSEMBLY (6Gb/s)		cat. no.	-	Product - Customer Drw	sheet 5 of 5