

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



CABLE TIE
COLOR: BLACK
SEE NOTE 14



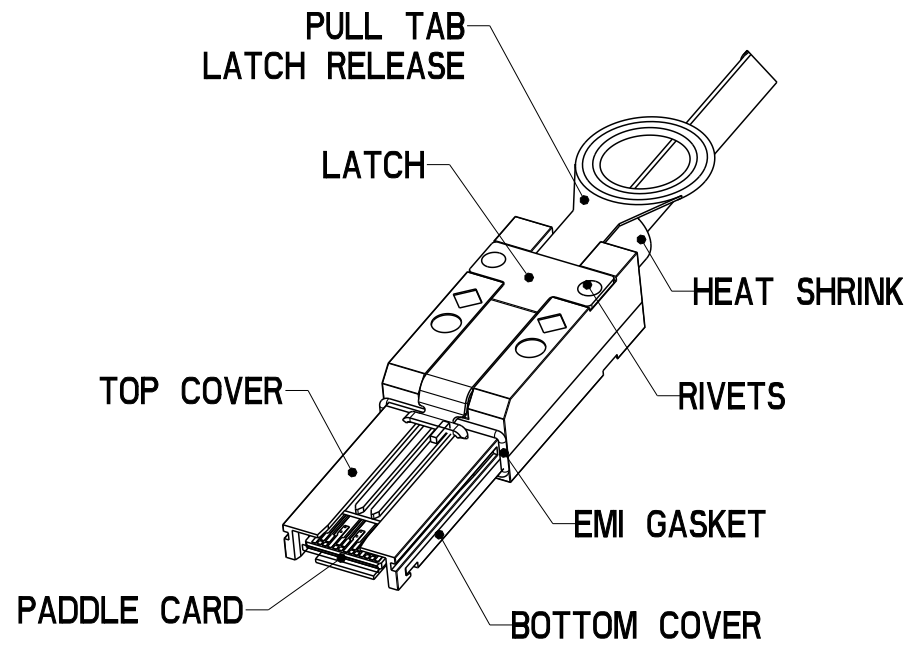
Mini SAS
CABLE ORIENTATION ONLY
END P2 & END P3

| | | | | | | | | |
|-------------|----------------|------------|----------------------------------|--------------|------------------------|---------------|-----------------|--------------|
| 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 | | sheet 1 of 5 |
| www.fci.com | | cat. no. | - | | Product - Customer Drw | | STATUS:Released | |

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



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 | - | - | | | product family | C&A | rel level | Released | |
| appr | Roger Cheng | 2014/01/07 | | | rel level | Released | | | |
| | | 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 |
| 10117947-XXXXHLF | HALOGEN FREE (H) | SEE SHT. 3 |

| 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 | | |
|  | | title 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 | |

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

NOTES:

1. 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

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

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

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

5. 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"

6. LABEL DETAILS:

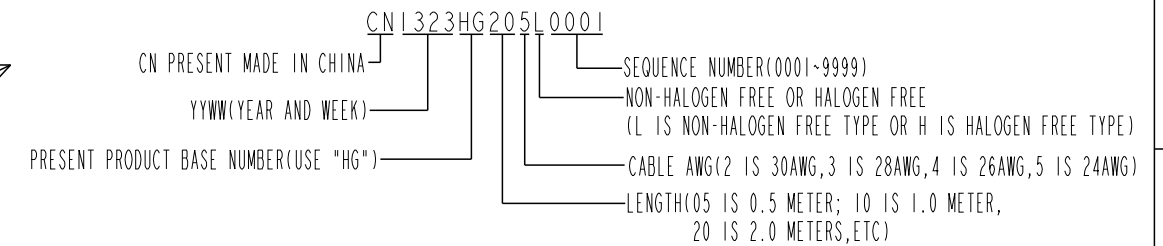
FCI CHINA
 FCI P/N
 FCI CUSTOMER DRAWING REVISION
 FCI SERIAL NUMBER

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:



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

8. 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.

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

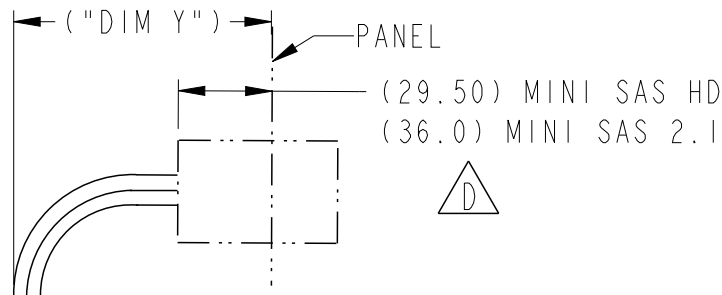
10. THIS DIMENSION IS A FINISHED PRODUCT LENGTH.

11. A "△" 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.

12. MEETS ELECTRICAL PERFORMANCE REQUIREMENTS OF SAS 2.1.

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

14. 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.



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 |



NOTES CONTINUED

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

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

| | | | | | |
|----------------|----------------|------------|--|--------------------|------------------------|
| 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 | | | - | ecn no | ELX-N-16648-1 |
| rel level | | | - | Released | |
| | | | 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 5 of 5 | | |