

| 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



SECTION C-C
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 | 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 1 of 5 | | |

| 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 | - | - | | | rel level | Released | | |
| appr | Roger Cheng | 2014/01/07 | product family | C&A | | 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 |  |  | 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 | C&A | | |
|  | | 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 | | |



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| 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

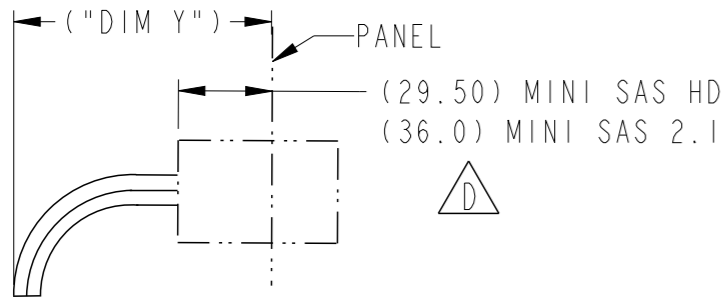
| | | | | | | | | |
|-------------|----------------|------------|----------------------------------|-----|------------------------|---------------|--------------|----------|
| dr | Deborah Ingram | 2011/05/23 | projection | mm | size | A3 | scale | 1:2 |
| eng | Tommy Lin | 2014/01/06 | | | ecn no | 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:

- 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:

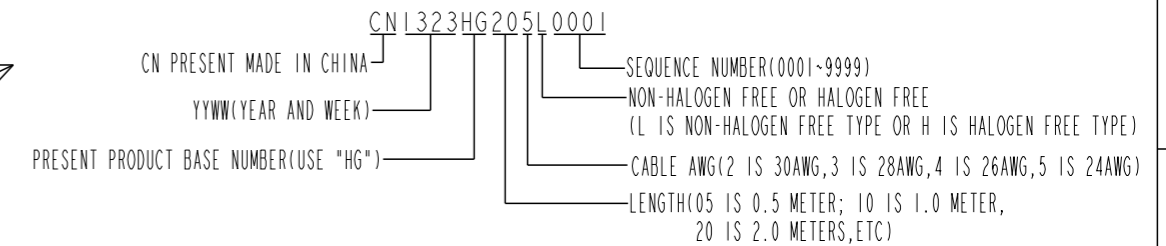
FCI CHINA
FCI P/N
FCI CUSTOMER DRAWING REVISION
FCI SERIAL NUMBER

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 "△" 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

| | | | | | | | | |
|-------------|----------------|------------|---|------------------------|----------------|---------------|-------|-----|
| dr | Deborah Ingram | 2011/05/23 | | 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 | - | | |
| www.fci.com | | cat. no. | - | Product - Customer Drw | sheet 5 of 5 | | | |

| | | | | | |
|--|--|--------|----------|-----|---|
| | MINI SAS HD 8X TO 2 MINI SAS 2.1 | dwg no | 10117947 | rev | D |
| | TRAINED UNIVERSAL FINAL ASSEMBLY (6Gb/s) | | | | |

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «**JONHON**», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «**FORSTAR**».



JONHON

«**JONHON**» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«**FORSTAR**» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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Факс: 8 (812) 320-03-32

Электронная почта: ocean@oceanchips.ru

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А