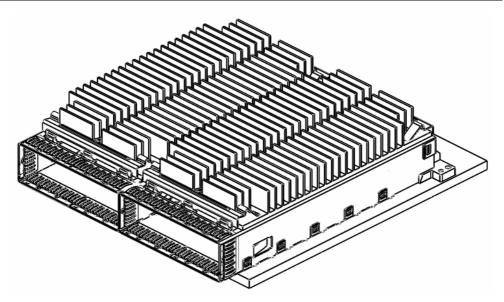
CFP2(CN121 series) Application Specification



Note

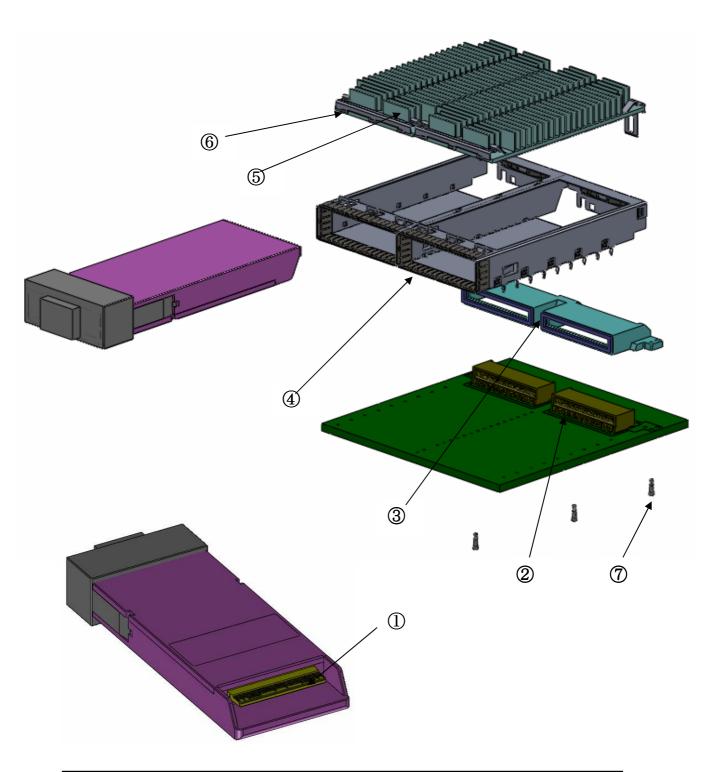
All numerical values are in metric units. Dimensions are in millimeters. Unless otherwise specified, dimensions have a tolerance of ± 0.30 mm and angles have a tolerance of ± 2 °.Figures and illustrations are for identification only and are not drawn to scale.

1. INTRODUCTION

This specification covers the requirement for application of CFP MSA requirement (The home of the CFP Multi Source Agreement). CFP2 connector assembly is 0.60mm pitch, right angle surface mount connector. A Cage that provides a positive stop for the CFP2 transceiver and EMI isolation for the connector assembly. Threaded holes in the connector cover hold the CFP2 transceiver in place once installed. The optional heat sink will help dissipate heat in high performance application.



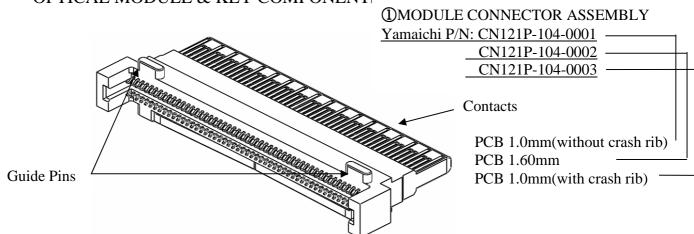
OPTICAL MODULE & CONNECTOR ASSEMBLY EXPLOITED VIEW



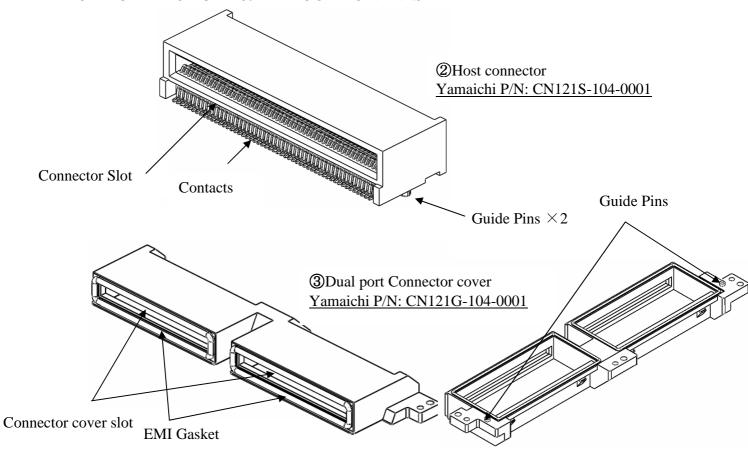


Standard components

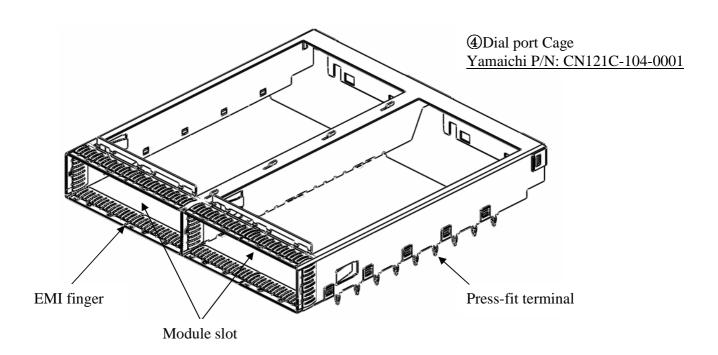
OPTICAL MODULE & KEY COMPONENTS



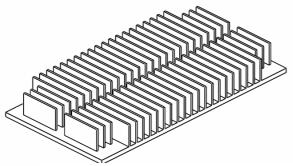
OPTICAL MODULE & KEY COMPONENTS



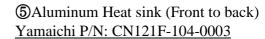


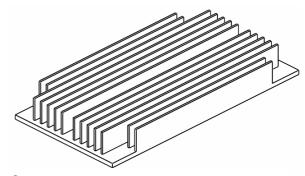


⑤Aluminum Heat sink (Side to Side) Yamaichi P/N: CN121F-104-0001

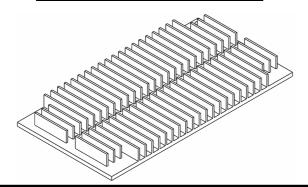


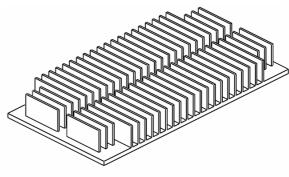
⑤Low profile Heat sink (Side to Side) Yamaichi P/N: CN121F104-YEU01



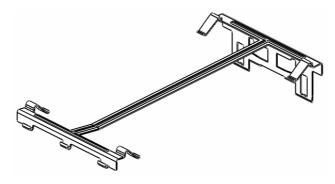


⑤Copper Heat sink (Side to Side) Yamaichi P/N: CN121F-104-0004-YEU









(6)Heat sink clip Yamaichi P/N: CN121M104-0001

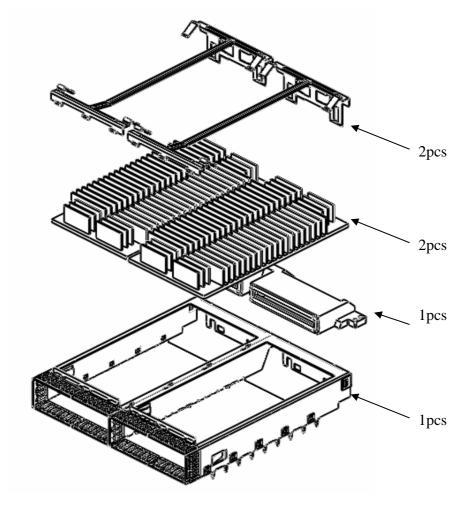
⑦Standard screw Yamaichi P/N: CN121-03#SC 7 Long screw (for Belly to Belly configuration) Yamaichi P/N: CN121-01#SC



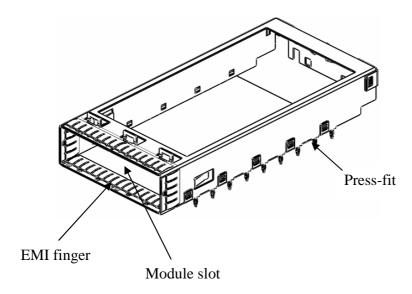


Optional Mechanical set

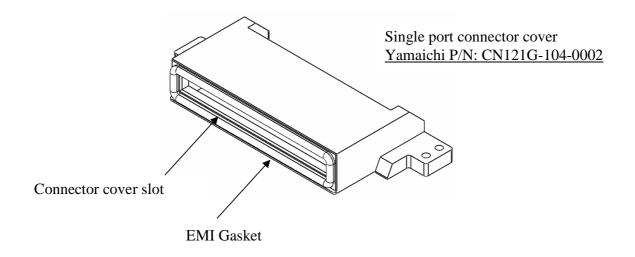
Mechanical kit Yamaichi P/N: CN121A-104-0004



Optional Single port configuration



Single port cage Yamaichi P/N: CN121C-104-0002





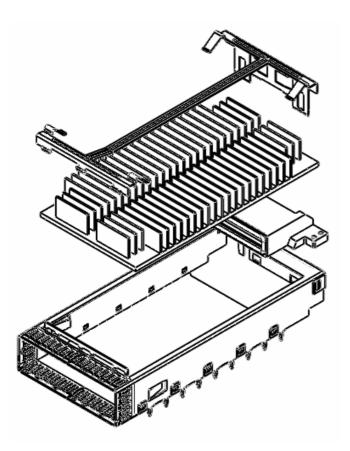
Optional Mechanical set configuration (Single port)

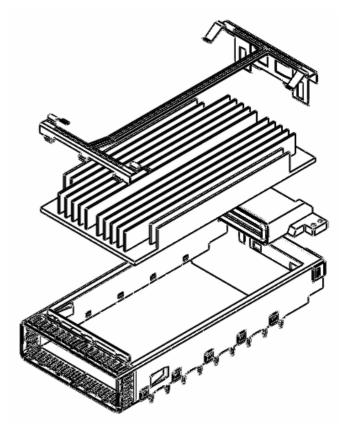
Single port kit

Yamaichi P/N: CN121A-104-0003

Single port kit

Yamaichi P/N: CN121A-104-0006





2. REFERENCE MATERIAL

2.1 Revision Summary

Revisions to this application specification include.

We will revise this application specification if there is additional information on this without notice.

2.2 Customer Assistance

Reference product base part number are following table. Use of these numbers will identify the product line and help you to obtain more information. Such information can be obtained through a local Yamaichi Electronics office or representative. (http://www.yeu.com/).

Yamaichi P/N	Descliption
CN121S-104-0001	Host connector
CN121P-104-0001	
CN121P-104-0002	plug connector
CN121P-104-0003	
CN121G-104-0001	Dual port connector cover
CN121G-104-0002	Single port connector cover
CN121C-104-0001	Dual port cage
CN121C-104-0002	Single port cage
CN121F-104-0001	Side to Side heat sink(aluminum)
CN121F-104-YEU01	Low profile Side to Side heat sink(aluminum)
CN121F-104-0004-YEU	Side to Side heat sink(copper)
CN121F-104-0003	Front to Back heat sink(aluminum)
CN121M-104-0001	Heat sink clip
CN121A-104-0004	Dual port Mechanical set
	(Side to Side heat sink)
CN121A-104-0003	Single port Mechanical set
	(Side to Side heat sink)
CN121A-104-0006	Single port Mechanical set
	(Front to Back heat sink)

2.3 Specification

Product specification CN121x-104-xxxx(F114177-001) provides product performance, test information and PC board layout information.

2.4 Design baseline

CFP2 design baseline are located on the CFP MSA website (http://cfp-msa.org/documents.html)



2.5 Hard ware specification

CFP2 Hardware specification are located on the CFP MSA website (http://cfp-msa.org/documents.html)

3. REQUIREMENTS

3.1 Safety and packaging

Do not stack product component containers so high that the containers buckle or deform. Please refer to packaging specification listed following table.

Packing Specification

Yamaichi P/N	Descliption
CN121S-104-0001	Host connector
CN121P-104-0001	plug connector
CN121P-104-0002	
CN121P-104-0003	
CN121G-104-0001	Dual port connector cover
CN121G-104-0001	Single port connector cover
CN121C-104-0001	Dual port cage
CN121C-104-0002	Single port cage
CN121F-104-0001	Side to Side heat sink
CN121F-104-0003	Front to Back heat sink
CN121M-104-0001	Heat sink clip
CN121A-104-0004	Dual port Mechanical set
CN121A-104-0004	(Side to Side heat sink)
CN121A-104-0003	Single port Mechanical set
CN121A-104-0003	(Side to Side heat sink)
CN121A-104-0006	Single port Mechanical set
	(Front to Back heat sink)

3.2 Shelf Life

The products should be used on a first in, first out basis to avoid storage contamination that could adversely affect performance.

3.3 Connector operating temperature range

The connectors are designed to operate in a temperature range -55 to 85°C.



3.4. HANDLING AND INSTALLATION

When handling surface mount connectors, pay careful attention to the following points.

3.4-1

To retain terminal flatness, protect the damage before mounting onto PCB, it is recommended that host connector is mounted using automated machinery. Be especially careful when mounting host connector by hand.

3.4-2

To assure the sufficient retention strength, do not insert the plug connector in to the host connector slot before mount the host connector on to PCB. Be sure that no external forces are applied to the terminal or the contacts.

3.4-3

Performance of the products used without connector cover can not be guaranteed.

3.4-4

Connectors should be handled only by housing to avoid terminal deformation, contamination and damage.

3.5 MATERIAL

The host connector and plug housing are made of LCP, US94-V0. The contacts are made of copper alloy plated with gold over nickel. Cage and heat sink clip are made of stainless, heat sink is made of zinc and heat sink is aluminum or copper.

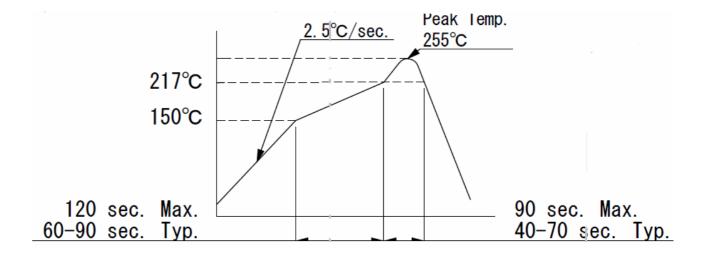
3.6 PC board Layout

All holes and circuit pads must be precisely located on the pc board to ensure proper placement and optimum performance of the connector, cover and cage. Recommended circuit pattern, keep out area, dimensions, and tolerances for pc board are provided in the specification drawings. (Refer to CN121x-104-xxxx:SPEC)

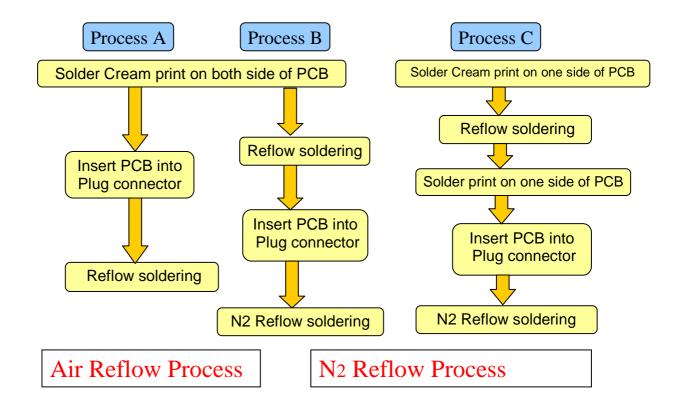


4. Soldering

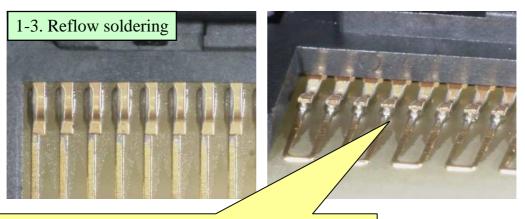
The connector must be soldered using non-focused infrared (IR) or equivalent soldering technique. When mounting to both side of the host PC board, the surface tension of the solder when it is in the liquids state will hold the connector on the PB board. Reflow temperature and time may vary depending on the size of the host PC board and placement of other components. Please confirm reflow condition beforehand.



Plug connector Assembly instructions

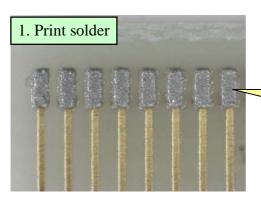


Process A: One time Reflow soldering

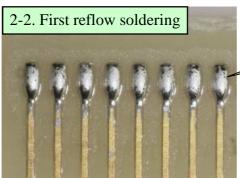


Solder is gathered to the terminal area and creates a filet by reflow soldering.

Process B: 2 times Reflow soldering



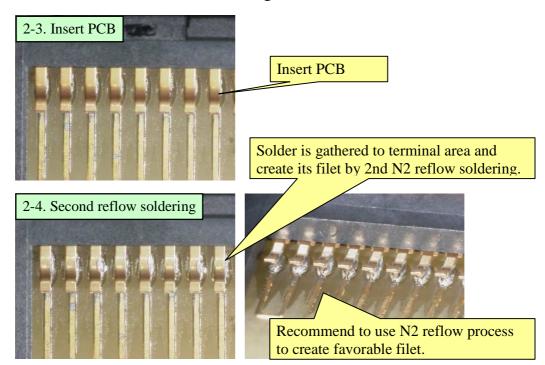
Print solder past on the both side of PCB.



To melt solder paste once by reflow and cool it down to harden.

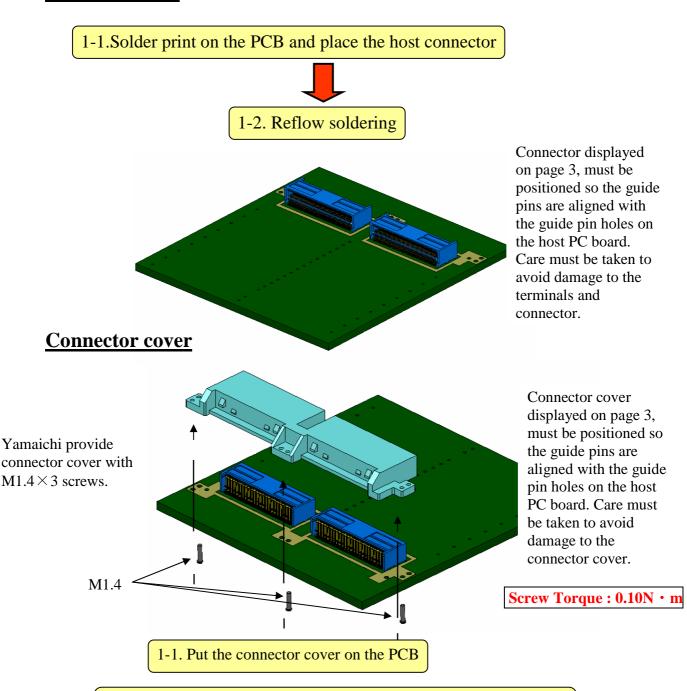


Process B: 2 times Reflow soldering



Connector assembly procedure instruction

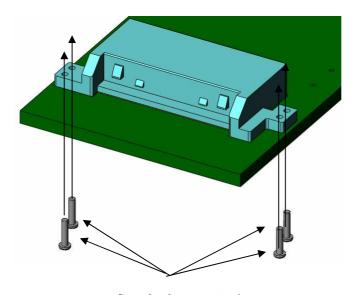
Host connector



1-2. Screw the connector cover using M1.4 screws from opposite side in three locations.

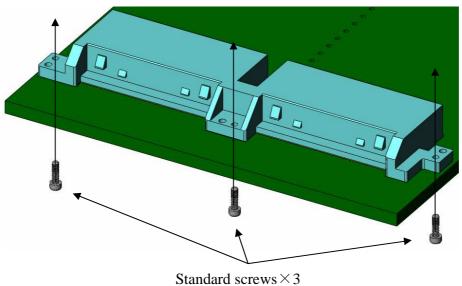


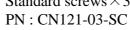
Screw instruction Single connector cover with side to side configuration



Standard screws × 4. PN: CN121-03-SC

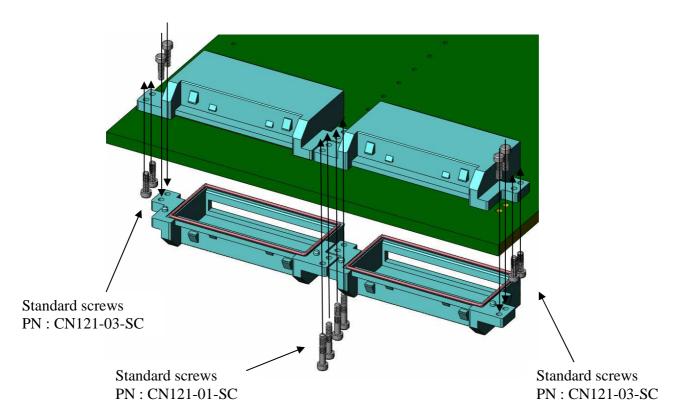
Dual connector cover with side to side configuration



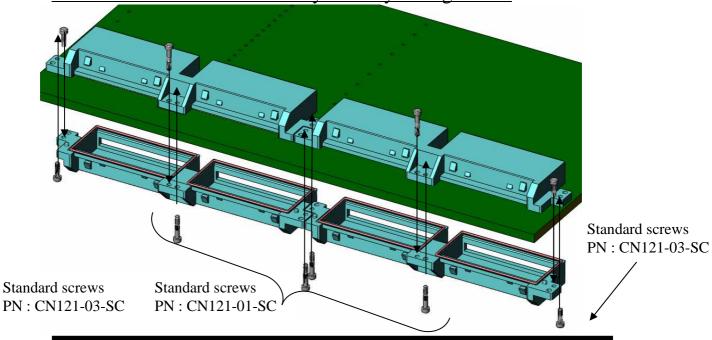




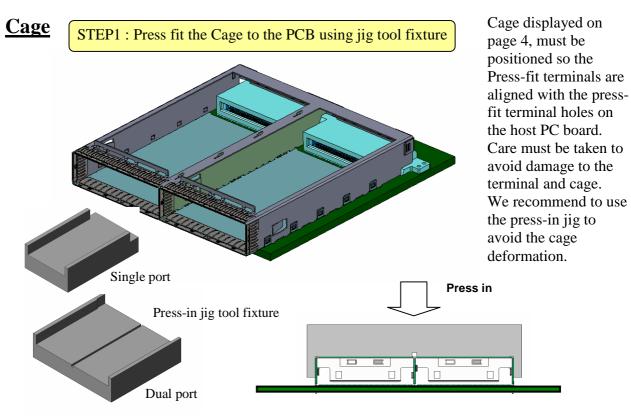
Single connector cover with Belly to Belly configuration





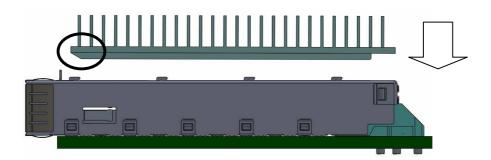






Note: Press-in jig tool fixture design guidance can be provided. Please contact your Yamaichi representative.

STEP 2 : Place the heat sink on the cage

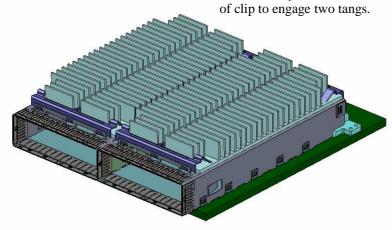


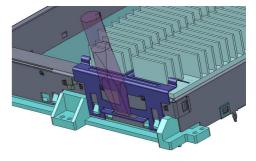
Note: Heat sink has insertion direction, chamfer position is font side to insert the Module smoothly.



STEP 3: Install heat sink clip on the cage

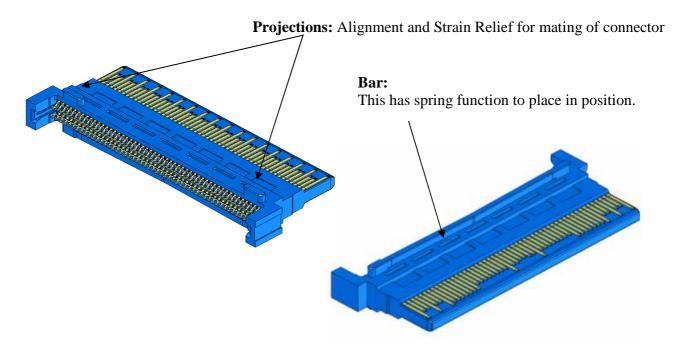
Put the edge of clip on the front side first to engage the three tangs and as a next step, press the rear side





When you release clip, please use tool (ex. Screw Driver)

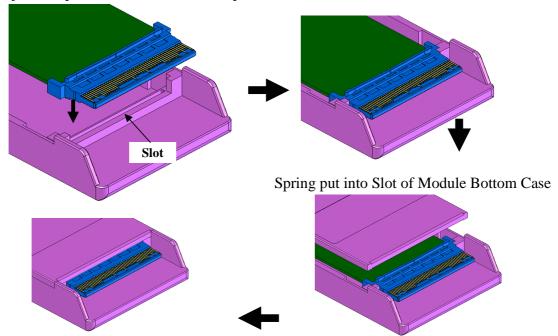
Plug connector





Plug connector assembly

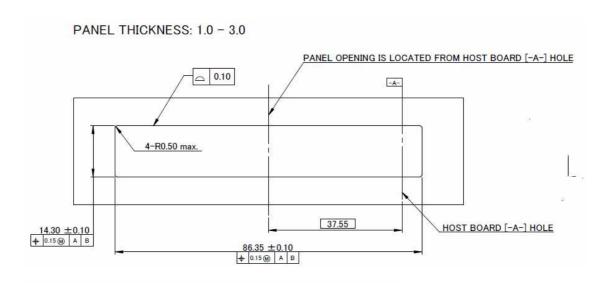
Projections put into Slot of Module Top Case

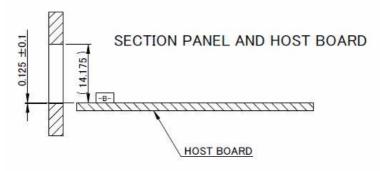


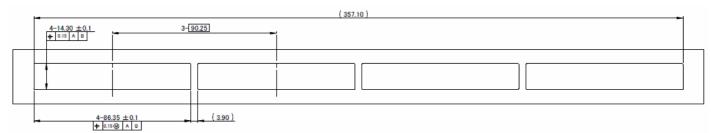
PANEL

The panel must provide a cut out that allow proper position for transceiver. The panel and host PC board must be positioned in relation to each other to avoid interference with the insertion and extraction of the transceiver. This relationship must confirm to dimensions given following figure.

For Dual port configuration panel reference design

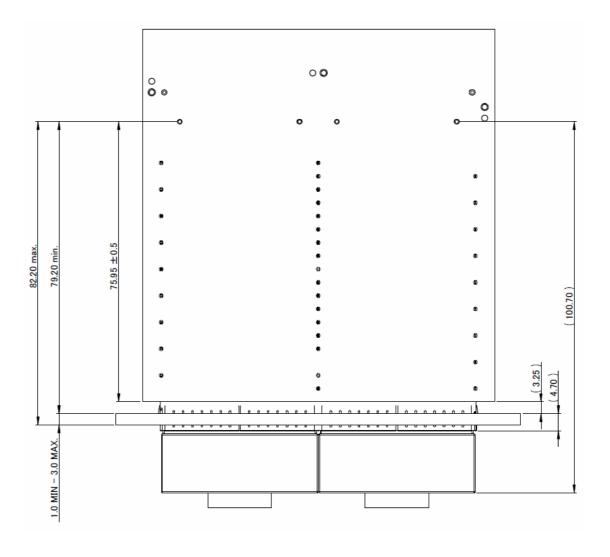






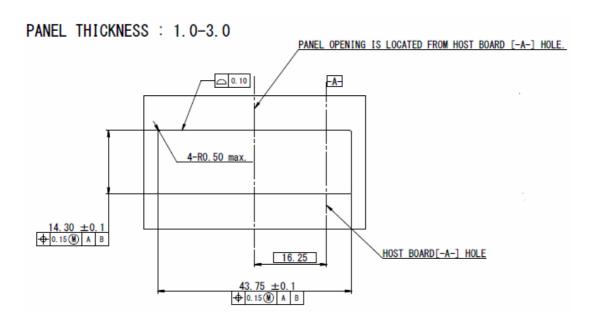


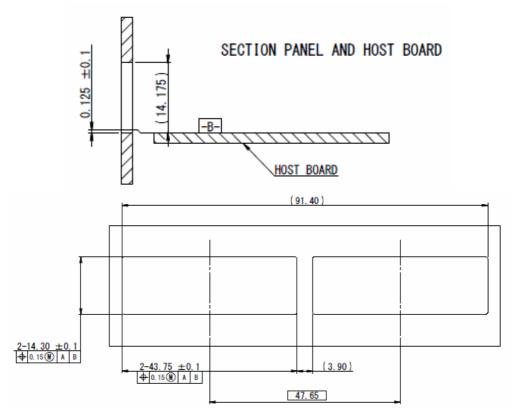
Relationship with Panel and PB





For single port configuration panel reference design







SI break out board

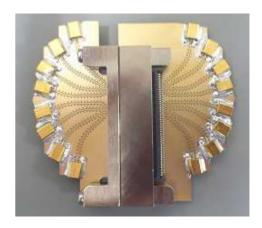
Yamaichi local office has SI break out board to evaluate the SI performance. Such information can be obtained through a local Yamaichi Electronics office or your representative.(http://www.yeu.com/)

Pin assignment

These pin assignment is not complied to MSA, these are for connector performance measurement purpose.



<u>PN: CN121-PCB-02xx</u> (Measure with 2.4mm connector)



PN:CN:121-PCB
(Measure with GPPO connector)

Accessory product <u>Dust Cap</u>



Yamaichi P/N : CN121D-104-0002

This Dust cap has EMI shielding function

Dummy Module



Yamaichi P/N : CN121D-104-0001

Dummy Module is used for heavy heat sink user (This product also has EMI shielding function.)

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Yamaichi Electronics:

CN121D-104-0002 CN121P-104-0001



OOO «ЛайфЭлектроникс" "LifeElectronics" LLC

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- Техническую поддержку проекта.
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- Оценку стоимости проекта по компонентам.
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