

**HIGH-SPEED
DATA NETWORKING**

WORLDWIDE SITES



ASIA HQ Tokyo Japan,
founded 1956
(Listed in the first section of the
Tokyo Stock Exchange)

Design Center:	1	14
Sales Office:	7	
Manufacturing Site:	6	

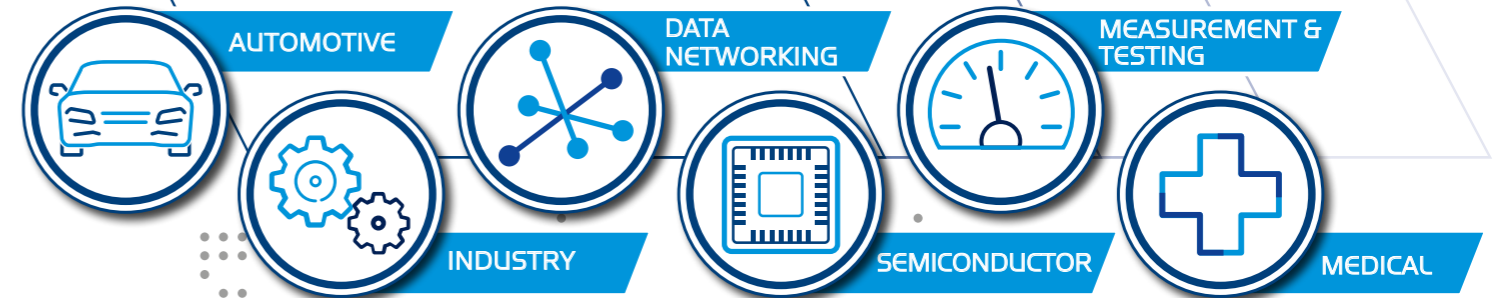
EMEA
HQ Munich Germany,
founded 1986

Design Center:	2	9
Sales Office:	5	
Manufacturing Site:	2	

AMERICAS
HQ San Jose CA. USA,
founded 1983

Design Center:	1	3
Sales Office:	1	
Manufacturing Site:	1	

MARKETS



WORLDWIDE EMPLOYEES



GROUP 1,750 in production
373 in engineering **2,123**

EMEA 251 in production
110 in engineering **361**

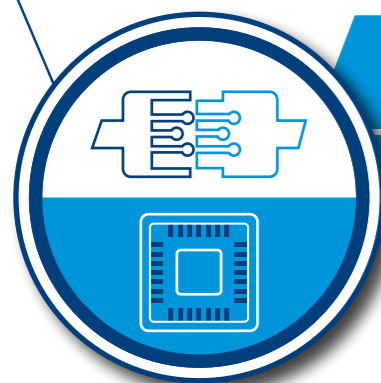
ANNUAL SALES



GROUP
232 Mio. Euro

EUROPE
90.5 Mio. Euro

DIVISIONS



CONNECTOR SOLUTIONS
Standard & customised connectors,
cable assemblies

TEST SOLUTIONS
Test & burn-in sockets, test contactors,
module test adapters, PCB design

DESIGN CENTER



- Complex 3D CAD Construction
- Design FMEA
- Analysis using FEM
 - Structural Mechanics
 - Moldflow for Plastics
 - Thermal Simulation (Flow & Static)
 - Signal Integrity
- PCB Design
- Circuit Simulation
- High Resolution 3D Prototyping
 - Plastics (Photo Polymeric)
 - Metal (LMF Laser Metal Fusion)
- In-house Sample Construction

TEST LABORATORY



- High Voltage & High Current Testing
- High Frequency Measurements
- Soldering
- SEM (Scanning Electron Microscope)
- EDX (X-Ray spectroscopy)
- Computer Tomography / X-Ray
- X-Ray Fluorescence Spectrometer
- De-Rating

ENVIRONMENT

- Climatic & Temperature Chambers
- Mixed Gas (4 Gases) Testing
- Shock and Vibration Chamber
- Corrosion Tester
- IP Testing
- Bending-Rotation Tester

MANUFACTURING



In our production facility in Frankfurt (Oder) Germany, we manufacture connectors and cable assemblies as well as test contactors on 5,148 m².

DATA NETWORKING PRODUCTION LOCATIONS



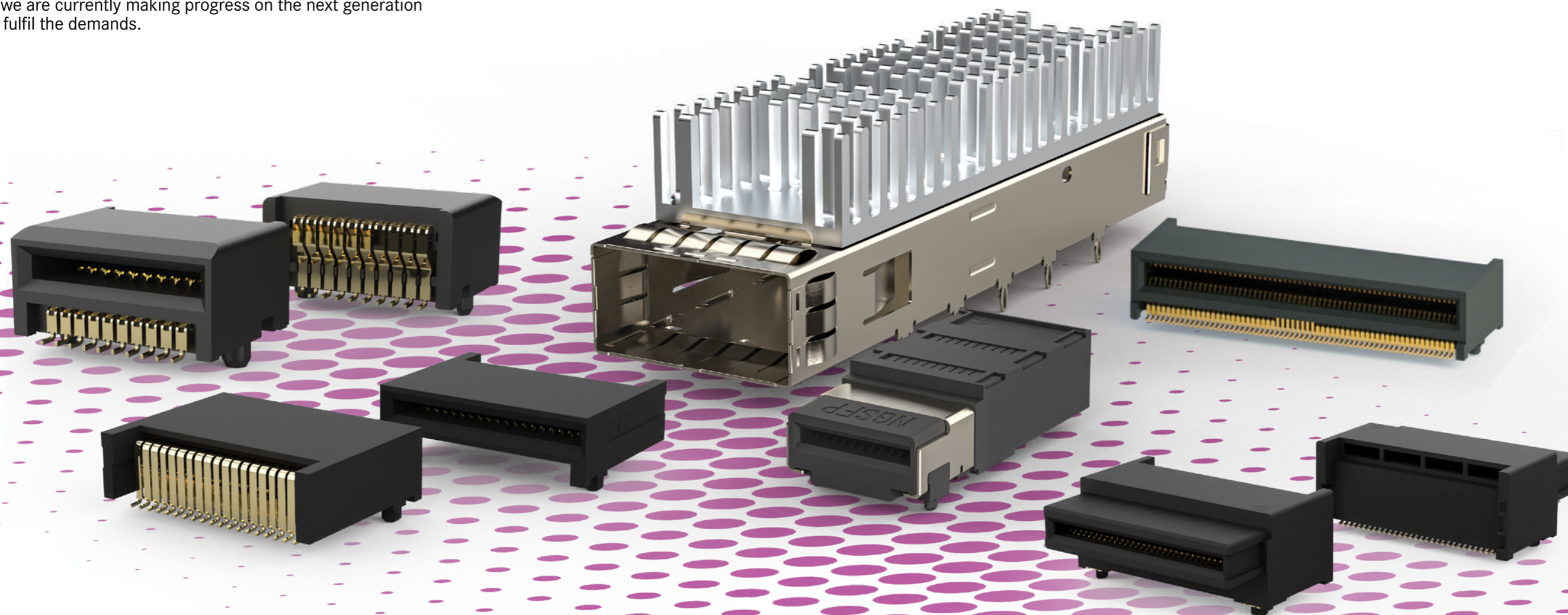
- Philippines
- Japan





As the electronics industry develops rapidly, networks for data communication require high data rates. Yamaichi is a leading company for 112G high-speed connectors. And we are a contributing member of various standardization (MSAs, IEEE, OIF and PICMG). We offer a lineup of high-speed transmission connectors up to 112G compatible with each standard.

Further, we are currently making progress on the next generation 224G to fulfil the demands.



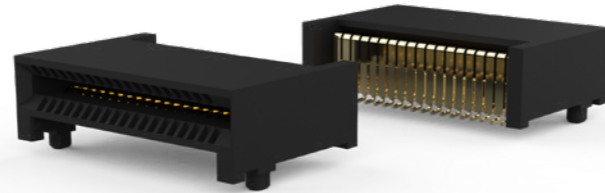


QSFP56 HOST CONNECTOR CN120

The enhanced QSFP+ (eQSFP+) connector and mechanical kit support data rates up to 56Gbps per channel. All products are designed in accordance with the Multi-Source Agreement (MSA).

FEATURES

- High speed up to 28Gbps (NRZ) 56Gbps (PAM4)
- Pitch: 0.8 mm
- Pin Count: 38 Pins
- Compatible with existing QSFP (Infiniband: QDR / FDR / EDR) module
- Fully compatible foot pattern with existing QSFP connector



QSFP112 HOST CONNECTOR CN120

FEATURES

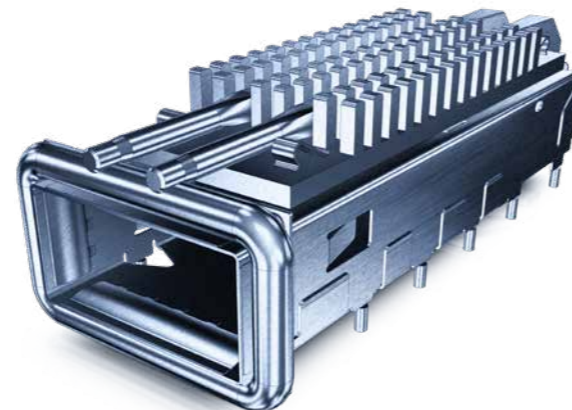
- High speed up to 56Gbps (NRZ) 112Gbps (PAM4)
- Pitch: 0.8 mm
- Pin Count: 38 Pins
- Compatible with existing QSFP (Infiniband: QDR / FDR / EDR) module
- Fully compatible foot pattern with existing QSFP connector



QSFP56 + 112 MECHANICAL PARTS CN120A

FEATURES

- Complies with W7SFF-8683
- Optional single or double light pipes
- Heatsink with 3 different heights (4.2, 6.5 and 13.5 mm)
- Mechanical kit (Style A: Partially available, Style B available)



SFP112 HOST CONNECTOR CN109

The enhanced small form-factor pluggable (SFP+) connector supports data rates at 112Gbps. The design is in accordance with the Multi-Source Agreement (MSA).

FEATURES

- High-speed Up to 112Gbps (PAM4)
- Pitch: 0.8 mm
- Pin count: 20 pins
- Backward compatibility with all SFP modules (SFP, SFP+, SFP28)



DSFP112 HOST CONNECTOR CN109

FEATURES

- High-speed 56Gbps (NRZ) 112Gbps (PAM4)
- Pitch: 0.8 mm
- Pin count: 22 pins
- Compatible with existing SPF+ module
- Backward compatibility with all SFP modules (SFP, SFP+, SFP28)



SFP AND DSFP HOST CONNECTOR MECH. PARTS CN109A

FEATURES

- Complies with SFF-8402
- SFP/DSFP have compatibility with SFP mechanical parts
- Single 1x1 Cage is available





QSFP-DD112 HOST CONNECTOR CN174

FEATURES

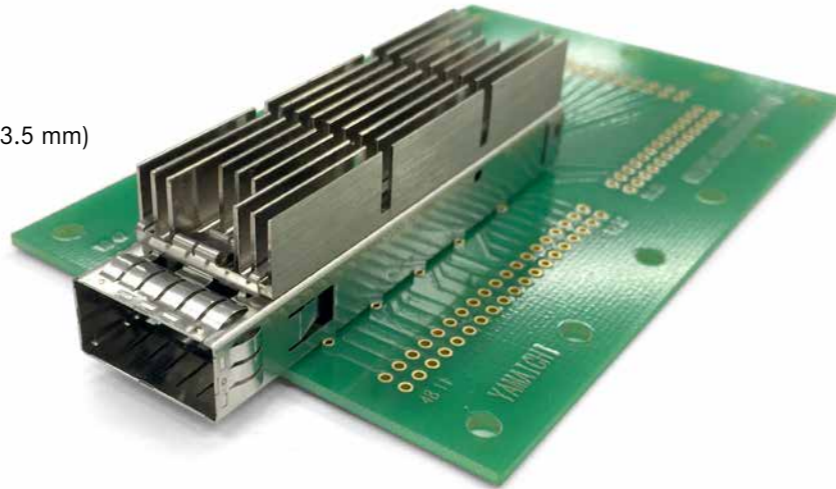
- High speed up to 200Gbps (NRZ) 400Gbps (PAM4)
- Pitch: 0.8 mm
- Pin Count: 76 Pins
- Compatible with existing QSFP (Infiniband: QDR / FDR / EDR) module
- Complies with QSFP-DD MSA standard



QSFP-DD MECHANICAL PARTS CN174

FEATURES

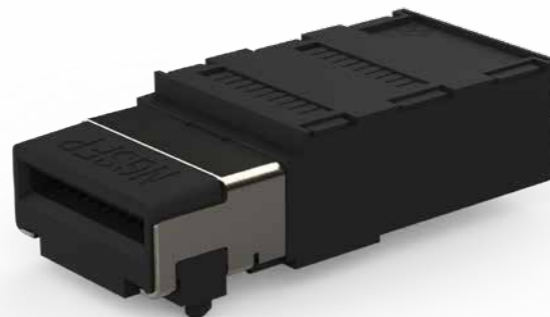
- Complies with QSFP-DD MSA
- Heatsink with 3 different heights (4.2, 6.5 and 13.5 mm)



NGSFP-DD112 HOST CONNECTOR CN109

FEATURES

- Transmission performance: PAM4 400G (112G x 4ch)
- Mating compatible to SFP & DSFP modules
- 2 slots on the front and back double the density
- Complies with NGSFP-DD MSA standard



OSFP112 HOST CONNECTOR CN176

FEATURES

- High speed up to 200Gbps (NRZ) 400Gbps (PAM4)
- Pitch 0.6mm
- Supports excellent heat dissipation and is compatible with 200W modules.
- Complies with OSFP MSA



OSFP STACK 112 HOST CONNECTOR CN176

FEATURES

- High speed up to 200Gbps (NRZ) 400Gbps(PAM4)
- Pitch 0.6mm
- SMT specification with high performance is used for the stack type.
- Supports excellent heat dissipation performance and is compatible with 200W modules.
- Complies with OSFP MSA



OSFP MECHANICAL PARTS CN176

FEATURES

- OSFP cage 1x4, 2x1 and 2x4 are available.
- Press fit mounting
- Complies with OSFP MSA





CFP

CFP8 PLUG CONNECTOR CN168

FEATURES

- High-speed transmission: 400G 28 Gbps/ch x 16 ch
- Pitch: 0.5 mm
- PCB thickness: 1.0 mm, and other
- Pin count: 124 pins
- Same size with CFP2, but 4x higher performance
- First connector in the world for 400 Gbps Ethernet



CFP8 HOST CONNECTOR CN168

FEATURES

- High speed transmission: 400 G 28 Gbps/ch x 16 ch
- Pitch: 0.5 mm
- Pin count: 124 pins
- Same size with CFP2, but 4x higher performance
- First connector in the world for 400 Gbps Ethernet



CFP8 MECHANICAL PARTS CN168

FEATURES

- Dual slot: MSA standard
- Complete kit for dual slot requires 1 x dual cage, 1 x dual cover, 2 x heatsink
- Complete kit for single slot requires 1x single cage, 1 x single cover, 1 x heatsink
- Clipless design to fold heatsink
- Optional sealing on bottom of cage for insulation via kapton tape

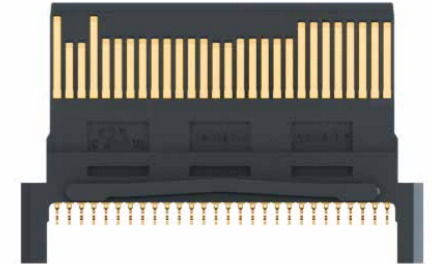


CFP

CFP4 PLUG CONNECTOR CN121

FEATURES

- High-speed transmission: 100 G 28 Gbps/ch x 4 ch
- Pitch: 0.6 mm
- PCB thickness: 1.0 mm, and other
- Pin count: 56 pins
- Dust cap available for EMI protection



CFP4 HOST CONNECTORS CN121

FEATURES

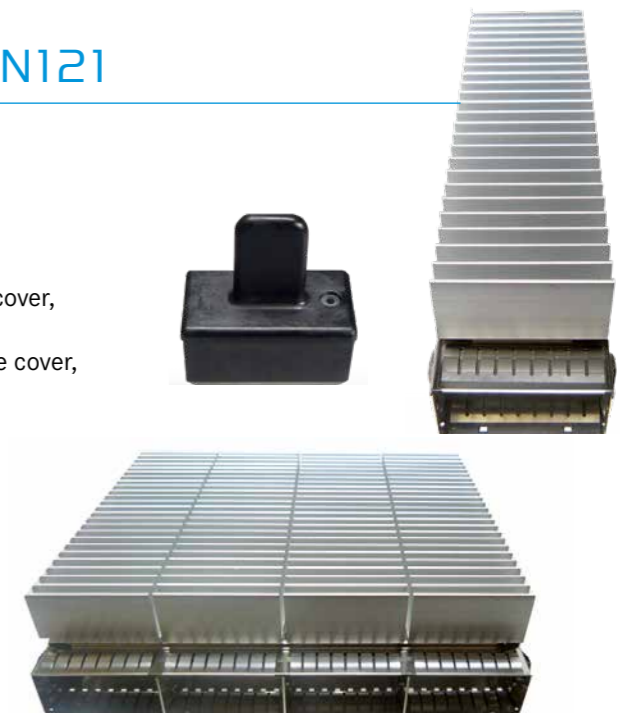
- High speed transmission: 100 G 28Gbps/ch x 4 ch
56Gbps per channel is also available for ACO
- Pitch: 0.6 mm
- Pin count: 56 pins
- Dust cap available for EMI protection
- Plan to launch connector for CFP4ACO (Analog Coherent) module



CFP4 MECHANICAL PARTS CN121

FEATURES

- Quad slot: MSA standard
- Complete kit for quad slot requires 1 x quad cage, 1 x quad cover, 4 x heatsink
- Complete kit for single slot requires 1x single cage, 1 x single cover, 1 x heatsink
- Clipless design to fold heatsink
- Press fit tool available for cage
- Dust cap available for EMI protection



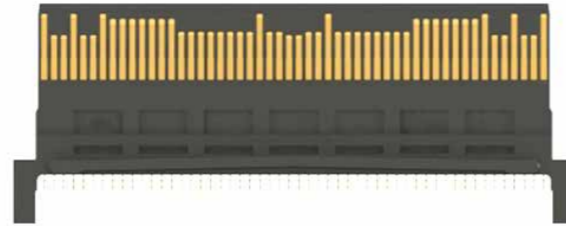


CFP

CFP2 PLUG CONNECTOR CN121

FEATURES

- 2 variations to transmit high speed:
 - 100 G 28 Gbps/ch x 4 ch
 - 56 -64 Gbps per channel is also available for ACO
- Pitch: 0.6 mm
- PCB thickness: 1.0 mm, and other
- Pin count: 104 pins
- Dust cap and dummy module available for EMI protection



CFP2 HOST CONNECTOR CN121

FEATURES

- 2 variations to transmit high speed:
 - 100 G 28 Gbps/ch x 4 ch
 - 56 -64 Gbps per channel also available for ACO and DCO
- Pitch: 0.6 mm
- Pin count: 104 pins
- Dust cap and dummy module available for EMI protection



CFP2 MECHANICAL COMPONENTS CN121

FEATURES

- Dual slot: MSA standard
- Complete kit for dual slot requires 1 x dual cage, 1 x dual cover, 2 x heatsink and 2 x clip
- Complete kit for single slot requires 1x single cage, 1 x single cover, 1 x heatsink and 1 x clip
- Optional sealing on bottom of cage for insulation via kapton tape

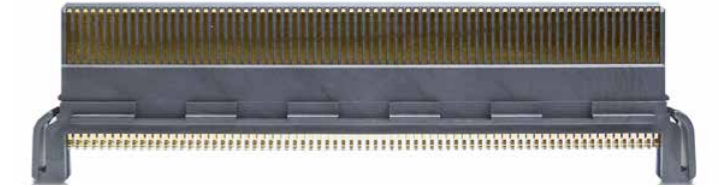


CFP

CFP PLUG CONNECTOR CA009

FEATURES

- High speed transmission: 10 Gbps/ch, (for 40 Gbps/100 Gbps)
- Pitch: 0.8 mm
- Pin count: 148 pins
- Heatsink with thermal interposer available for efficient thermal dissipation



CFP HOST CONNECTOR CA009

FEATURES

- High-speed transmission: 10 Gbps/ch, (for 40 Gbps/100 Gbps)
- Pitch: 0.8 mm
- Pin count: 148 pins
- Heatsink with thermal interposer available for efficient thermal dissipation



CFP MECHANICAL COMPONENTS CA009

FEATURES

- Complete kit requires:
 - 2 x guide rail
 - 1 x cover,
 - 1 x backend plate,
 - 1 x external bracket
 - 1 x heatsink
- Customer must prepare 2 pcs. x 3M screw/each guide rail and cover (total 6 pcs./kit)

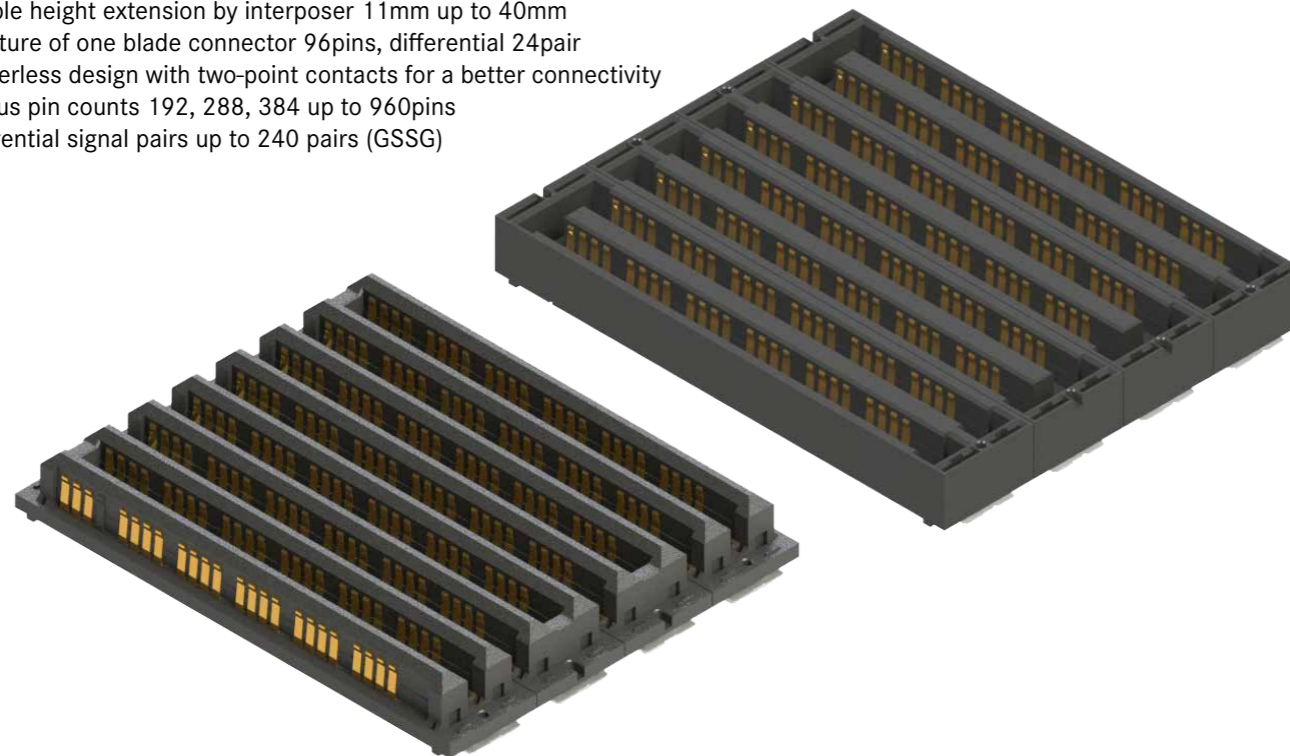


YTM 112 MEZZANINE CONNECTOR

The YTM high-speed mezzanine combines highest density with total modularity and 112G PAM4 data rate. The modular concept allows the widest range of pin count and stacking height variations.

FEATURES

- High speed up to 112Gbps/ch PAM4
- Mating height 5mm-10mm in 1mm increments
- Flexible height extension by interposer 11mm up to 40mm
- Structure of one blade connector 96pins, differential 24pair
- Genderless design with two-point contacts for a better connectivity
- Various pin counts 192, 288, 384 up to 960pins
- Differential signal pairs up to 240 pairs (GSSG)

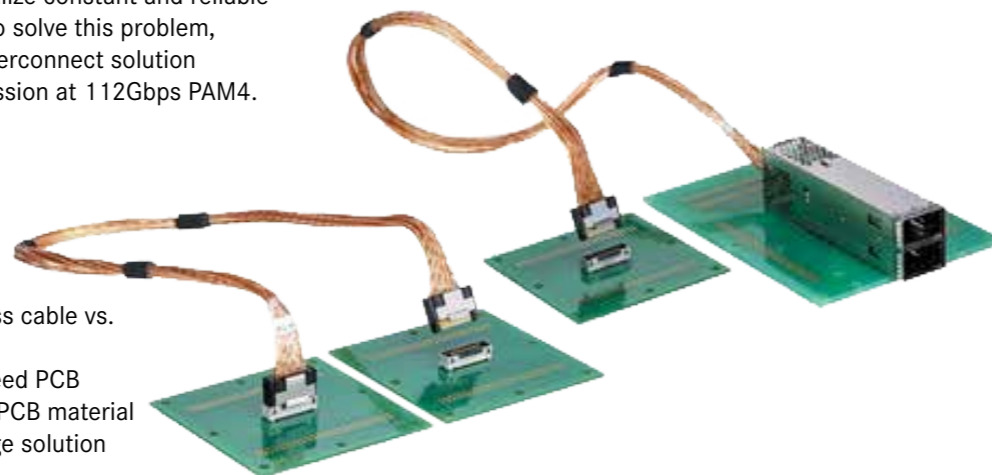


112 JUMPER CABLE

As requirements for data transmission speed is reaching upper limit of existing PCB technologies, It is becoming more difficult to realize constant and reliable data transmission performance. To solve this problem, Yamaichi offers a jumper cable interconnect solution which can perform stable transmission at 112Gbps PAM4.

FEATURES

- Extended signal reach by low loss cable vs. high loss PCB
- Simplifies the design of high-speed PCB
- Relaxes the specification of the PCB material
- Board to board and board to cage solution are available



YFLEX CABLE

YFLEX is a fully customized flexible circuit cable. Yamaichi Electronics designs the layout to meet customer-specific requests such as transmission loss, data rate and dimensions. This cable can support the high-speed transmission requirements of the data networking market.

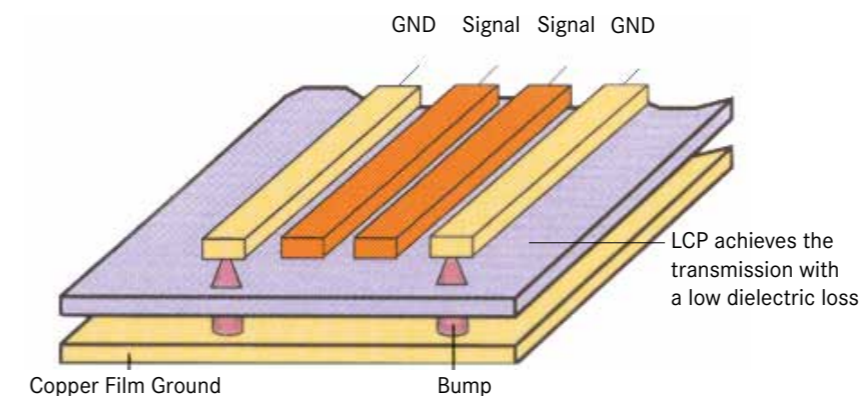
FEATURES

- Available to transmit high-speed in Gbps with low loss
- Effective in the harshest temperature, humidity and EMI conditions
- Customized depending on layout and requirements
- Can match differential impedance

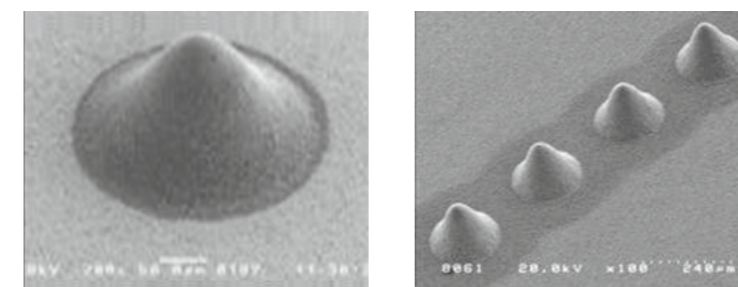


HIGH-SPEED TRANSMISSION STRUCTURE

- LCP achieves transmission with low dielectric loss
- GND and copper film ground are connected with silver bumps which also protect from EMI



CLOSEUP IMAGE OF THE BUMP





HIGH-SPEED DATA NETWORKING

YED-V1-2 | 4

TECHNICAL DATA ARE SUBJECT TO ALTERATION WITHOUT PRIOR NOTICE

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