

Professional Card-edge & I/O Connectors Manufacturer



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Argosy Research Inc.

36 years electrical engineering & 25 years connector business exp.

- IPO in 2004, stock# 3217.TWO
- Capital USD 30M & Revenue USD 95M in year 2023

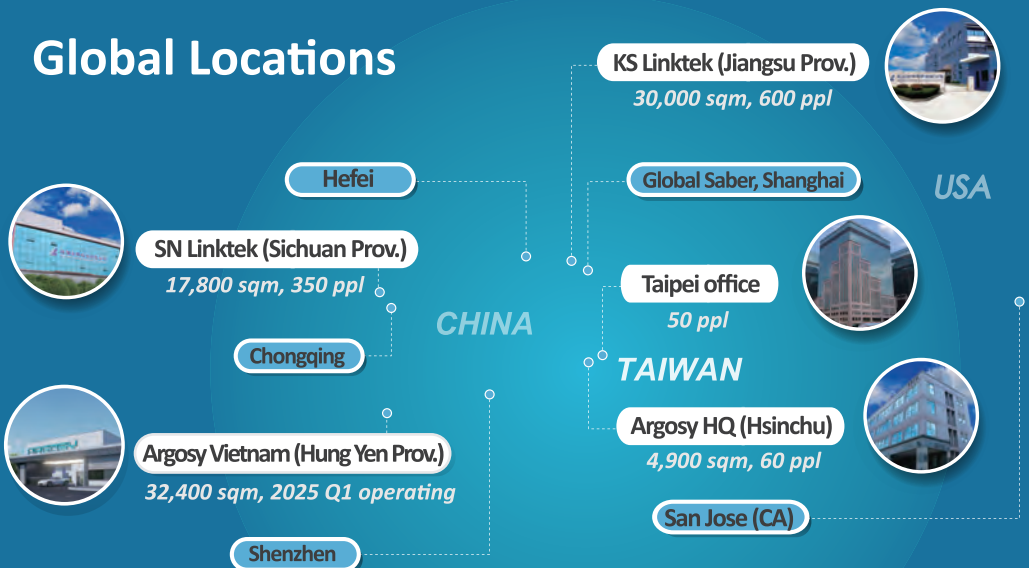
Certificate:

- RBA 7.0 SILVER Status / IATF 16949 / DNB
- Green Factory / ISO 50001 / 14064-1 / ISO 14067
- Electro-Plating License / QC 080000
- ISO 45001 / ISO 14001 / ISO 9001

Milestone:

- HP ranks “No.1 Strategic Supplier” from 2018 to 2023
- DDR & M.2 conn. achieved 50% in global laptop market share since 2021
- KS Linktek awarded as “Green Factory of Jiangsu Prov.” in 2023
- Corp. Governance Evaluation result within 50% among Taiwan listed corp.

Global Locations



LPDDR5 CAMM2 DDR5/4 DIMM DDR5/4/3 SODIMM

JEDEC, EIA, HSF
REACH, RoHS, Halogen Free

NEW

DDR5 R-DIMM

SMT

NEW

LPDDR5 CAMM2

NEW

DDR5 U-DIMM

SMT

NEW

DDR5 SODIMM

DDR4 DIMM

SMT & DIP

Server

Rugged Laptop

Data Center

Industrial PC

APPLICATION

DDR5 RDIMM & UDIMM

DDR4 DIMM (SMT & DIP)

- Join design DDR5 with JEDEC & Intel since 2018
- Signal Integrity performance No.2 by JEDEC in 2019
- High-temp. Warpage performance No.1 by JEDEC in 2020
- Solder joint test “0 % Defect Rate” as No.1 by Server brand in 2021
- Conforms to IPC-A-610 Class 2

Product	Mounting	Pitch	Pins	Spec Mix
DDR5 R/LR DIMM 	SMT	0.85 mm	288	Latch distance: standard/ narrow/ wider; w/ metal bridge Color: black, blue, gray, green, nature, orange, red, yellow Housing: normal/ with metal shell Ejector: single/ double side adjustable
DDR5 UDIMM 	SMT		288	
DDR4 DIMM	SMT	0.85 mm	288	Ejector: standard/ slim type Board lock: hook/ tab/ hybrid Cover: none/ with cover/ with mylar
	DIP			

LPDDR5 CAMM2

- CAMM2 means Compression Attached Memory Module Gen 2
- Join design CAMM2 with JEDEC since 2023
- Passed JEDEC’s Signal Integrity criteria and completed MP in Jan. 2024

Product	Pins	Pitch	Dimension	Spec Mix
CAMM2 	644	1.00 x 1.38 mm	78.0L x 17.0W x 1.0H mm	supply Cover & Back plate

DDR5, DDR4 & DDR3 SODIMM

- Join design DDR5 with JEDEC & Intel since 2018
- Signal Integrity performance No.1 by JEDEC in 2019
- DDR5/4 SODIMM achieved 45-50% global laptop market share 2021-2023

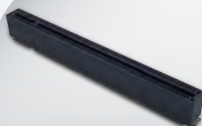
Product	Mounting	Orientation	Pitch	Pins	Spec Mix
DDR5 SODIMM 	SMT	Right Angle, Standard/ Reverse	0.5 mm	262	4.0 / 5.2 / 8.0 / 9.2 mm
DDR4 SODIMM 				260	4.0 / 5.2 / 6.0 / 8.0 / 9.2 mm
DDR3 SODIMM			0.6 mm	240	4.0 / 5.2 / 6.0 / 6.5 / 8.0 / 9.2 mm

PCIE CEM 5.0 M.2 GEN 5/4/3 & M.2-1A MINI PCIE

PCI-SIG, EIA, HSF
REACH, RoHS, Halogen Free



M.2 Gen 5



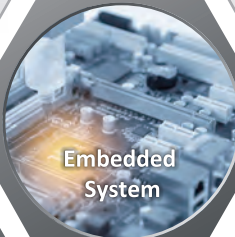
PCIe CEM 5.0



PCIe CEM R/A



Mini PCIe



Embedded
System



Smart Speaker



Server



NAS



Set-Top Box

APPLICATION

M.2 GEN 5/4/3 & M.2-1A MINI PCIE CONNECTORS

- M.2 connectors achieved 50% global laptop market share 2021-2023
- Meet PCIe M.2 spec:
 - Socket 1 Connectivity, applicable A & E key
 - Socket 2 WWAN, applicable B & C key; Socket 2 SSD, applicable B key
 - Socket 3 SSD Drive, applicable M key
- M.2-1A Add-in Card is only compatible with M.2-1A Connector

Product	Mounting	Orientation	Pitch	Pins	Key	Spec Mix
NEW M.2 Gen 5 1A & 0.5A	SMT/ Hybrid	Right Angle Standard	0.5 mm	67	A B E M	1A Top-mount: 2.3/ 3.2/ 4.2/ 6.7/ 8.5 mm
						0.5A Top-mount: 2.3/ 4.2 mm
M.2 Gen 4 1A & 0.5A						1A Top-mount: 2.3/ 3.2/ 4.2 mm
						0.5A Top-mount: 2.0/ 2.65/ 3.0/ 3.2/ 3.5/ 3.65/ 4.0/ 4.2/ 4.8/ 5.0/ 5.8/ 6.4/ 6.7/ 8.5/ 10.0 mm
M.2 Gen 3						0.5A Mid-mount: 1.2/ 1.35 mm
						Top-mount: (same as M.2 Gen 4) Mid-mount: 1.2/ 1.3/ 1.35/ 1.4/ 1.5/ 1.63/ 1.65/ 1.68/ 1.8/ 2.05/ 2.15 mm
Mini PCIe	SMT/ Hybrid	Right Angle Standard	0.8 mm	52		Top-mount: 3.2/ 4.0/ 4.5/ 5.2/ 5.7/ 6.7/ 6.8/ 8.0/ 9.0/ 11.0 mm

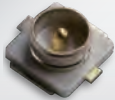
PCIe CEM 5.0 / 4.0 / 3.0

- Meet PCIe 5.0 (32 GT/s) & 4.0 (16 GT/s)

Product	PCB Mounting	Orientation	Pitch	Spec Mix
PCIe 5.0 & 4.0	SMT	Vertical	1.0 mm	Gen 5 x8 (98 Pin), x16 (164 Pin) Housing: normal/ with metal shell/ slim Board lock: SMT/ tab Ejector: without ejector/ with ejector Color: black, cool white, nature *Impedance 85-90Ω available
PCIe 3.0		Right Angle		Gen 3 x8 (98 Pin)

LVDS RECEPTACLE MICRO COAXIAL (RF) SPI FLASH

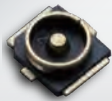
EIA, MID-STD, HSF
REACH, RoHS, Halogen Free



M4



LVDS



M6



SPI Flash



Small Cell



Drone



Car Screen



Satellite
Antenna



Rugged Laptop

APPLICATION

MICRO COAXIAL (RF) RECEPTACLE

- M4 & M6 both conform to MIL-STD-202G

- M4 high-frequency performance

- Frequency: DC ~ 9 GHz

VSWR: receptacle 1.3 max. @ 0.1~3 GHz; 1.4 max. @ 3~6 GHz; 1.8 max. @ 6~9 GHz
plug 1.3 max. @ 0.1~3 GHz; 1.5 max. @ 3~6 GHz; 1.6 max. @ 6~9 GHz

- M6 gives 1.2 mm mated height, suitable for low profile design

- M6 high-frequency performance

Frequency: DC ~ 12 GHz

VSWR: receptacle 1.3 max. @ 0.1~3 GHz; 1.4 max. @ 3~6 GHz; 1.85 max. @ 6~12 GHz
plug 1.3 max. @ 0.1~3 GHz; 1.4 max. @ 3~6 GHz; 1.5 max. @ 6~9 GHz; 1.6 max. @ 9~12 GHz

Product	PCB Mounting	Orientation	Dimension	Pad
M4	SMT	Vertical (Straight)	3.0 x 3.1 x 1.25(H) mm	3 / 4
M6			2.0 x 2.0 x 0.60(H) mm	4

LVDS RECEPTACLE

Product	PCB Mounting	Mated Height	Dimension	Pitch	Pins
LVDS	SMT	2.0 mm	14.6 x 3.36 x 1.4(H) mm	0.5 mm	20
			19.6 x 3.36 x 1.4(H) mm		30
			24.6 x 3.36 x 1.4(H) mm		40
			29.6 x 3.36 x 1.4(H) mm		50

SPI FLASH

Product	PCB Mounting	Orientation	Mated Height	Pitch	Pins
SPI Flash	SMT	Vertical	5.4 mm	1.27 mm	8
			5.8 mm		16

USB TYPE-C RECEPTACLES USB4 & THUNDERBOLT 5/4



USB4 TID & Intel Thunderbolt
EIA, HSF, REACH, RoHS



APPLICATION

USB TYPE-C RECEPTACLE (Top-mount)

- The following USB Type-C connectors are Right Angle orientation, Pitch 0.5mm, 24 Pin
- All pass 10,000 times mating reliability test, and support up to 240W (5A*48V) power

No.	Orientation	PCB Mounting	C/H	Details
FP4	Top-Mount	Dual Row SMT	1.92 mm	● Achieve IPX8 of IEC 60529 after 2 times Reflow
FT2	Top-Mount	Hybrid (SMT+DIP)	1.73 mm	● TID# 5,200,000,235 ● USB 3.2 Gen 2 (10 Gbps)
FT7			1.60 mm	● TID# 5,200,000,726 ● USB 3.2 Gen 2 (10 Gbps)
			2.20 mm	● USB 3.2 Gen 2 (10 Gbps)
FT4		Dual Row SMT	1.57 mm	● Thunderbolt 5/4 certified, part# UCF3T-4TN  Thunderbolt ● USB4 Gen 3 (40 Gbps) certified, TID# 4741  ● 16,000 times mating test ● Support 140W (7A*20V) or up to 240W (5A*48V)
NEW FT8			3.40 mm	● USB4 Gen 3 (40 Gbps) certified, TID# 8100 
FTC			2.00 mm	● Thunderbolt 5/4 certified, part# UCF3T-C2  Thunderbolt ● USB4 Gen 3 (40 Gbps) certified, TID# 7281 
			2.30 mm	● USB4 Gen 3 (40 Gbps) certified, TID# 8132 
NEW FTD			2.25 mm	● USB4 Gen 3 (40 Gbps) under verifying
NEW FTE			2.20 mm	● USB4 Gen 3 (40 Gbps) under verifying

USB TYPE-C RECEPTACLE (Vertical)

- The following USB Type-C connectors are Pitch 0.5mm and 24 Pin
- All pass 10,000 times mating reliability test, and support up to 240W (5A*48V) power

No.	Orientation	PCB Mounting	C/H	Details
FV1	Vertical	Dual Row SMT	13.30 mm	● TID# 5,200,000,775
 FV3			14.00 mm	● USB 3.2 Gen 2 (10 Gbps), TID# 8133
 FV4			15.05 mm	● USB 3.2 Gen 2 (10 Gbps), TID# 7105

USB TYPE-C RECEPTACLE USB TYPE-C PLUG



USB 3.2 with TID certified
EIA, HSF, REACH, RoHS, Halogen Free



USB4
Thunderbolt 5



Screw Lock



Ultra Thin



USB-C Plug



SSD



AR / VR



Smart Speaker



Game Console



Router

APPLICATION

USB TYPE-C RECEPTACLE (Mid-mount)

- The following USB Type-C connectors are Pitch 0.5mm and 24 Pin
- All pass 10,000 times mating reliability test, and support up to 240W (5A*48V) power

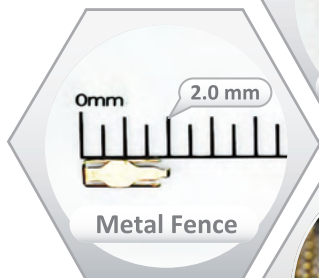
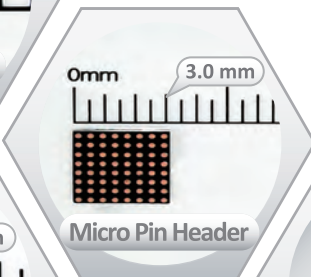
No.	Orientation	PCB Mounting	C/H	Details
FM0	Mid-Mount	Hybrid (SMT+DIP)	-0.50 mm	● TID# 5,200,000,210 ● Thunderbolt 3 (20 Gpbs) by Allion Labs
FM1			0.70 mm	● TID# 5,200,000,418 ● Thunderbolt 3 (20 Gpbs) by Allion Labs
FM2			-0.60 mm	● USB 3.2 Gen 2 (10 Gbps) ● Thunderbolt 3 (20 Gpbs) by Allion Labs
FM4			0.60 mm	● USB 3.2 Gen 2 (10 Gbps)
FMA			-1.22 mm	● USB 3.2 Gen2 (10 Gbps)
FMB			-1.10 mm	● USB 3.2 Gen2 (10 Gbps)
FM3		Dual Row SMT	1.10 mm	● TID# 5,200,000,807 ● USB 3.2 Gen 2 (10 Gbps)
FM5			-0.64 mm	● Thunderbolt 4 certified, part# UCF3M-5  Thunderbolt ● USB4 Gen 3 (40 Gbps) certified, TID# 8182 
FM5-H			-0.64 mm	● USB4 Gen 3 (40 Gbps) certified, TID# 10549
FM6			0.47 mm	● Thunderbolt 4 certified, part# UCF3M-62  Thunderbolt ● USB4 Gen 3 (40 Gbps) certified, TID# 4765 
 FMD			-1.40 mm	● USB4 Gen 3 (40 Gbps) certified, TID# 8303 
 FME			0.5 mm	● USB4 Gen 3 (40 Gbps) certified, TID# 8973 

USB TYPE-C PLUG

- Pass 10,000 times mating reliability test, and support up to 240W (5A*48V) power
- Adopting “Deep Drawing” technology makes the metal shell seamless

No.	Orientation	PCB Mounting	Pins	Details
MC2	Clip Type	SMT Type	Customizable, e.g. 12, 16, 24, etc.	● TID# 4800 ● Support Thunderbolt 3 (20 Gpbs)

MICRO STAMPING for OSAT ODM & OEM CONNECTORS



APPLICATION

MICRO STAMPING for OSAT

Engineering Capability

- Able to process on Copper Alloy, with or w/o plating, thickness 0.06mm min. or $\Phi 0.1\text{mm}$ min.
- Product dimension achieve $<0.08\text{mm}^3$, pitch 0.4mm, co-planarity 0.03 - 0.05mm
- Product packing is applicable to automated SMT assembly for *OSAT, e.g. pick & place

Product	Application
Metal Bar	As EMI Filter in **SiP module
Metal Fence	As EMI Shielding in SiP module
Micro Pin Header	As I/O pin to replace solder ball in ***DSM SiP module

*OSAT= Outsourced Semiconductor Assembly and Test

**SiP= System in Package

***DSM= Dual Side Mounting

ODM & OEM CONNECTORS

● DESIGN

High-frequency Simulation
EMI Analysis
Moldflow Analysis
Tooling Development
Product Verification

● MANUFACTURE

Stamping
Injection
Electro-Plating
Automated Assembly w/ Robotic Arm
- 100% Online CCD Inspection
- Auto-assembly Cleanroom (ISO Class 5)

● INSPECTION

Environmental
Electrical
Mechanical
Appearance

