



ELECTRIC CONNECTOR TECHNOLOG

Document Number:
742740294101

产品规格书

Product Specification

P/N:

742740294101

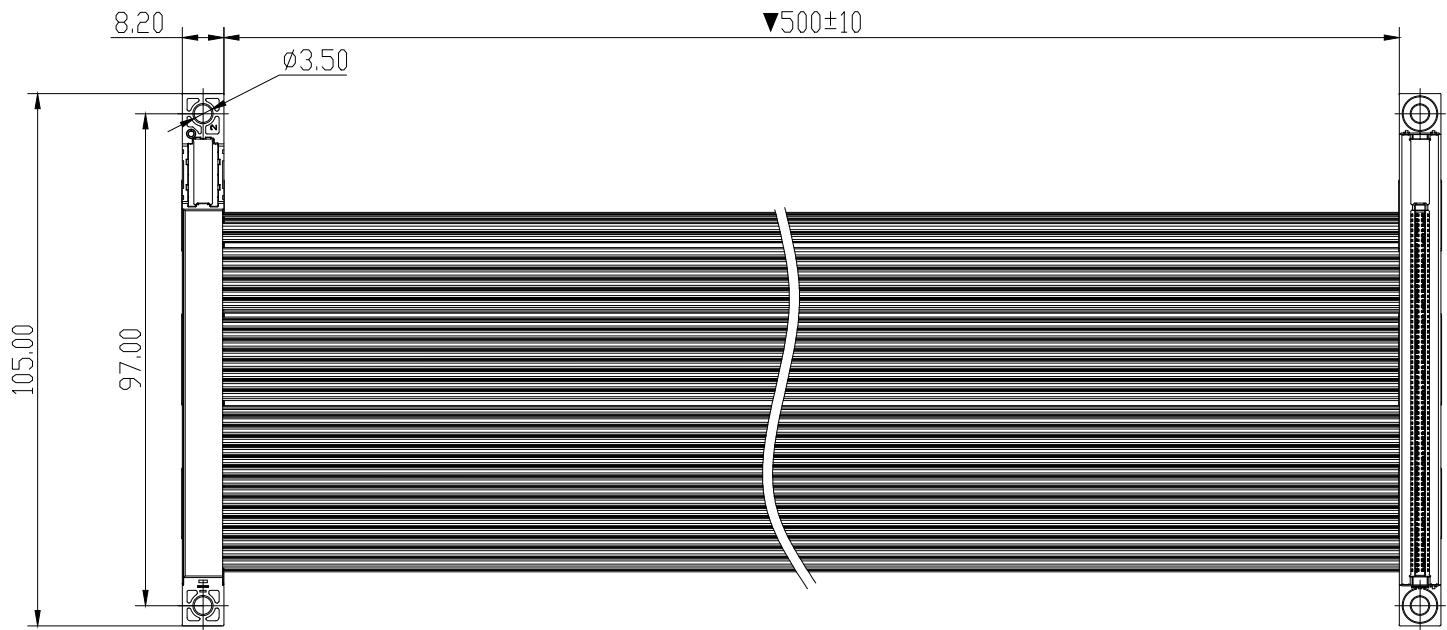
Title :

DA-CEM 6.0 Positive TO DA-CEM 6.0 Reverse

[illegible]

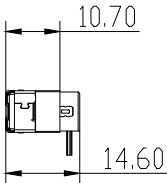
文档密级：
商业秘密

REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECK	APPROVE
X1		INITIAL RELEASE		Li Ang		Steven Lin

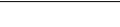


NOTES:

- 产品符合 SFF-1016 的机械尺寸要求
- 该产品满足PCIe6.0 工业标准.
- 焊接区域特性阻抗: $85\pm 10\%$ ohm;Cable区域特性阻抗: 85 ± 5 ohm.
- 产品必须100%进行开路、短路、瞬断及间隙性接触测试.
- 导通阻抗: 3 Ohms MAX.
- 绝缘阻抗: 10M Ohms MIN/300V DC 10ms.
- 标注“▼”的尺寸必须重点检验.
- 有害物质须符合ECT《QE-Q-19-001环境有害物质管理基准》管控标准, 本产品不管控卤素.
- MC10 8X加固版带拉带的弹片到胶壳尺寸▼ 0.35 ± 0.08 100%全检, 详见图纸151-27788-02
- 符合客户Smooth Compute_PCIE 5.0&6.0 Cable设计要求与测试规范V1.1.



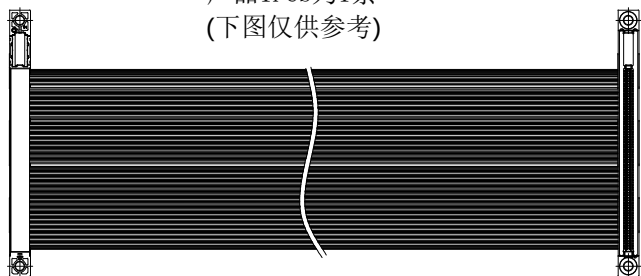
2		PCIE DACEM CONNECTOR	A/R	MM
1		SAS CBL:30P*2C+2EAM, 镀银铜, 85Ω, VW-I, 银, 1H, P6	A/R	MM
ITEM	P/N	DESCRIPTION	QTY	UNIT

	GENERAL TOLERANCE		SCALE:	DRAWN:	DATE:	DWG. NO:	TITLE:	REV.
	XX. ± 5	XX. ° ± 2°	See Drawing	Li Ang		600-2740294-02	DACEM_TO_DACEM_500MM_P6	X1
	X. ± 1	X. ° ± 1°	UNIT: mm	CHECK:	DATE:			PARTS NO. (INTENDED USE):
	. X ± 0.5	. X ° ± 0.5°		APPROVE:	DATE:	742740294101		
	. XX ± 0.25			SIZE: A4				

文档密级：
商业秘密

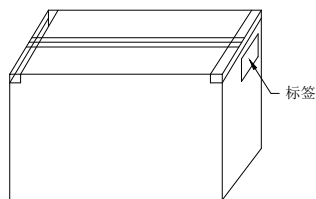
REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECK	APPROVE
X1		INITIAL RELEASE		Li Ang		Steven Lin

产品1PCS为1条
(下图仅供参考)



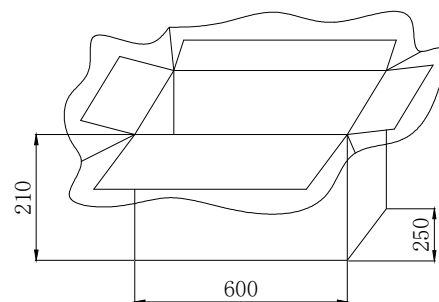
干燥剂

PE 自封袋中放入1PCS产品(参考上图示),再放入干燥剂,排除PE 自封袋中的空气,锁紧袋口,然后装入纸箱。



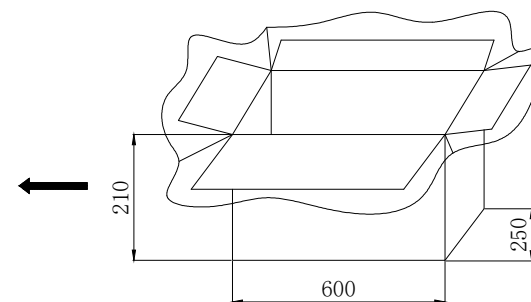
封箱:

- 1、产品*PCS/箱,分2层放,每层*PCS
- 2、箱内空余位置需用泡棉填充
- 3、纸箱封口需严密,成“工”字型
- 4、贴标签的位置依据SOP



纸箱内:

- 1、摆放1层产品,放入2PCS隔板隔开,共计2层产品。
- 2、防水袋收口,然后封箱。



- 1、纸箱尺寸L600*W250*H210mm。
- 2、纸箱内置4个护角、3PCS隔板、防水袋



ELECTRIC
CONNECTOR
TECHNOLOGY

GENERAL TOLERANCE	
XX. ± 5	XX. $^{\circ} \pm 2^{\circ}$
X. ± 1	X. $^{\circ} \pm 1^{\circ}$
.X ± 0.5	.X $^{\circ} \pm 0.5^{\circ}$
.XX ± 0.25	

SCALE:	See Drawing
UNIT:	mm
SIZE:	A4

DRAWN:	
CHECK:	
APPROVE:	

DATE:	
DATE:	
DATE:	

DWG. NO:	551-742740294-02
PARTS NO. (INTENDED USE):	742740294101

TITLE:	DACEM_TO_DACEM_500MM_P6
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REV.	X1
SHEET:	1/1

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1. Scope:

This Product Specification covers the requirement of DA CEM cable assemblies on product performance, test methods and quality assurance provisions

2. Product Application & Features:

The DA CEM cable assembly is designed for in the servers, Data storage, Workstation, etc.

Product Features:

- Provide 164 channels signal transmission as per industry standard.
- Data speed: support PCIE GEN6 64Gbps.
- Meet SPCle_CEM_R5_V1.1_01112023_NCB

3. Ratings:

Voltage Rating:	30 V DC /contact;
Current:	1.1 A /contact;
Insulation Resistance:	100MegaOhm;
Withstanding Voltage:	300V DC 1 minute ;
Durability:	50 cycles

Item	Description	Test Condition	Requirement
1	Initial examination of product	Meets requirements of product drawing. No detrimental condition	EIA-364-18B Visual examination and dimensional inspection per product drawing.
2	Final examination of product	Meets visual requirements. No detrimental condition	EIA-364-18B Visual examination.

4. Electrical Performance

Item	Description	Test Condition	Requirement
4.1	Low Level Contact Resistance	Subject mated contacts assembled in housing to closed circuit current of 100mA (Max) at open circuit voltage of 20 mV voltage (Max).30 mΩ Max. (Initial)	20 mΩ MAX change from baseline
4.2	Insulation Resistance	(EIA 364-21) Testing by applying the specified voltage (DC 100 V) between adjacent contacts for one minute.	100MegaOhm Minimum
4.3	Dielectric withstanding voltage	EIA-364-20 Method B 300 V DC minimum for 1 minute Applied voltage may be product / application specific	No defect or breakdown between adjacent contacts -AND- 0.5 mA Max Leakage Current

5. Mechanical Performance

Item	Description	Test Condition	Requirement
5.1	Insertion force	Measure the force necessary to mate the connector assemblies at a maximum rate of 12.5 mm (0.492 inches) per minute, using a steel gauge 1.70 mm thick with a tolerance +0.00,-0.01 mm.	94.3N MAX
5.2	Removal force	Measure the force necessary to unmate the connector assemblies at maximum rate of 12.5 mm (0.492 inches) per minute, using a steel gauge 1.44 mm thick with a tolerance +0.01,-0.00 mm.	12.3N MIN
5.3	Durability (preconditioning)	EIA-364-09 Perform 50 times mating & un-mating cycle in manual, after test the samples should be no physical damage in visual.	No evidence of physical damage
5.4	Durability	mating & un-mating 50 cycles	No visual damage to mating interface or latching mechanism
5.5	Mechanical Vibration	EIA-364 -28: 5Hz@0.01g ² /Hz 20Hz@0.02g ² /Hz 500Hz@0.02g ² /Hz;Grms=3.1g, 15 minutes in each of 3 mutually perpendicular directions. Before the test, The cable core (GND are not included) be connected in series by the mating test PCB and fixed on test platform. During the test a monitoring current of 80mA DC for each contacts of the series loop to monitor connectivity, should without discontinuity more than 1us, no damage after test.	No damage No discontinuity longer than 1 microsecond allowed 20 milliohms maximum change from initial (baseline) contact resistance
5.6	Mechanical Shock	EIA-364-27, Test Condition A Half-sine shock of 50g, pulses of 11ms duration, 3 shocks in each axis (18 total). The cable core (GND are not included) end to end must be connected become a series circuit by the mating test PCB and fixed on test platform. During the test a monitoring current of DC 100mA maximumfor each contacts of the series loop to monitor the connectivity, should without discontinuity more than 1us no damage after test.	No damage 20 milliohms maximum change from initial (baseline) contact resistance
5.7	Wrenching Strength	Bend cable 90° at minimum bend radius. Pull 25 N Min in each of 4 axis directions for round cable. Pull 25 N Min in each of 2 axis directions for flat cable.	No damage to plug / cable assembly.

6. Environmental Performance

Item	Description	Test Condition	Requirement
6.1	Storage Temperature & Humidity	EIA-364-32 -20°C to +80°C degrees 80% Relative Humidity Method A, Test Condition 1, Duration 4 Use min and max Field Temperatures listed in Table 7-1 for temperature range	Electrical, mechanical and environmental criteria
6.2	Thermal Shock	EIA-364-32, method A, condition I : -55°C to +85°C, dwell 30min, transient 5 min max, perform 5 cycles	Electrical, mechanical and environmental criteria
6.3	Cyclic Temperature and Humidity	EIA-364-31B, Method III without conditioning, initial measurements, cold shock and vibration. Ramp times should be 0.5 hour and dwell times should be 1.0 hour. Dwell times start when the temperature and humidity have stabilized within specified levels, perform 24 cycles in mated condition. 25 °C ± 3 °C at 80 % ± 3% RH and 65 °C ± 3 °C at 50 % ± 3% RH.	Electrical, mechanical and environmental criteria
6.4	Temperature Life (preconditioning)	Mated connectors 65°C field temperature. Temperature: 105 ± 3°C , Duration: 96 hours	Electrical, mechanical and environmental criteria
6.5	Thermal Disturbance	EIA-364-1000 Cycle the connector between 15 ± 3 °C and 85 ± 3 °C, as measured on the part. Ramps should be a minimum of 2 °C/minute. Dwell times should ensure that the contacts reach the temperature extremes (a minimum of 5 minutes), humidity is not controlled; perform 10 cycles in mated condition.	Electrical, mechanical and environmental criteria
6.6	Thermal cycling	Cycle the connector or socket between 15 °C ± 3°C. and 85 °C ± 3 °C, as measured on the part. Ramps should be a minimum of 2 °C per minute, and dwell times should insure that the contacts reach the temperature extremes (a minimum of 5 minutes). Humidity is not controlled. Perform 500 such cycles.	Electrical, mechanical and environmental criteria
6.7	Mixed flowing gas (mated)	Half the samples mated for 240 hours, 10 days	Electrical, mechanical and environmental criteria
6.8	Contact Current Rating	EIA 364-70 method 2 The sample size is a minimum of three mated connectors. The sample shall be soldered on a board with the appropriate footprint. Wire the nine power pins (B1, B2, B3, A2, A3, B8, A9, A10, and B10) and the nine nearest ground pins (A4, B4, B7, A12, B13, A15, B16, B18, and A18) in a series circuit. The mated Add-in Card is included in this circuit. The Add-in Card shall have 1 oz. copper traces and its mating	

geometry shall conform to the applicable PCI Express drawings. A thermocouple of 30 AWG or less shall be placed on the card edge-finger pad (pins B2 and A9) as close to the mating contact as possible. Conduct a temperature rise vs. current test.
1.1 A per pin minimum
The temperature rise above ambient shall not exceed 30 °
C. The ambient condition is still air at 25 ° C.

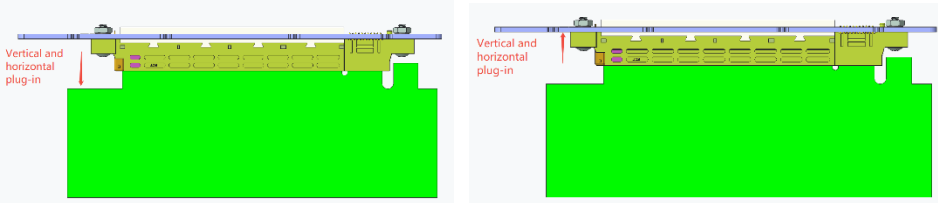
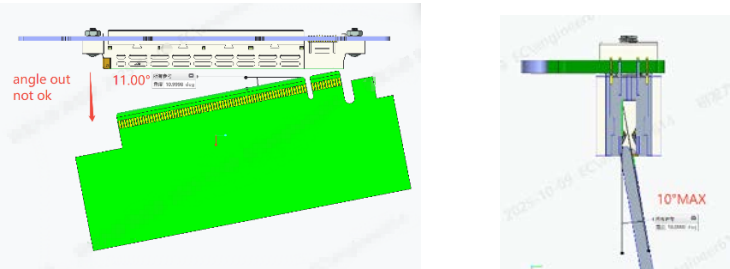
7. High frequency Performance

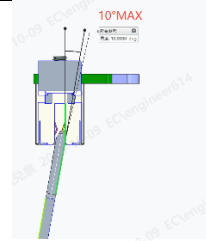
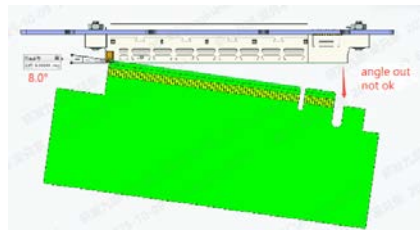
7.1 PCIE 6.0:

ITEM	PCIE6.0
Impedance	85±10%
Rise time	15ps(20%~80%)
SDD21/SD12	-2.0-0.3125*f for 0Ghz<f<=16Ghz 1.0-0.5*f for 16Ghz<f<=24Ghz.
SDD11/SDD22	-25+0.625*f for 0Ghz<f<=16Ghz -35+1.25*f for 16Ghz<f<=24Ghz+ PS:如果 SDD11/SDD22 Fail, 产品测试结果需<=iRL Spec
NEXT	PSNEXT: --60+0.4166667*f 0Ghz<f<=24GHZ PS:如果 PSNEXT Fail, 产品测试结果需<=ccICN_NEXT Spec
FEXT	PSFEXT: --50+0.4166667*f 0Ghz<f<=24GHZ PS:如果 PSFEXT Fail, 产品测试结果需<=ccICN_FEXT Spec
Effective Intra-Pair Skew	3ps Max.
Lane-to-Lane Skew	200ps Max
iRL	iRL≤-30dB Max (Trise=25ps)
ccICN_NEXT	≤200μV
ccICN_FEXT	≤200μV

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8. Usage Precaution 使用禁忌或注意事项

No	Items 项目	Matter 事项
8.1	Connection/ disconnection of connectors 连接器的连接 和断开	a) Before mating the male and female connectors, make sure both are aligned horizontally and vertically, and insert until reaching the stop position, indicating that they are fully mated together. Do not insert the connector at a severe angle. b) When disconnecting, try to pull the male connector straight along the axis of the mating opening until both are completely separated. a)公母头连接器进行配合前，务必确保两者水平竖直对齐，对插到死点位置为止，表示两者已完全配合在一起，不要以极偏的角度插配连接器。 b)断开时请尽量沿配合开口的轴向方向水平竖直拔起线端公头直至两者完全脱离为止。
		
8.2	Precautions 禁忌	a) When inserting the wire-end connector into the female socket, it should be inserted straight. The vertical angle at the power end should not exceed 11.0°, and the vertical angle at the non-power end should not exceed 8.0°; otherwise, it may damage the connector. b) When pulling out the connector, it should be pulled out vertically. The vertical angle at the power end should not exceed 11.0°, and the vertical angle at the non-power end should not exceed 8.0°; pulling at an angle may damage the connector. a)线端连接器插入母插座时，应直插，电源端垂直角度不大于 11.0°，无电源端垂直角度不大于 8.0°；否则会损坏连接器。 b)拔出连接器时，应沿垂直方向拔出，电源端垂直角度不大于 11.0°，无电源端垂直角度不大于 8.0；斜拉可能损坏连接器。
		



8.3

Instructions for
use
使用说明

a)Precautions for expansion cards with power consumption exceeding 75W: For expansion cards with auxiliary power connectors, please follow the PCI Express specifications to help ensure proper configuration of the add-on cards. For detailed documentation, please refer to 《PCIe_CEM_R5_V1.1_01112023_NCB》.

a)功耗超过75W的拓展卡的注意事项，辅助电源连接器的拓展卡请遵循PCI Express规范，以帮助确保附加卡的正确配置，详细文件请参考《PCIe_CEM_R5_V1.1_01112023_NCB》

8.4

Stockpile
condition
存储条件

Use this product within 6 months after receipt
Condition : Temp: -10~+40°C Humidity:15~85%
有效期：请在产品接收后的 6 个月内使用
存储环境：温度:-10~+40℃； 湿度:15%~85%

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9. Test Sequence and Sample Quantity/测试顺序及样品数量

Test Item 测试项目	A	B	C	D	E	F		
Examination of product	1,	1	1	1	1	1		
Insulation Resistance		3						
Dielectric withstanding voltage		4						
Low Level Contact Resistance	2	2	2,4,6	2,4,6,8	2,4,6	2,4		
Durability(preconditioning)								
Insertion force		5						
Removal force		6						
Durability	3							
Retention								
Wrenching Strength								
Mechanical Shock			3					
Vibration			5					
Temperature Life					3			
Temperature Life (preconditioning)			7					
Thermal Shock				3				
Cyclic Temp and Humidity				5				
Thermal Disturbance								
Thermal cycling				7				
Mixed Flowing Gas					5			
Cable Assembly Double 85 test								
Contact Current Rating						3		
SDD21/SDD12	4	7	8	9	7	5		
Rise time	5	8	9	10	8	6		
SDD11/SDD22	6	9	10	11	9	7		
FEXT/ NEXT	7	10	11	12	10	8		
Final examination of product	8	11	12	13	11	9		
Sample QTY(PCS)	3	3	3	3	3	3		
The number of group is test sequence 测试分组中的序号为试验顺序.								