



虹冠電子

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產品應用領域:

個人電腦、室內與室外照明設備、
雲端伺服器、戶外電子看板、LCD TV



股票代號Code:3257

<http://www.championmicro.com.tw>



虹冠電子工業股份有限公司 Champion Microelectronic Corp.

2017年法人說明會 2017 Investor Conference

Chairman Sandy Peng Spokesman
President Haiping Dun PhD.

October 5, 2017



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Safe Harbor Statement

- Champion's statements of its current expectations are forwardlooking statements subject to significant risks and uncertainties and actual results may differ materially from those contained in the forward-looking statements.
- Except as required by law, Champion undertake no obligation to update any forward-looking statement, whether as a result of new information, future events, or otherwise.

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Brief Introduction

- Founded : Dec. 30, 1998 (19 years)
- IPO : Mar. 21, 2011(6 years)
- Chairman : Sandy Peng
- President : Dun, Hai-Ping Ph.D.
- Product: AC-DC power management analog IC design
- Capital : NT693,803 thousand (@30.5 = USD 21,161 thousand)
- Location :
 - Headquarter : Hsinchu, Taiwan
 - 5F, No. 11, Park Ave. 2, Science-Based Industrial Park Hsinchu, Taiwan
 - Taipei Office
 - 21F., No.96, Sec. 1, Sintai 5th Rd., Sijhih Dist., New Taipei City, Taiwan
 - US Office
 - 960 Saratoga Ave, Suite #125, San Jose, California, USA



Management Team

Item	Title	Name	Education	Experience
1	Chairman	Sandy Peng	E.M.B.A., National Chiao Tung University M.B.A., Saginaw Valley State University USA	Independent Director, Remuneration committee member, Audit Committee, Avison Inc. Director, GoMax Electronics, Inc. Director, HC Photonics
2	President	Dun, Hai-Ping	Ph. D., M.S.E., Stanford University USA B.S., PHY., National Taiwan University	Intel CTO IBM Senior RD engineer
3	C. T. O.	Jeffrey Hwang	M. S., SanJose University USA	Micro Linear Telecom Semi National Semi
4	V.P. of Operation dep.	Dragon Lin	M.S., I.E.M., National Chiao Tung University	UTAC Corp.
5	V.P. of Application & Sale dep.	Elvis Lin	M.S., GIEE, National Cheng Kung University	Champion Microelectronic Corp.
6	Finance & Accounting senior manager	Rebecca Chen	M.B.A., Chung Yuan Christian University	Champion Microelectronic Corp.

Board of Directors

Item	Title	Name	Education	Experience
1	Chairman	Sandy Peng	E.M.B.A., National Chiao Tung University M.B.A., Saginaw Valley State University USA	Independent Director, Remuneration committee member, Audit Committee, Avison Inc. Director, GoMax Electronics , Inc. Director, HC Photonics
2	Director	David Liu	M.S., E.E., National Chiao Tung University B.S., Electrophysics, National Chiao Tung University	Vice Chairman, Rectron Electronic Enterprises, Inc. Chairman, Leadtek Research Inc. Supervisor, Avison Inc. Chairman, Champion Microelectronic Corp.
3	Director	Dun, Hai-Ping	Ph. D., M.S.E., Stanford University USA B.S., PHY., National Taiwan University	Intel C.T.O. IBM Senior R.D. engineer
4	Director	Chen, Tung-Yang	B.S., M.E., National Kaohsiung University of Applied Sciences	Chairman, WH investment Ltd. Director, HC Photonics
5	Director	Ke, Ba-Xi	B.S., M.E., National Taiwan University of Science and Technology	Chairman, Taiwan Association of Machinery Industr Chairman, Avid Electronics Corp. Chairman, Kwang Dah Enterprise Co., Ltd. Director, Mospec Semiconductor Corp.
6	Director	Echo Yu	Lawrence Technology University Master of Science in Industrial Operation	Adm. Manager, Game Flier International Corp. Fin. & Adm. manager, Soft-World International Corp. Cost Div. Associate V.P, Ritek Corp.
7	Director	Will Pan	M.B.A, Economics, Chinese Culture University	V.P, Ritek Corp.
8	Independent Director	Hu, Yaw-Wen	Ph. D., A.P., Stanford University USA B.S., PHY., National Taiwan	Director, Micro Technology Inc. Consultant, Micro Technology Inc.
9	Independent Director	Johnson Yin	Ph.D. Candidate, East China University of Political and Law M.B.A., Leicester University USA B.L., Law, Soochow University	legal & I.P. Div. Associate V.P., Arcadyan Technology Corp.

Board of Supervisors

Item	Title	Name	Education	Experience
1	Supervisor	Eric Kuo	M.B.A., National Taiwan University B.S., D.P.M.E., National Tsing Hua University	Adm. Manager, Avison Inc.
2	Supervisor	Jen Kao	M.S., E.E., Stanford University USA B.S., GIEE, National Chiao Tung University	V.P. Fairchild V.P. VLSI Technology
3	Supervisor	James Chen	M.B.A., Okla Homa City University	Manager, TC Bank

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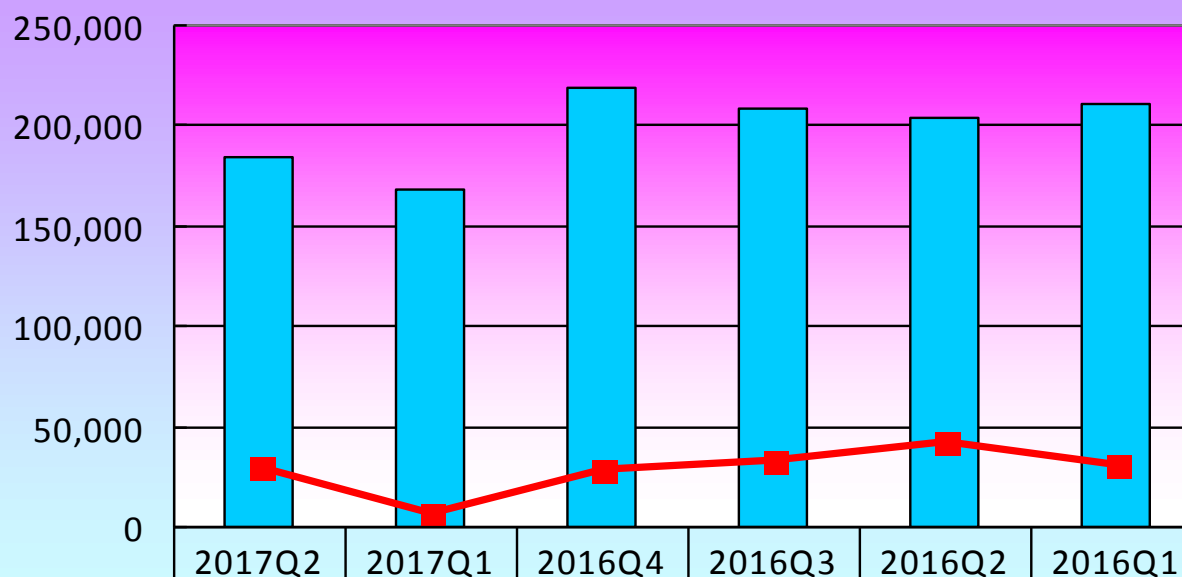


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2017 Q2 Revenue & Income Before Tax

Revenue (In NT\$ thousand)

Income Before Tax



Revenue	2017Q2	2017Q1	2016Q4	2016Q3	2016Q2	2016Q1
Income before tax	2017Q2	2017Q1	2016Q4	2016Q3	2016Q2	2016Q1

Revenue : 2017/Q2 184,576 thousand , 2017/Q1 168,591 thousand ; **QoQ 9.48%**
Income Before Tax : 2017/Q2 30,045 thousand , 2017/Q1 7,435 thousand ; **QoQ 304%**

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2017 H1 Income Statements

In NT Thousand

Item/Year	2017Q2	2016Q2	2017 H1	2016 H1
Revenue	184,576	204,440	353,167	415,260
Gross Profit	90,120	108,339	162,691	210,151
Gross Margin	49%	53%	46%	50%
Operating Expenses	66,616	71,744	119,806	138,354
Operating Expense Ratio	36%	35%	34%	33%
Operating Income	23,504	36,595	42,885	71,797
Net Non-Operating Income	6,541	6,172	(5,405)	1,916
Income before tax	30,045	42,767	37,480	73,713
Net Income	33,502	50,620	37,304	75,385
EPS (NT\$)	0.51	0.78	0.57	1.17
Capital	651,457	600,421	651,457	600,421
Book value per share	24.28	25.96	24.28	25.96

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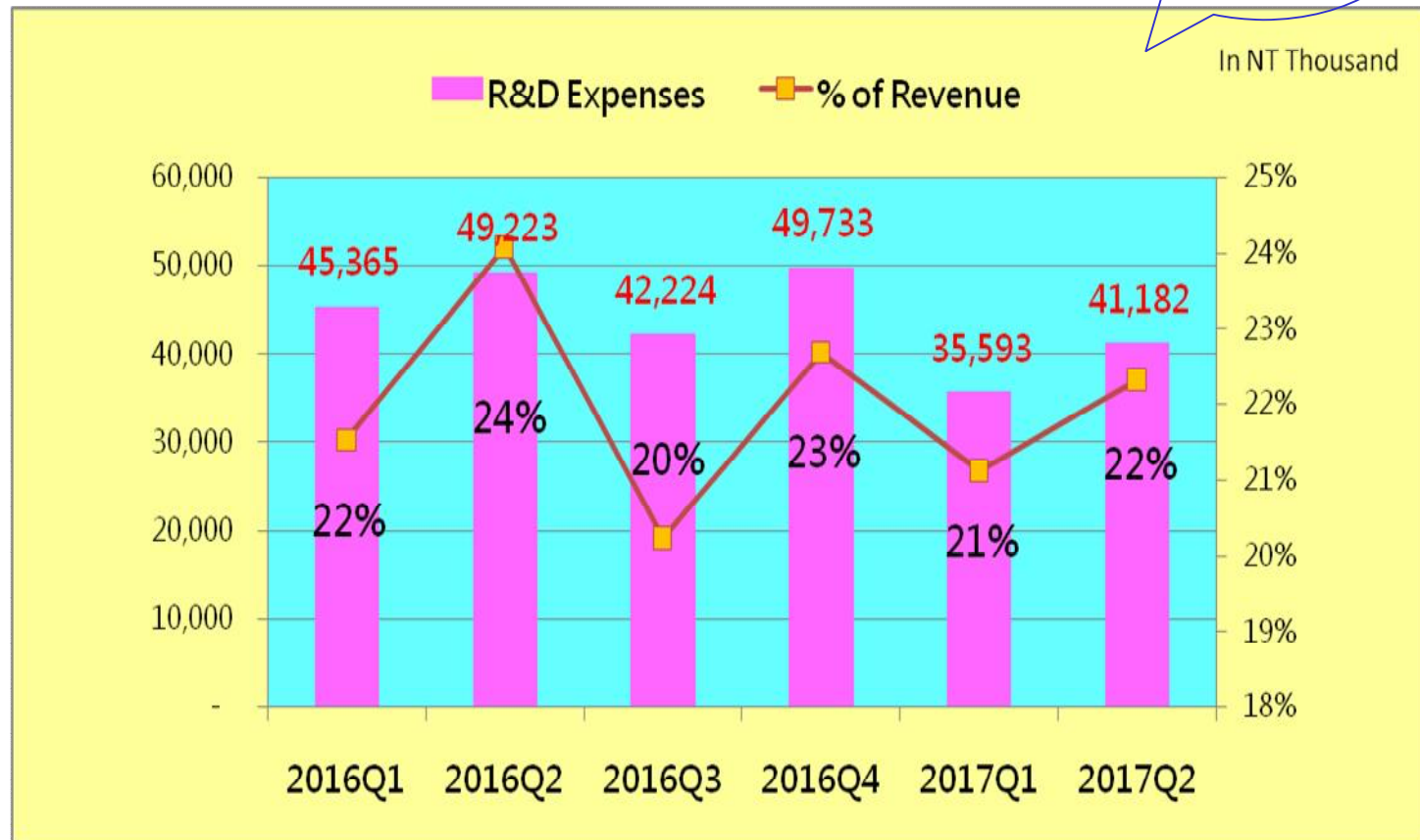


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R&D Expenses & %

QoQ:16%
YoY:-19%



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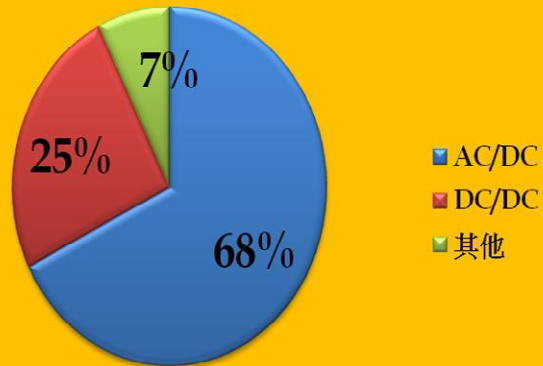


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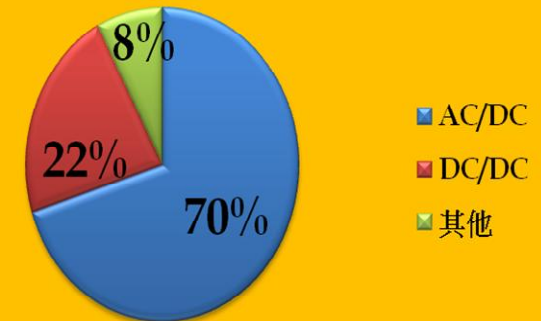


2017 H1 年 vs. 2016 H1 Revenue by Product

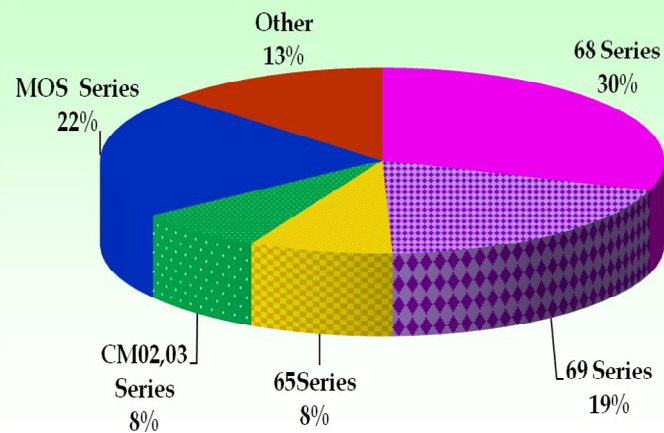
2017 H1 AC/DC vs. DC/DC Revenue Ratio



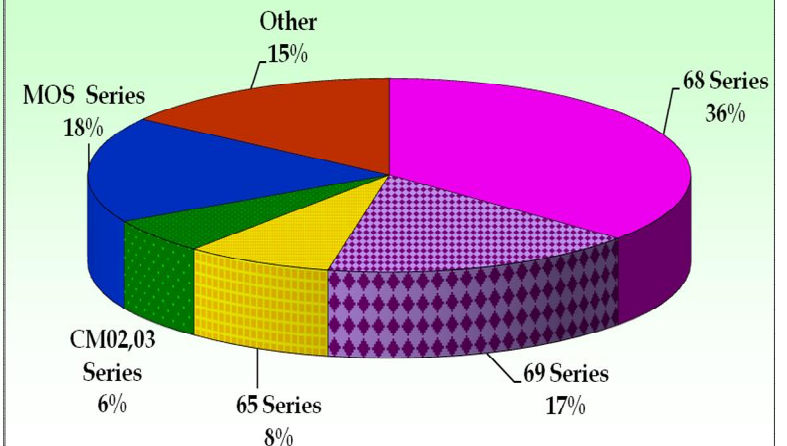
2016 H1 AC/DC vs. DC/DC Revenue Ratio



2017/H1 by Product Revenue Ratio



2016/H1 by Product Revenue Ratio



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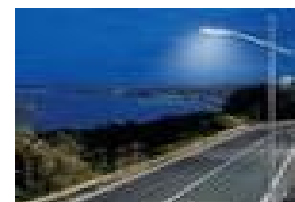
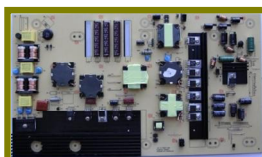


Product Applications



LCD TV

CM6807:PFC+standby-by
CM6900/01:HB/FB Resonant
converter



LED Street light / 顯示屏.....

CM6807:PFC+standby controller
CM6901:For 150W~220W HB Resonant converter



PC Computer

CM6800:Combo PFC+PWM
CM6802:Combo PFC+PWM
CM6805:Combo PFC+PWM
CM6502:PFC controller
CM6901:HB/FB Resonant converter
CM02/03:Switching controller
CM11.6:Standby controller



Gaming Power

CM6500/02:PFC controller
CM6901:HB/FB Resonant converter , X-Box



Cloud Computing Server Power

CM6565:Interleaving DCM PFC
CM6502:PFC controller
CM6901:HB/FB Resonant converter
CM02/03:Switching controller
CM11.6:Standby controller

Products Roadmap

CM6800:16Pin PFC+PWM COMBO	CM6568:ZVS Like DCM+CCM PFC controller	HPFAN	True no standby	◇ Develop Stage
			PFC:CU6502V	
CM6805:10 Pin PFC+PWM COMBO	CM6802:ZVS-Like PFC+PWM COMBO	CM03	S.L.S:CU6901V	
			CMRRIO4	
CM6808:ZVS-like triple Combo PFC+PWM+Standby	CM6901:SRC/LLC+SR	CM02		◇ CUDRFB
	CM6502:CCM Single PFC	PFC Diode Family		◇ CUSR100
				◇ CUSR45
			SJ MOSFET G1	
		HV-Planner MOSFET	SJ MOSFET G2	
			◇ SPT LV MOSFET	

Active PFC Solution:

CM6805 family:

10 pin Passive PFC to Active PFC, PFC/PWM combo controller

CM6800 family:16 pin PFC/PWM combo controller

EPA for efficiency between 82 85 82 to 85 89 85 :

CM6802 family: 80++ ZVS-Like PFC/PWM controller, pin to pin with CM6800A (for higher efficiency and smaller 380V capacitor)

EPA for efficiency from 88 92 88 to 91 94 90 :

CM6901: Secondary side SLS, SRC/LLC+SR controller (Now)

CM6565S: 16 pin 2 Phase ZVS-Like Interleaved PFC controller with Clean Digital AC Brown Out

CM6502T: 14 pin Single ZVS-Like PFC with Adjustable and Long Line Sagging Delay + Clean Digital AC Brown Out

HPFANG+/-: 8 pin High Efficiency Fan Controller

CM03/02: 8 pin Reduce No Load/3 x High Voltage Switches/CM02:EMI Cap. discharge IC

CM6568: 16 pin Single ZVS-Like

CCM PFC Diode Series

HV Planner Mosfet 500V-800V series

HV SJ MOSFET G1

HV SJ MOSFET G2

CU6502V:PFC controller include high voltage start. Application in no standby system

CU6901V:SRC/LLC+SR controller with kick function

CUDRFB:QR+ZVS flyback

CUSR100/45: 2ND SR with MOSFET

2008~2013

2014

2015

2016~2017



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Product Technology Advantages

- Power Control IC:

- Champion's R & D team is in Silicon Valley for long time, COO & CTO, Jeffrey, dedicated to research power IC, for industrial technology, international manufacturers technical specifications and application of material characteristics & high degree of control.
- Power supply leader

Power requirements required for the optimization and development of the structure, not for me too products, lead the international manufacturers

- Such as the PC market .. 6802 combo series to obtain 80+ certification is TOP. 1 in the filed.
- Such as the PC market ... resonant low-power power supply this control IC, to obtain 90 + certification is Top 1 in the filed.
- The new DR.FB QR-ZVS architecture is based on more compact / efficient all-in-one power solution

- IC design technology

- Design team have more than 30 years experience, Champion provide high stability / power efficiency specifications, all-round optimization of the control IC by the power structure

- Power discrete :

- Power discrete process technology led by DR.Dun, super Junction MOSFET, performance, CP value is better than foreign manufacturers, with IC applications, Champion provide Total Solution, not limited to foreign manufacturers, Champion is leadership in the field.

- On-line Trimming:

- For coming High-precision product control generation :

Timely introduction of advanced equipment to quickly improve product yield, real-time supply with market demand

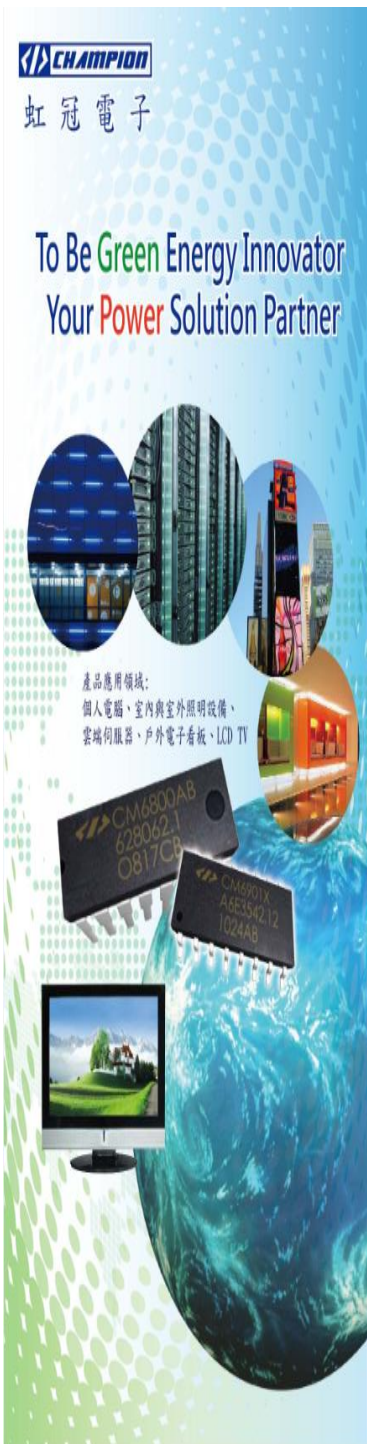
- Set up laser trimming:

It's to enhance the yield of new products and product gross margin main key.

- Learning curve overcomes:

Laser Trimming less talent, need to training by ourselves, from 2013y to 2017y, Champion has R & D the core key technologies, according to research institutions, Ultramobiles, NB for energy-saving demand for the original desktop PC market 10 times the future with the scale of operation of the amplification, may lead to the future demand for Laser Trimming,

Champion's core technology will be quickly applied to the expansion of equipment, the new benefits will gradually appear in the feature.



Product Development and Application

虹冠電 Champion	2011	2012	2013	2014	PFC+PWM Combo CM68xx		PFC+PWM Combo CM68xx		2017	2018	2019
					PFC(CM65)+Resonant architecture(CM69) High efficiency product fermentation		PFC(CM65)+Resonant architecture(CM69) High efficiency products are flat				
					PFC+PWM Combo Product prepared		PFC (CU65)+Resonant architecture(CU69)+CMRRIO4 High efficiency product fermentation				
							Power Discrete have poured				

- By the past Champion's product line only focus on the PC application, resulting in 2015Y revenue decline
- However, Champion adopted a decentralized regional and decentralized product application strategy, the Champion's revenue decline rate is less than the degree of industrial recession
- ✓ In decentraliz areas, increased the sales proportion in China
- ✓ In decentraliz products, extend the application of products to the gaming NB, mining machines, machine tools, IPC and electric car charging applications
- ✓ The conclusion above, operating from the impact of a substantial decline in the industry
- New opportunities:
 - ✓ Diversification of the game and VR / AR i, power consumption increased significantly, relatively driven by high demand for new applications
 - ✓ USA , California, Europe and many countries follow the energy efficiency to take mandatory regulations rules

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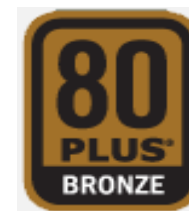
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節能減碳

綠色科技

的 領航先驅



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CM6800AB
628062.1
0817CB

CM6801X
A6E3542.12
1024AB

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Thank You For Your Attention

