

旺矽科技股份有限公司 6223.TT

免責聲明

The information herein contains forward-looking statements. We have based these forward-looking statements on our current expectations and projections about future events. Although we believe that these expectations and projections are reasonable, such forward-looking statements are inherently subject to risks, uncertainties and assumptions about us, including, among other things: the intensely competitive Semi-conductor, and LED industries and markets; Cyclical nature of the semiconductor industry; Risks associated with global business activities; General economic and political conditions. All financial figures discussed herein are prepared pursuant to IFRS. All audited figures will be publicly announced upon the completion of our audited process.

MPI 部門

Since 1995



Probe Card

Since 2001



Photonics Automation

Since 2014



Advanced Semiconductor Test

Since 2015



Thermal Test









Since 2021



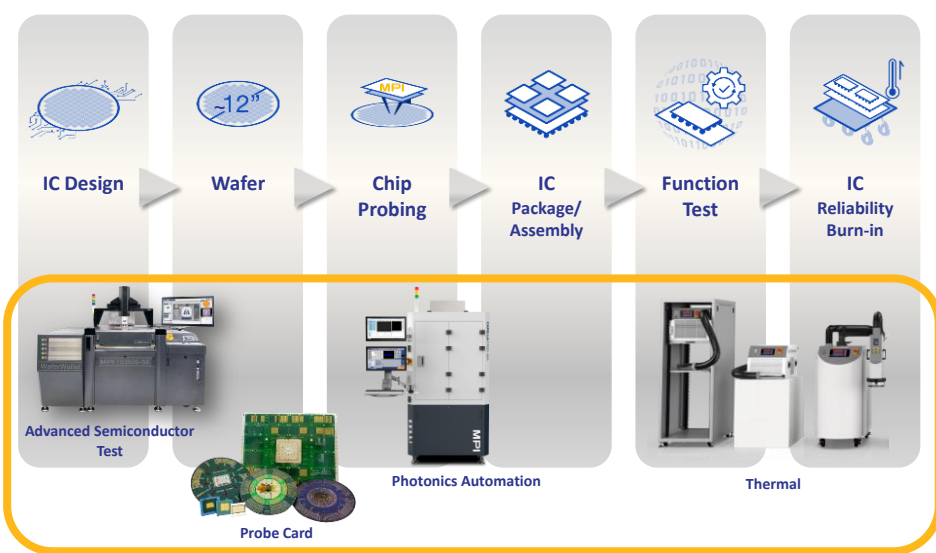
Celadon Systems

MPI 全球駐點



Worldwide				Taiwan			
							
MPI America CA, USA (2017)	MPI Suzhou Jiangsu, CN (2017)	Celadon Systems MN, USA (2021)	Headquarters Hsinchu, TW (2000)	Luzhu Office Kaohsiung, TW (2006)	2 nd Production Site Hsinchu, TW (2012)	Xinyu Office Hsinchu, TW (2014)	3 rd Production Site Hsinchu, TW (2021)

MPI-卓越的測試解決方案



議程



Business Contents

- Probe Card
- Photonics Automation
- Thermal & AST



Financial Statements

MPI CORPORATION

半導體事業部
(探針卡)

READY FOR THE TEST™

MPI Probe Card

Advanced Wafer Sort Test Solutions

Vertical / MEMS Probe Card

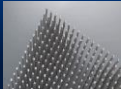
Cantilever Probe Card



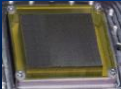
Features



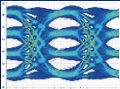
Fine Pitch



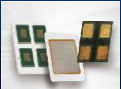
MEMS



High Pin Count



High Speed



Substrate



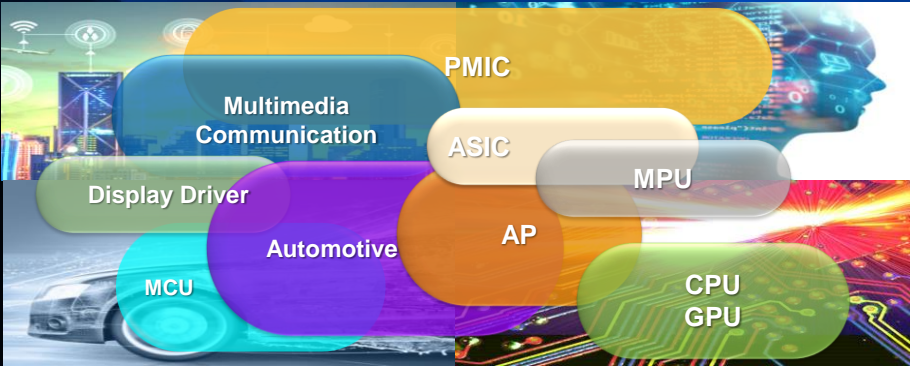
Hand-wired



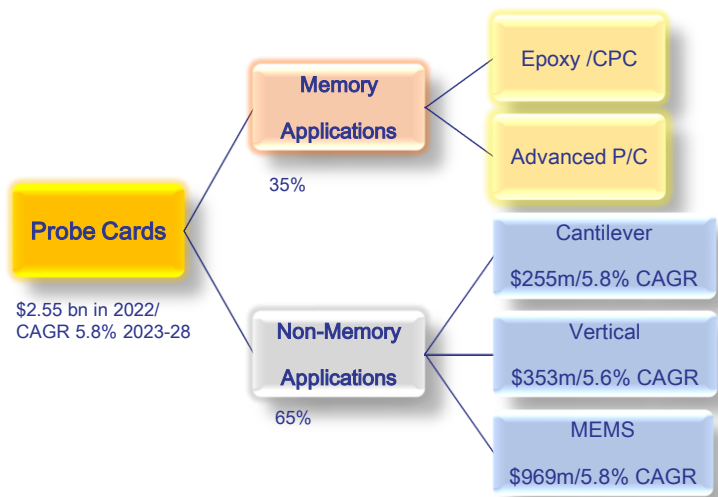
RF

Full range of products for the applications
sufficient coverage solutions to IC markets

Company Confidential C

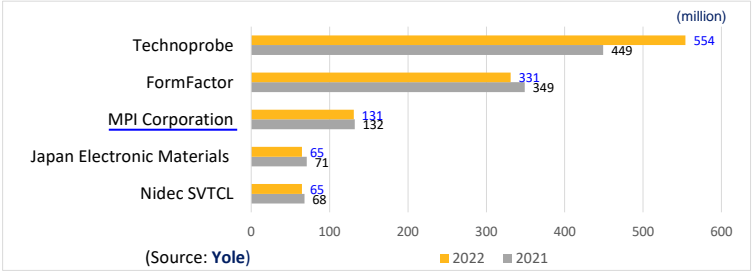


全球探針卡市場概況



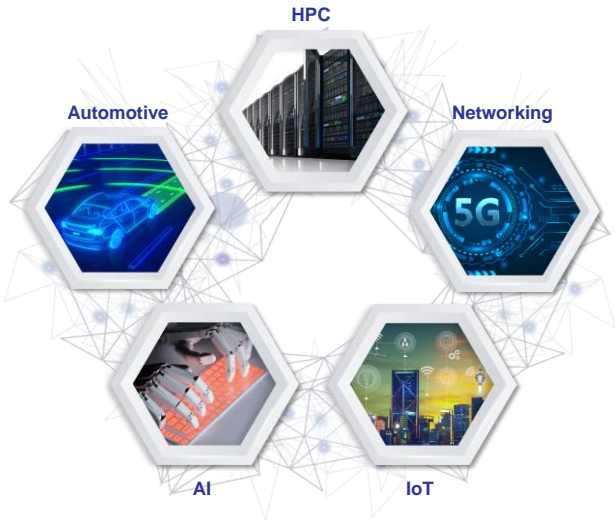
前五大探針卡供應商(Non-Memory)

	(Rank)	2017	2018	2019	2020	2021	2022
Technoprobe	Italy	2	2	2	2	1	1
FormFactor, Inc.	USA	1	1	1	1	2	2
MPI Corporation	Taiwan	3	3	3	3	3	3
Japan Electronic Materials	Japan	4	4	5	5	4	4
Nidec SVTCL	Singapore	5	5	4	4	5	5

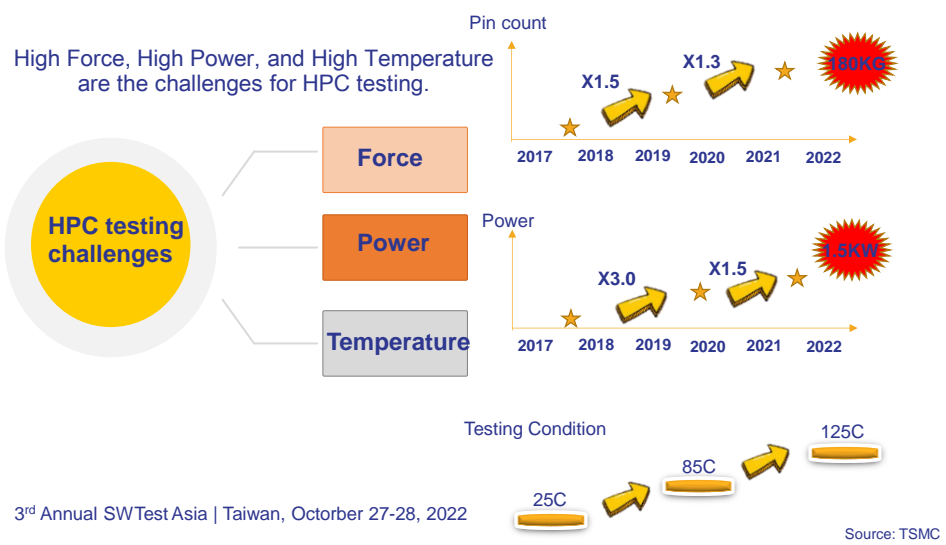


HPC 需求

The demand of HPC (High Performance Computing) growth rapidly.



HPC 挑戰



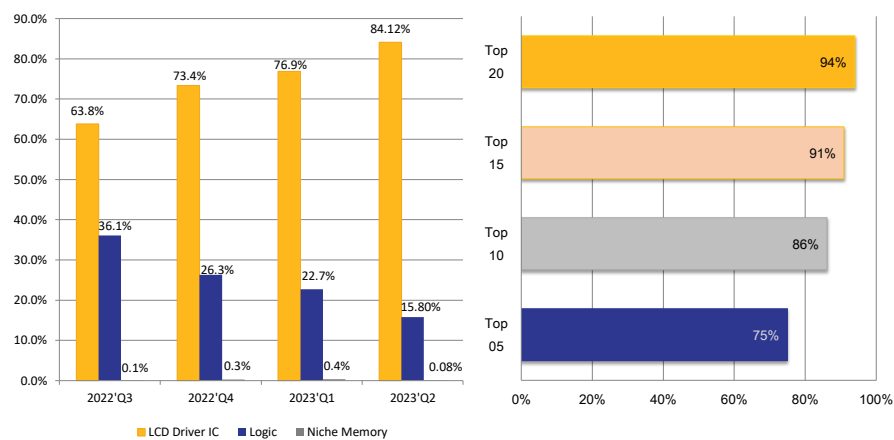
Interface Technical Complexity Check in

Complexity Trends are on pace to be at 2022 targets (1 Cycle) or in some cases beyond

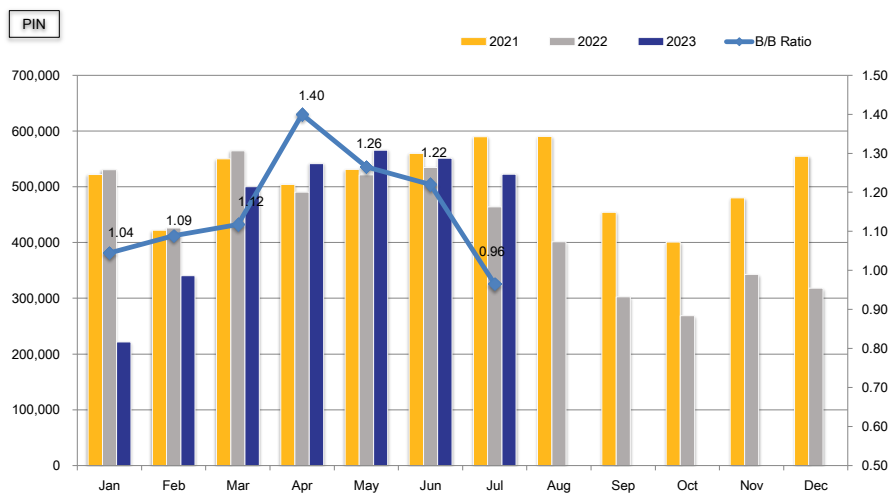
“2x4 Scaling”=2xPins, 2xPerformance, every 4 years

		2018	2022	2026
		Level 4	Level 5	Level 6
Pin Density	Pin Pitch	90um	70um	50um
	Total Contact Force	80kg	150kg	250kg
I/O Speed	Digital	32Gpbs	64Gpbs	128Gpbs
	RF/mmWave	< 12 GHz	29 GHz	+60 GHz
Device Power	Main Power	900 mV	750mV	625mV
	Single Rail	35A	50A	100A
	Impedance	2.2 mOhm	1.4 mOhm	0.8 mOhm
Thermal	Self Heating	75 W		
	Operating Range	0 to +80C	0 to +105C	-20 to +125C
Most Expensive Probe Card		\$400K*	>\$500K	>\$700K

出貨產品結構及主要客戶



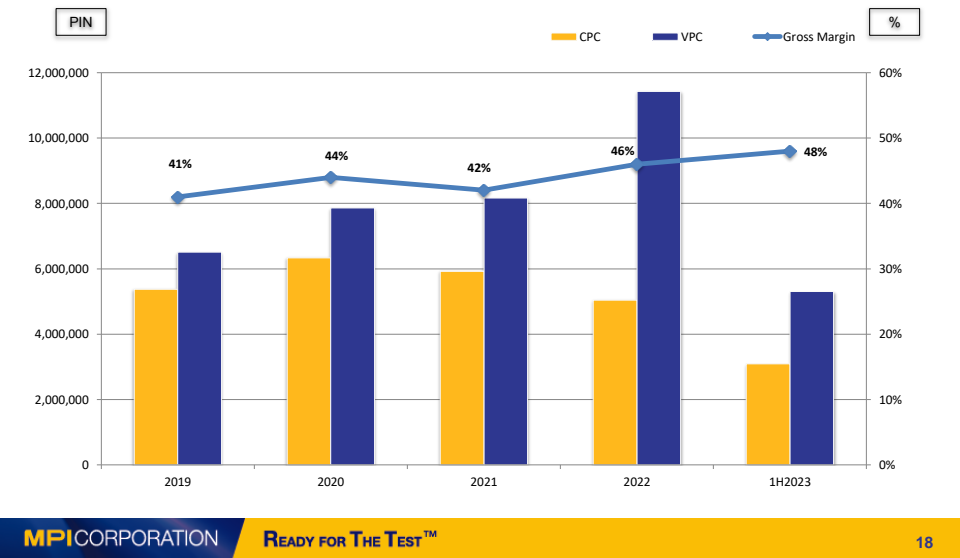
CPC月出貨針數及月接單出貨比



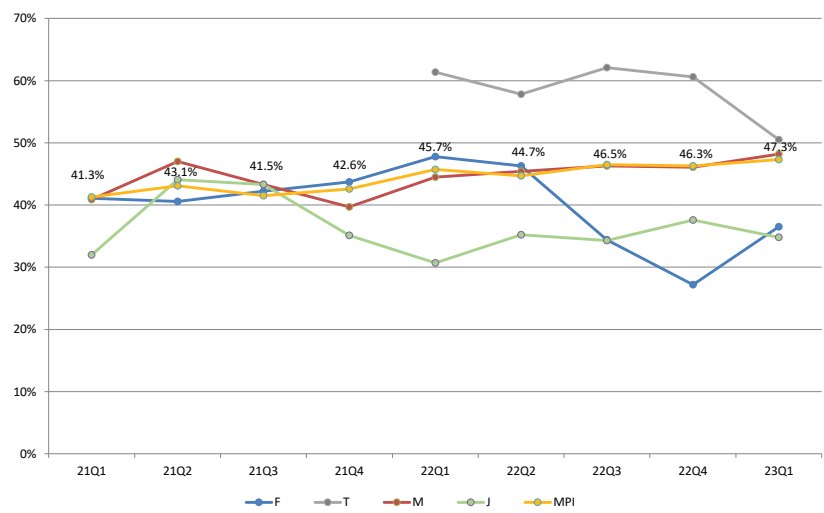
VPC月出貨針數及月接單出貨比



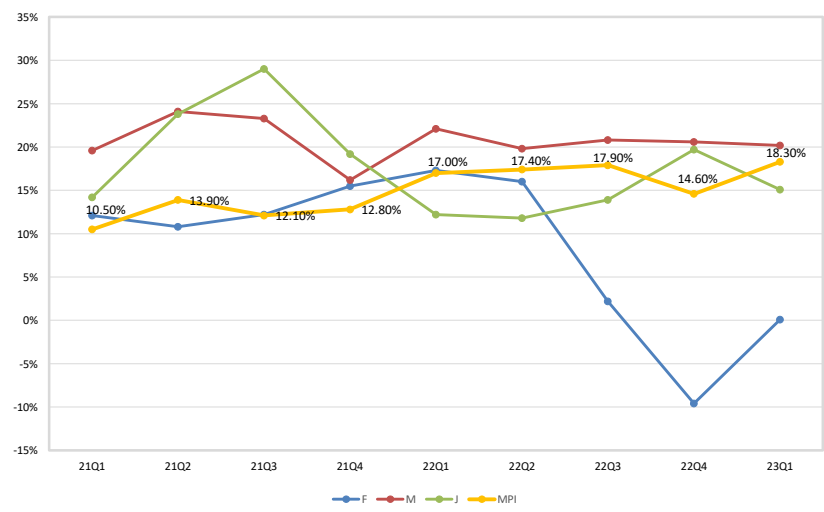
CPC及VPC成長趨勢



全球同業毛利率



全球同業營利率



MPI Probe Card

Company Confidential C

Our Customer

The MPI is committing more than 800 customers globally to contribute to industrial development as well as providing testing industry advanced technology needs.



MPI CORPORATION

發光二極體事業部 (LED)

READY FOR THE TEST™

產品概覽



- **High Power VCSEL Wafer Testing**
Wafer / Board Prober Development
Testing methodology Development
 - **High Power VCSEL PKG Testing**
PKG Handler Development
Testing methodology Development
- **VCSEL / Photo-Detector Testing**
Wafer / Board Prober Development
Testing methodology Development
 - **RF Character**
Wafer Level RF Testing Integration
 - **SiPh Die/PKG Platform**
SiPh Handler Development
- **uLED Mass Production Methodology**
Wafer prober for large quantity die testing method
 - **Panel testing platform development**
Panel / Panel in-process testing platform

發展計畫



Optical Sensing	Optical Communications	Micro Display
<ul style="list-style-type: none">➢ Focus on Sensing VCSEL Testing➢ Production Wafer Prober in Low Temperature➢ High Power Measurement Tool and Technology Development➢ Flip Chip Wafer VCSEL testing Solution➢ Package / Hybrid Device testing tool	<ul style="list-style-type: none">➢ Focus on VCSEL/Photodetector Testing➢ Wafer Prober for Dark / Responsivity / Capacity measurement➢ RF Measurement Capability Development➢ SiPh package testing approaching	<ul style="list-style-type: none">➢ Lab and production wafer testing tool development➢ Contacting Accuracy Improvement➢ Innovative testing methodology➢ Optical measurement in production methodology

MPI CORPORATION

Thermal/AST

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MPI Thermal

Hot and Cold Air Flow
Environmental Temperature Test

-100°C  +300°C
ThermalAir Series
Temperature Testing Systems



Applications & Industry Segments



Semiconductor



Automotive



Aerospace



Telecommunications



Fiber Optic



Electronics



Sensors



Advanced Technology

MPI Advanced Semiconductor Test

Engineering Probe Systems
and
RF Probe Products



50 – 300 mm

26 – 110 GHz

Applications & Industry Segments

							
Device Characterization	High Power	RF & mmW	Design Validation	Failure Analysis	Wafer Level Reliability	Silicon Photonics	Laser Cutter

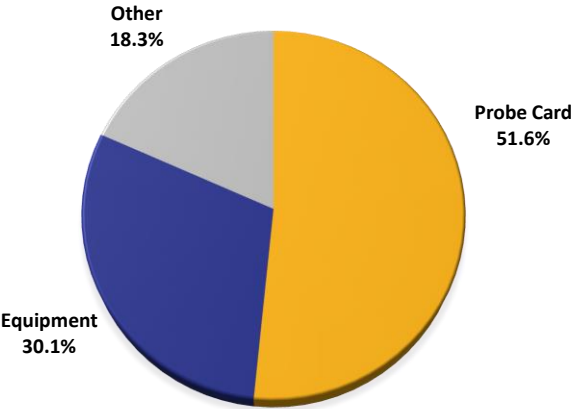
MPI's Ideation

- To Combine Two Very Unique Values
- The MPI Corporation
 - Operational Excellence – High quality, on time
 - Production Test Experience – 24/7 systems reliability
 - Customer Centric – Highest value without compromise
- Management & Market Expertise
 - More than 50 years together in Device Modeling, RF & mmW, WLR, High-Power, Failure Analysis, Thermal solutions...
 - Visionary and Innovative Ideas
 - Worldwide Partner Relationships

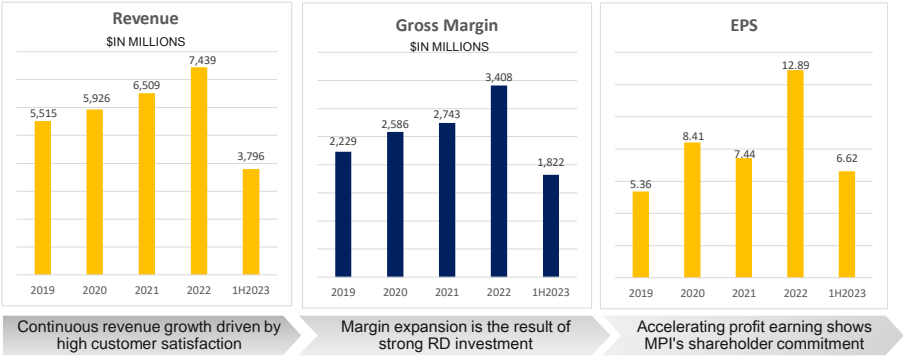
財務報表

READY FOR THE TEST™

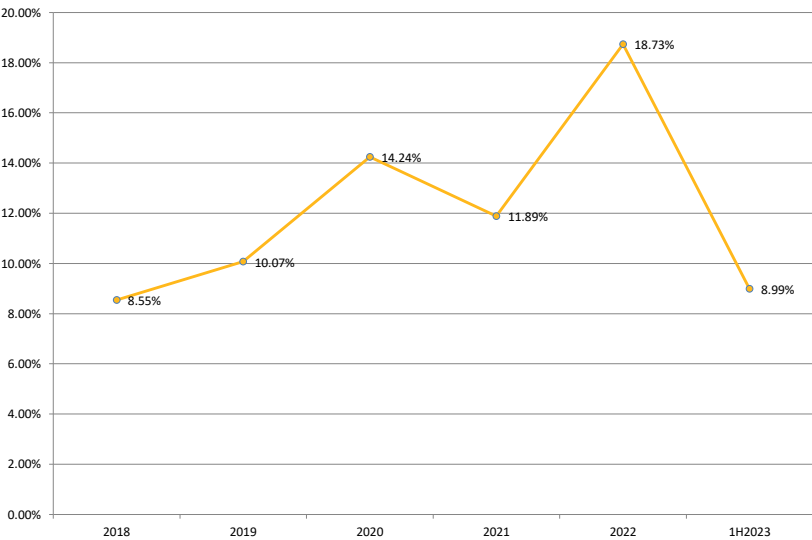
1H 2023出貨分布



營業表現



股東權益報酬率



資產負債表

NT\$ Million	1H 2023		1H 2022	
Cash and Cash Equivalents	1,993	17%	1,589	15%
Fixed Assets	5,396	46%	4,418	42%
Total Assets	11,765	100%	10,401	100%
LT Debt	953	8%	1,091	11%
Shareholders' Equity	6,924	59%	6,286	60%
EBITDA	739	19%	738	21%

*EBITDA=operating income + depreciation & amortization expenses

損益表

NT\$ Million	1H 2023		1H 2022	
Net Sales	3,796,614	100%	3,588,079	100%
Cost of Goods Sold	1,973,971	52%	1,963,111	55%
Gross Profit	1,822,643	48%	1,624,968	45%
Operating Expense	1,106,169	29%	1,003,009	28%
Operating Income	716,474	19%	621,959	17%
Investment Income & Others	22,557		116,871	
Net Income (after tax)	622,676	16%	607,788	17%
EPS (after tax)	6.62		6.46	

MPICORPORATION



Thank You



<http://www.mpi-corporation.com>

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