



# Malaysia's Electronics Industry

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An introduction

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For important disclosure information please refer to the last page of this presentation.

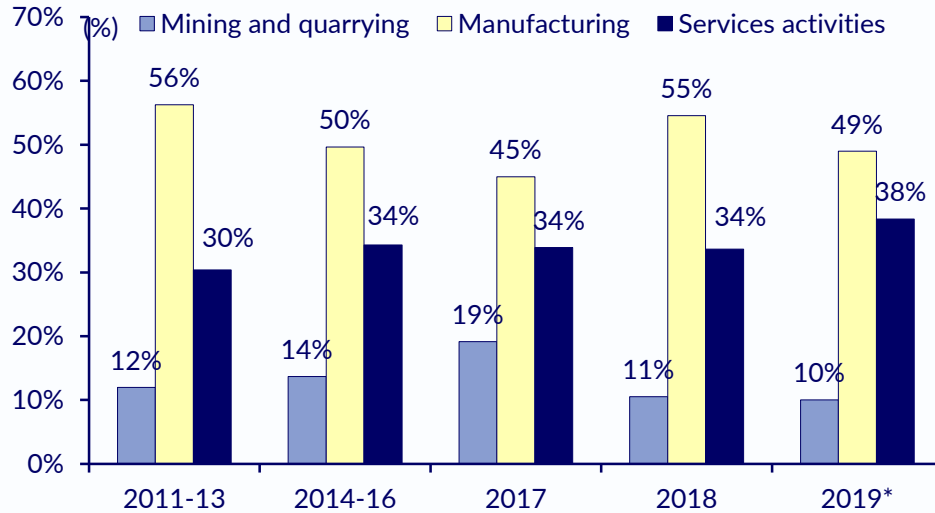
# Key highlights

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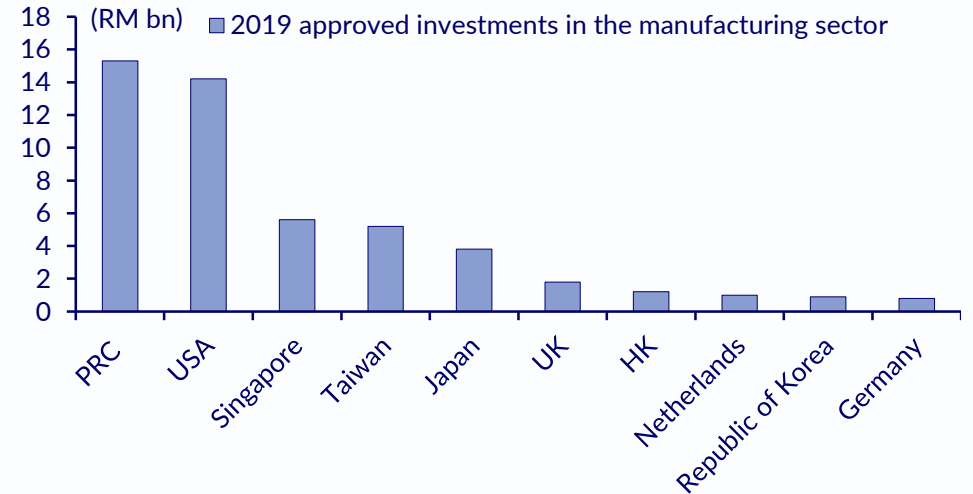
- Malaysia stamped its E&E footprint on the map since 1972; MNEs started to open shop in Penang
- Penang represents 80% of the nation's contribution to global backend semiconductor output.
- Johor is an EMS hub for some of world's largest EMS companies
- China Special Channel was set up during Budget 2020 to attract Chinese companies to use Malaysia as its new regional hub outside China; also as part of trade diversion due to supply chain disruption faced during the trade war.
- Why invest in Malaysia?

# Malaysia's manufacturing and key export trends

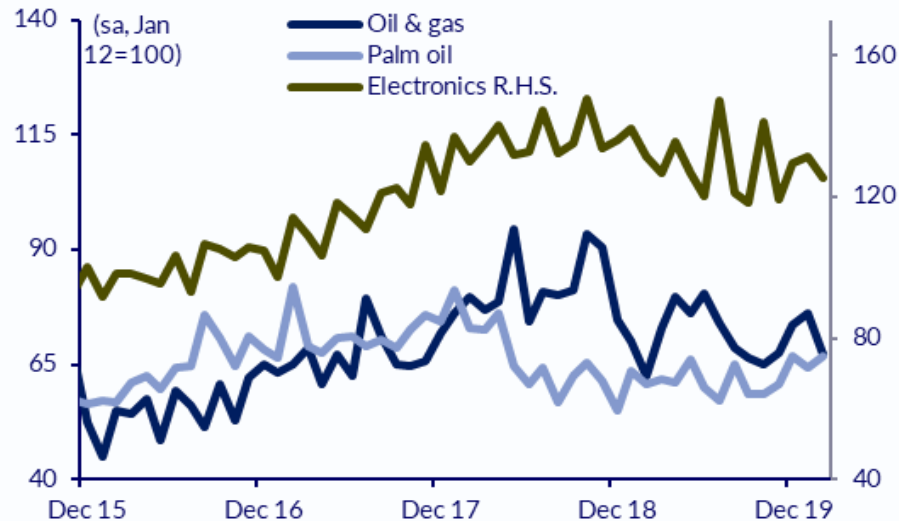
## Malaysia FDI by sector – manufacturing skewed



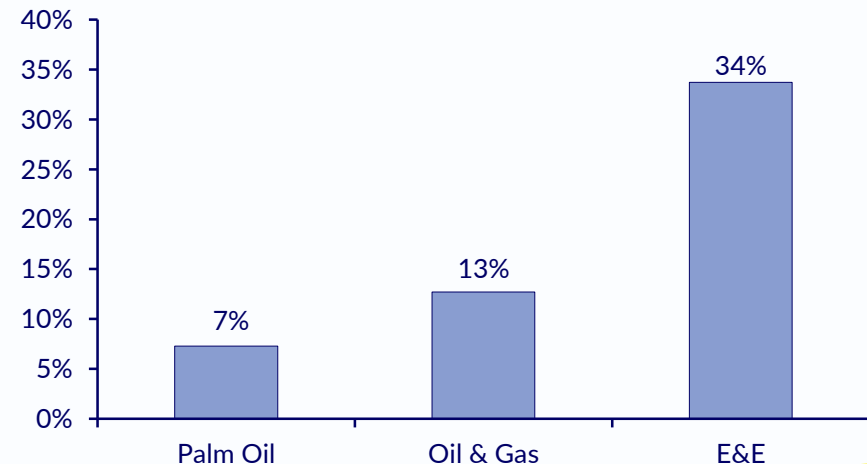
## Malaysia manufacturing investments by countries



## Malaysia E&E export growth trends



## Malaysia E&E a major export component



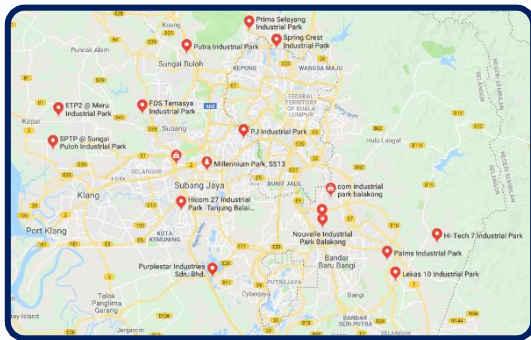
# Malaysia's investment hubs and their potential



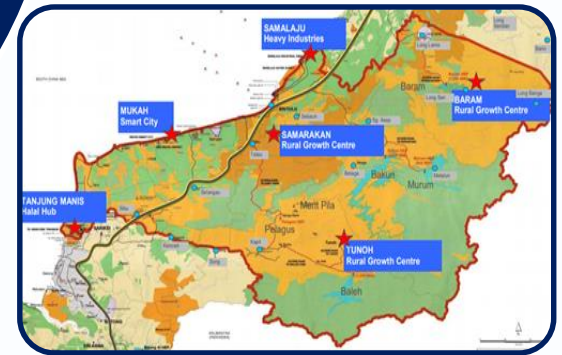
**Penang**  
(E&E hub)



**Johor**  
(Manufacturing hub, EMS players, petrochemicals)

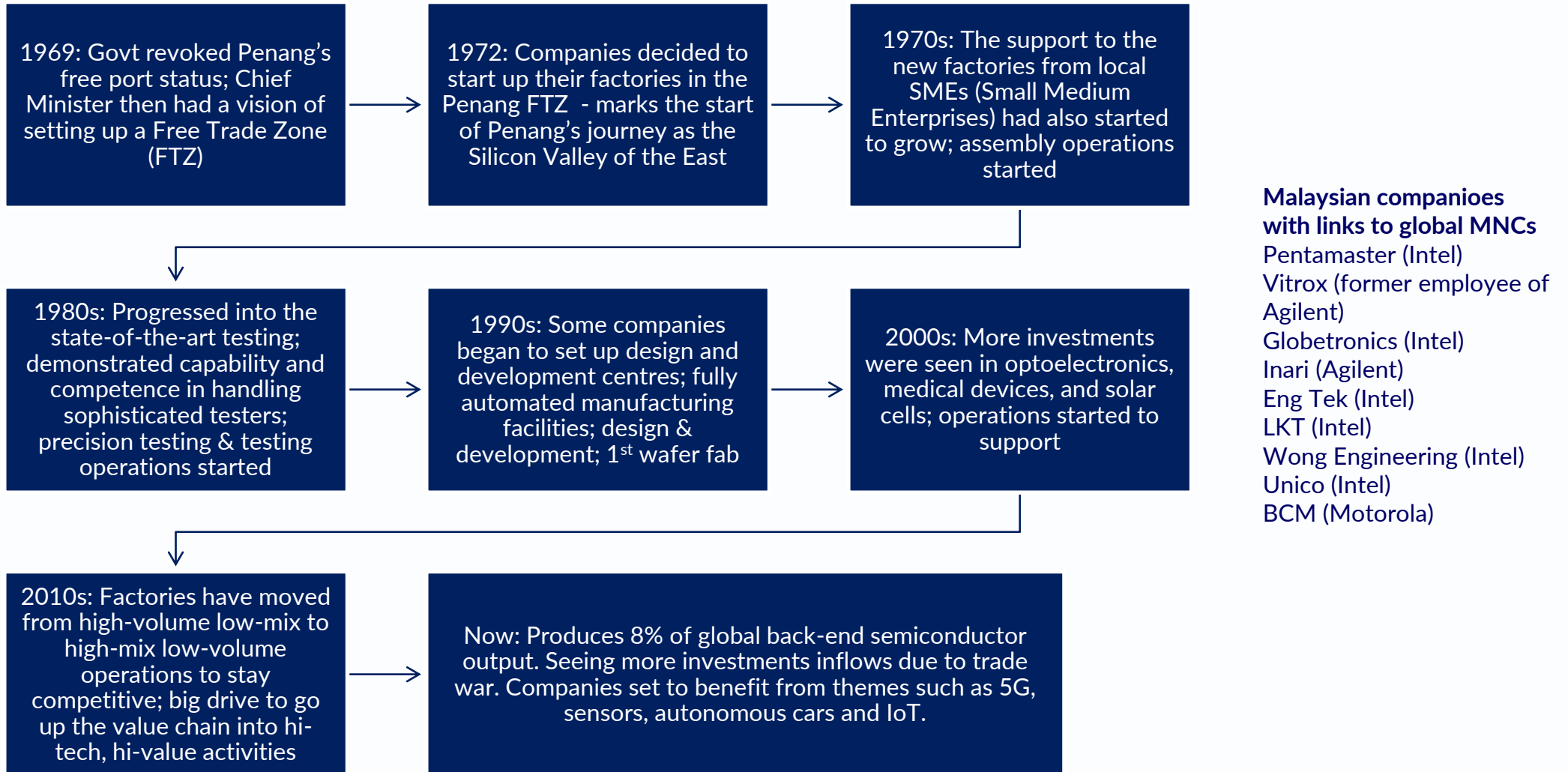


**Selangor**  
(manufacturing, warehousing, logistics, aerospace)



**Sarawak**  
(energy, petrochemicals, ports)

# Key milestones – E&E hub in Penang



# Link between MNCs and local suppliers

Company	Industry segment	Client	Remarks
Pentamaster	Semiconductor automation equipment	Started with Intel	Started in 1997
Vitrox	Automated machine, vision inspection system	Customers from semiconductor companies	Former employee of Agilent, started in 2000
Globetronics	Semiconductor EMS; expanded to provide hardware and software, system solutions and consultation for medical	Started with Intel	Started in 1991
Inari Amertron	Semiconductor wafer sort, assembly, RF testing, opto-electronics and fibre-optics manufacturing	Started with Agilent (HP)	Started in 2006; subsidiaries in Philippines and China
Eng Tek	Machining	Intel	Started as backyard machine shop in 1974; internationalised with operations in the Philippines, Thailand and China
LKT	Machining	Intel	Started operation as backyard workshop in the early 1970s; acquired by Singapore Aerospace Manufacturing in 2008
Wong Engineering	Machining	Intel	Started as a backyard machine shop in 1982
Unico Technology	Original equipment manufacturing for customers in computer, server, communication industries	Started with Intel	Incorporated in 1989
BCM Electronics	PCBA and test development	Started with Motorola	Incorporated in 1993
AT Engineering	Design and manufacture of industrial automation systems and machinery		Former employee of Intel, started in 1991
Greatech	Contract equipment manufacturing		Founded in 1993

# What Malaysia has to offer

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## Pioneer status

- Income tax exemption between 70-100% of statutory income for 5-10 years

## Investment tax allowance

- Allowances between 60% - 100% on qualifying capital expenditure incurred within a period of 5 to 10 years.

## Principal hub

- Formation of a locally incorporated company that uses Malaysia as a base for conducting its regional or global businesses and operations to manage, control, and support its key functions

# Malaysia's investment proposition

## Supportive government policies

- ❑ Pro-business policies
- ❑ Responsive government
- ❑ Liberal investment policies
- ❑ Attractive tax rates and other incentives
- ❑ Liberal exchange control regime
- ❑ Intellectual property protection

## Developed infrastructure

- ❑ Network of well-maintained highways and railways
- ❑ Well-equipped seaports and airports
- ❑ High-quality telecommunications network and services
- ❑ Fully developed industrial parks, including free-trade industrial zones, technology parks and Multimedia Super Corridor
- ❑ Advanced MSC Malaysia Cybercities and Cybercentres

## An educated workforce

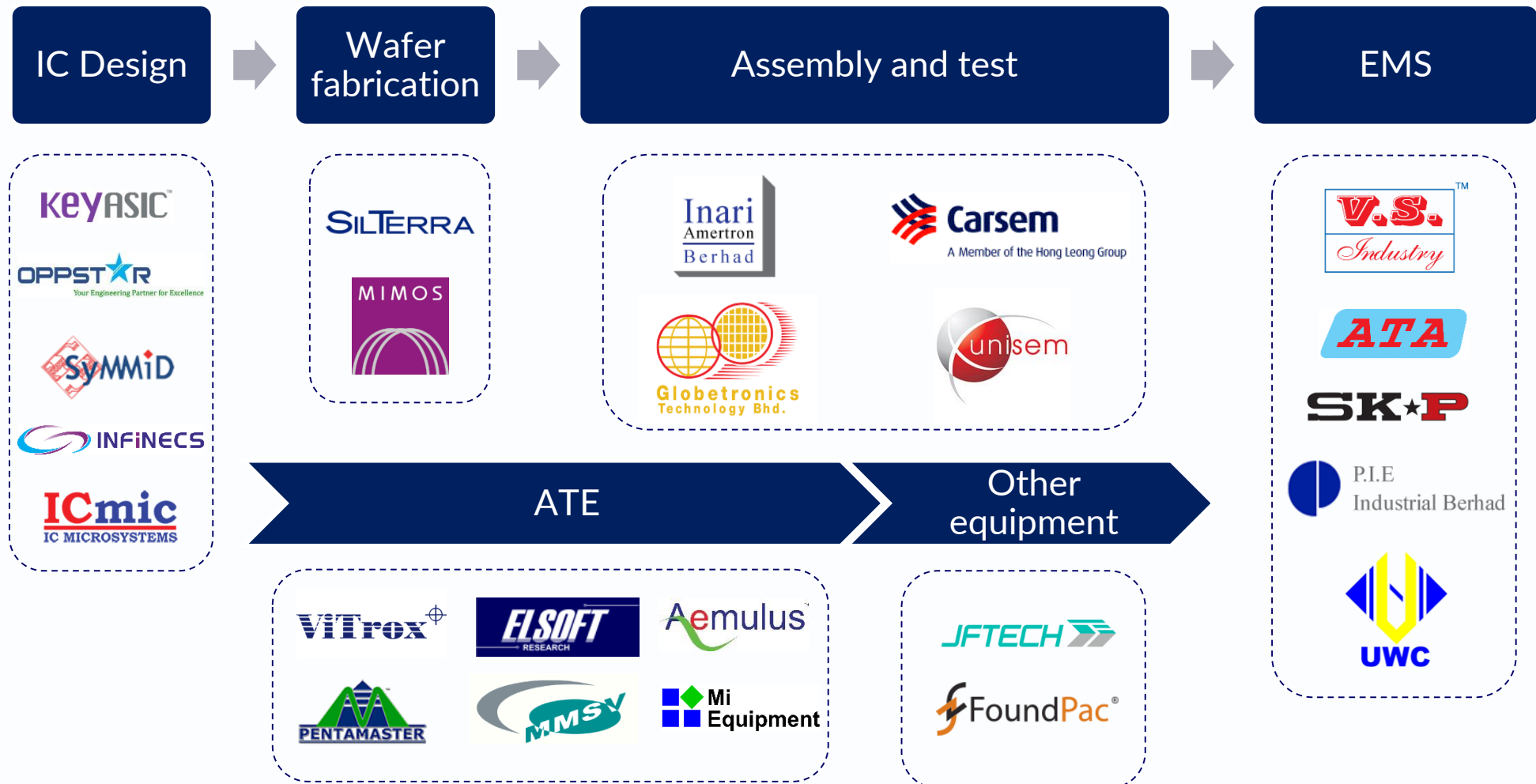
- ❑ Talented, young, educated and productive workforce
- ❑ Multilingual workforce speaking two or three languages, including English (and selectively Mandarin)
- ❑ Comprehensive system of vocational and industrial training, including advanced skills training
- ❑ Harmonious industrial relations with minimal trade disputes

## Vibrant business development

- ❑ Market-oriented economy
- ❑ Well-developed financial and banking sector, including the Labuan International Business and Financial Centre
- ❑ Wide use of English, especially in business, legal and accounting practices based on the British system
- ❑ Large local business community with a long history in international business links
- ❑ Large foreign business community in all business sectors



# Semiconductor ecosystem in Malaysia



# Malaysia as a tech/E&E hub

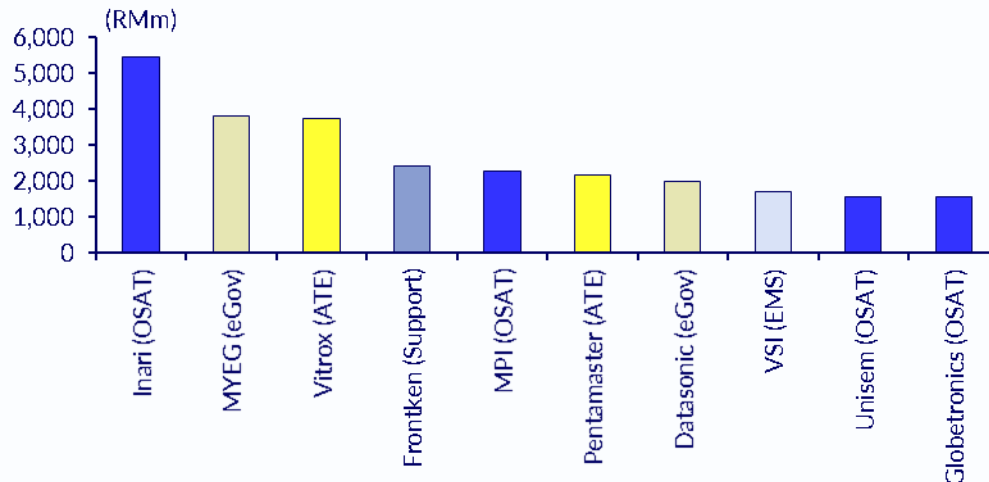
## Listed EMS players in Malaysia

Name	Market cap (RMm)	Description
VSI	1,696	EMS provider for household appliances and coffee machines.
ATA IMS	1,409	EMS provider for household appliances.
SKP Resources	1,337	EMS provider for household appliances.
Uchi Technologies	1,033	Control modules for coffee makers.
P.I.E. Industrial	449	EMS provider. Indirectly owned by Foxconn through its stake in Pan-International Industrial Corp.

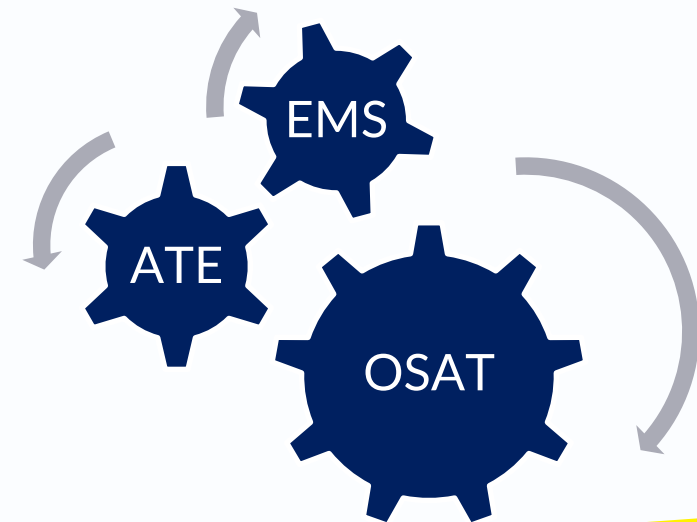
## Listed semiconductor companies in Malaysia

Name	Market cap (RMm)	Description
Inari	5,446	OSAT for RF and optoelectronics products.
Vitrox	3,729	Supplier of automated vision-inspection equipment
Frontken	2,400	Support service. Cleaning and coating of tools for fabricating wafer.
MPI	2,275	Automotive focused OSAT.
Pentamaster	2,156	Manufacturer of automated and semi-automated equipment
Unisem	1,571	OSAT. Owned by Tianshui Huatian Technology.
Globetronics	1,560	Sensor focused OSAT.

## Top 10 largest tech companies on Bursa Malaysia



Source: CLSA, Bloomberg

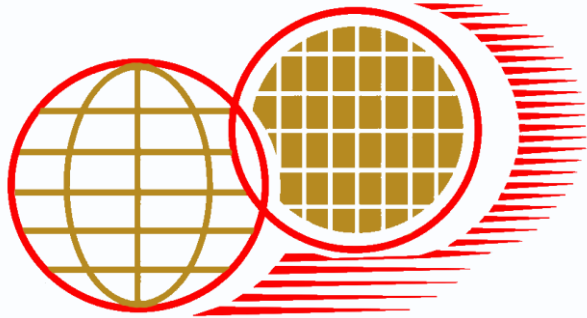


# Inari Amertron Berhad



- Largest listed tech company in Malaysia with a market cap of RM5.4b (US\$1.2b).
- OSAT provider for Radio Frequency (RF) products.
- Acquired Amertron in 2013 for US\$32m, expanding capabilities to optoelectronics and fibre-optics assembly.
- Capabilities include wafer sort, assembly, RF testing and other services.
- 9 manufacturing plants in Malaysia, China (Kunshan) and Philippines.

# Globetronics Technology Berhad



- Started in 1990 with two employees. Company has grown to a market cap of RM1.6b (US\$356m).
- OSAT with a focus on sensors.
- Other products include quartz crystal timing devices, LED components, integrated circuits and small outline component/ICs.
- Headcount of 1.6k employees with factories located in Penang and Kuala Lumpur.

# Vitrox Corporation Berhad



- Largest equipment maker in Malaysia with market cap of RM3.7b (US\$850m).
- World-leading machine vision solutions provider. Customers are leading EMS and OSAT companies.
- Moved into Campus 2.0 at Batu Kawan Industrial Park with build-up of 450k sqft.
- Operate four R&D sites and sales & support sites in 33 countries.
- 25% of 2019 sales are from China (second largest market).

# Pentamaster Corporation Berhad



- Listed in both Malaysia and Hong Kong. Market cap of RM2.2b (US\$491m).
- Solutions include Automated Test Equipment and Factory Automation Solutions.
- End markets include smart sensors, automotive, power modules and RF devices.
- Two manufacturing facilities in Penang. Also operate offices in Suzhou, Singapore and Sunnyvale.
- >6k projects deployed with >400 engineering R&D staff.

# V.S. Industry Berhad



*Passion to grow your business™*



- 23<sup>rd</sup> largest EMS company in the world. Market cap of RM1.7b (US\$386m).
- Vertically integrated services from tooling, plastic injection, PCB and battery pack assembly.
- Existing products include home cleaning, coffee brewers and robotic pool cleaners.
- Serve customers from USA, Europe and Japan. More than 30 years experience.
- Operations in Malaysia, China (Zhuhai) and Indonesia. Combined >3m sqft built-up space.

# Upcoming CLSA Forums

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## CITIC CLSA Japan Forum 2020

Virtual conference, 18-22 May



## CITIC CLSA Flagship Investors' Forum 2020

Hong Kong, 8-11 September



## CITIC CLSA India Forum 2020

4Q



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