Semiconductor - Malaysia

Prepared by Bernard Lim,
IEEE Malaysia Section
Information on location

Penang, Malaysia

- Malaysia is one of the top 10 semiconductor manufacturers in the world?
  - Malaysia produced approximately 32.64 billion semiconductors in 2022 – Statista
  - Malaysia is consistently listed in the top 10 semiconductor manufacturing countries – Insider Monkey

- Malaysia’s semiconductor industry is still expected to grow with a compound annual growth rate (CAGR) of 7% to reach an output of US$46 billion or RM212.52 billion by 2028.
  – Eastspring Investments & PwC Singapore
Information on location

Malaysia Semiconductor Landscape
Information on location

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Malaysia Semiconductor Landscape
What is happening in the Malaysia Semiconductor landscape?
Silicon Valley of Malaysia

Penang Island, Malaysia
Penang, Malaysia: Silicon Island of the East

- **>50 years** of industrial excellence & technical expertise
- **>350 MNCs**, over **4,000 SMEs** & **>200** Malaysia Digital status companies
- **Thriving** Global Business Services (GBS) & Centre of Excellence (CoE) for MNCs
- **Work – Live – Play balanced lifestyle** with vibrant cultures - a UNESCO World Heritage Site

- Houses **3** of the Global Top 10 semiconductor leaders (by sales)
- Houses **6** of the Global Top 30 medical device companies (by sales)
- Accounted for over **5%** of global semiconductor sales
- **Top FDI recipient** among Malaysian States

Source: DOSM & UN Comtrade
> 350 MNCs in Penang and counting

AND MANY MORE...
At a glance: Penang as Malaysia’s industrialisation hub

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Percentage of Malaysia’s Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Manufacturing Investment [2022]</td>
<td>RM13.7 billion</td>
<td>16%</td>
</tr>
<tr>
<td>Total Manufacturing Investment FDI [2022]</td>
<td>RM9.7 billion</td>
<td>15%</td>
</tr>
<tr>
<td>Estimated Job Creation from Manufacturing Investment [2022]</td>
<td>15,752</td>
<td></td>
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<tr>
<td>Penang’s Exports in 2022</td>
<td>RM463 billion</td>
<td>30%</td>
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<td>Penang’s Trade Surplus in 2022</td>
<td>RM170 billion</td>
<td>67%</td>
</tr>
<tr>
<td>Penang’s E&amp;E Exports in 2022</td>
<td>RM341 billion</td>
<td>58%</td>
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</tbody>
</table>
Penang’s approved manufacturing investments in Jan – Sep 2023 (9M23)

Total: RM38.9B

- 92% RM35.8B
- 8% RM3.1B

**Source**: InvestPenang, MIDA

**94% contributed by**
Electronics & Electrical, Machinery & Equipment

**107 manufacturing projects**

**11,121 job creation**

**Top contributor among all states**
(39% of Malaysia’s total)
### Electrical & Electronics: Robust supply chain with diverse areas of expertise

<table>
<thead>
<tr>
<th>Semiconductor IDM &amp; Fabless</th>
<th>Design &amp; Engineering Services</th>
<th>OSAT &amp; EMS</th>
<th>Material, Sub-systems, Modules &amp; Components</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>intel, Broadcom</em></td>
<td><em>PixArt Imaging Inc</em></td>
<td><em>PLEXUS, T-F AMDA</em></td>
<td><em>VAT, SIMMTECH</em></td>
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<td><em>Micron, Analog Devices</em></td>
<td><em>Synaptics, Quest</em></td>
<td><em>ASE GROUP</em></td>
<td><em>PSA, IBIDEN</em></td>
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<td><em>AMS, OSRAM, AMD</em></td>
<td><em>Syncom, INFINECS</em></td>
<td><em>flex, Jabil</em></td>
<td><em>TTM Technologies, UCT</em></td>
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<td><em>Lumileds, Bosch</em></td>
<td><em>APEX, TESSOLVE</em></td>
<td><em>HOTAI, Inari America</em></td>
<td><em>Comet group, Advanced Energy</em></td>
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<td><em>Renesas</em></td>
<td><em>Capgemini engineering</em></td>
<td><em>SAMINA, NationGate</em></td>
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<td><em>Lattice, StarFive</em></td>
<td><em>Motorola solutions</em></td>
<td><em>ESCATEC</em></td>
<td><em>Honeywell, ATOTECH</em></td>
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<td><em>DEFINIX, Skyechip</em></td>
<td><em>Dell Technologies, HP</em></td>
<td><em>STMicroelectronics</em></td>
<td><em>Schott, ‘Toray’</em></td>
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<td><em>Nxp, Mini-Circuits</em></td>
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<td><em>Nolato, Knowles</em></td>
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<td><em>Fairecia clarion</em></td>
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*Source: InvestPenang, MIDA*
Electrical & Electronics: Robust supply chain with diverse areas of expertise

Metal Fabrication, Precision Engineering & Surface Treatment

Equipment, Automation & IoT Solutions

Source: InvestPenang, MIDA
HOUSING RENOWNED PLAYERS IN DIVERSE AREAS OF EXPERTISE

AND MANY MORE!

Source: InvestPenang, MIDA
THANK YOU