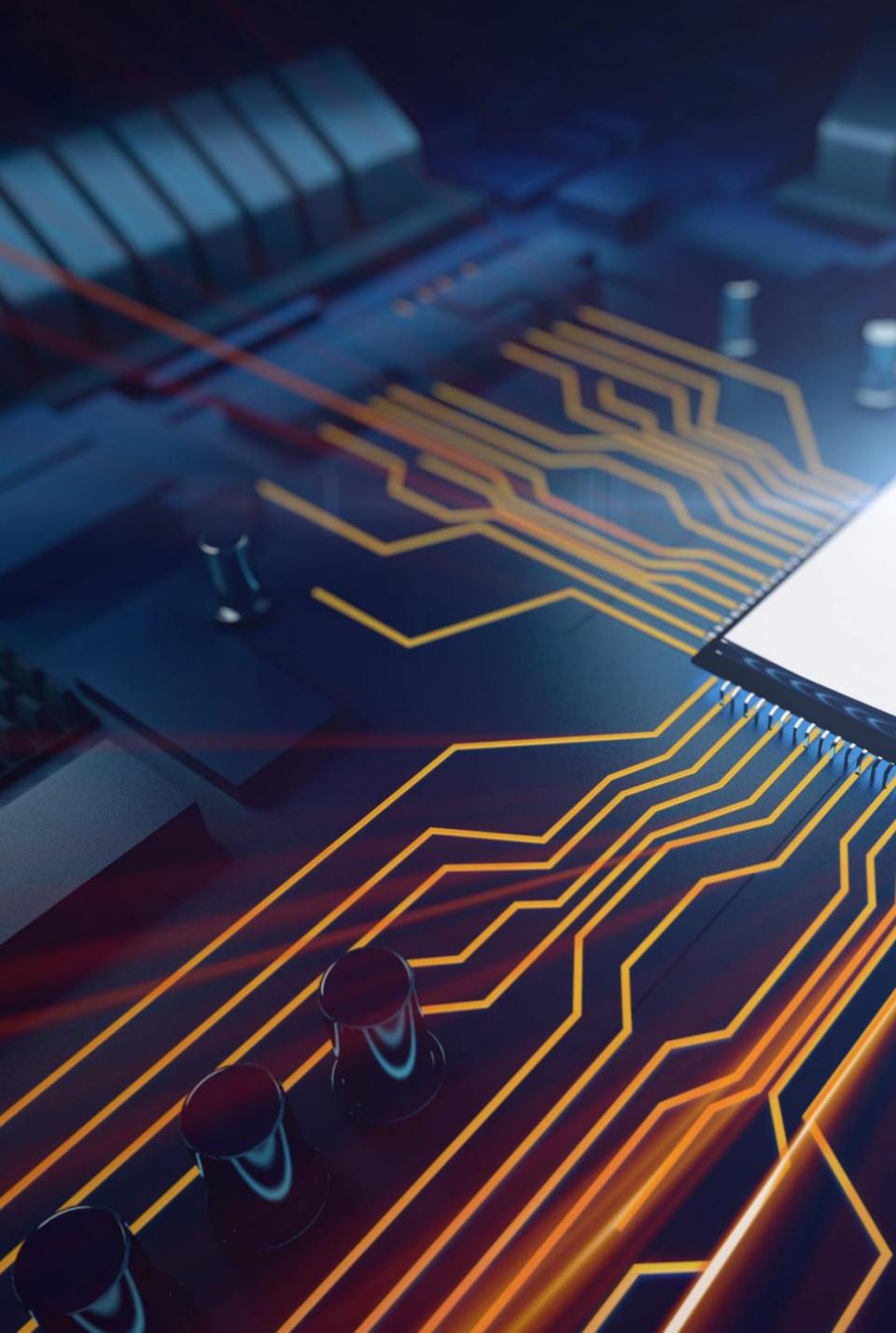


BOI's New Investment Promotion Policy for Smart Electronics Industry

Mr. Atiboot Petwisit
Investment Promotion Officer
Thailand Board of Investment (BOI)
26 August 2021



- 01** Introduction to Board of Investment (BOI)
- 02 Why Thailand?
- 03 Electronics Industry Overview
- 04 Electronics and Electrical (E&E) Industry Incentive
- 05 BOI Support

Introduction to the BOI



BOI is a government agency
under the Office of
the Prime Minister

Provides comprehensive
information and advice on
establishing operations
in Thailand

Grants Investment
Incentives

Coordinates between
the foreign business
community and other
public agencies

Provides Business
Support Services
for Investors

BOI Offers Investors Highly Competitive Investment Tax Incentives and Non-tax Incentives



Tax Incentives

- Exemptions / Reductions of Corporate Income Tax
- Exemptions of Import Duties on Machinery
- Exemption of Import Duty on Raw or Essential Materials Used in Production for Export
- Exemption of Import Duties on Materials imported for R&D purposes
- Double Deduction on Cost of Transportation, Electricity and Water
- 25% Deduction on Installation or Construction of Facilities



Non-Tax Incentives

- Permit for Foreign National to Enter Kingdom to Study Investment Opportunities
- Permit to bring in Skilled Workers and Experts to Work in Investment Promoted Activities
- Permission to Own Land
- Permit to Remit Money Abroad in Foreign Currency
- No Local Content Requirement
- No Export Requirements
- No Restriction on Foreign Currency
- Visa Facilitation

BOI Investment Incentive Scheme

Standard Incentives

Max. 10 years CIT exemption

Activity-Based



≤ 8 years CIT exemption

Technology-Based

- Targeted Core Technologies -



Bio-Technology Digital Technology Nano-Technology Advanced Material Technology

10 years CIT exemption

Additional Incentives

Additional CIT exemption / reduction

Area-Based

- EEC 3 provinces
- SEZ 10 provinces
- Southern border provinces
- 20 provinces with lowest income
- Industrial Estates/Zones
- Science and Technology Parks

Merit-Based

- Research & Development (R&D)
- Support academic / research institutes, or technology and human resource development fund
- IP licensing fee
- Advanced technology training
- Development of local suppliers
- Product and packaging design

BOI Incentive Packages

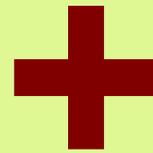
			Exemption CIT	Exemption Import duties on machinery	Exemption of import duties on raw materials used in R&D	Exemption Import duties on raw materials	Non-tax incentives
8 years	T8	Technology and Innovation Development includes targeted core technology development	10 years + Merit no cap	✓	✓	✓	✓
	A1	Knowledge-based activities focusing on R&D and design to enhance the country's competitiveness	8 years + Merit no cap	✓	✓	✓	✓
CIT exemption	A2	Infrastructure activities for the country's development, activities using technology to create value-added, with no or very existing investments in Thailand	8 years + Merit	✓	✓	✓	✓
	A3	High technology activities which are important to the development of the country, with a few investments already existing in Thailand	5 years + Merit	✓	✓	✓	✓
	A4	Activities with lower technology than A1-A3 but which add value to domestic resources and strengthen the supply chain	3 years + Merit	✓	✓	✓	✓
	B1	Supporting industry that does not use high technology, but is still important to the value chain	— + Merit	✓	—	✓	✓
0 year	B2	Supporting industry that does not use high technology, but is still important to the value chain	—	—	—	✓	✓

Incentives are based on several key factors including level of technology, role in supply chain, and location.

Investment Stimulation Measure

Incentives

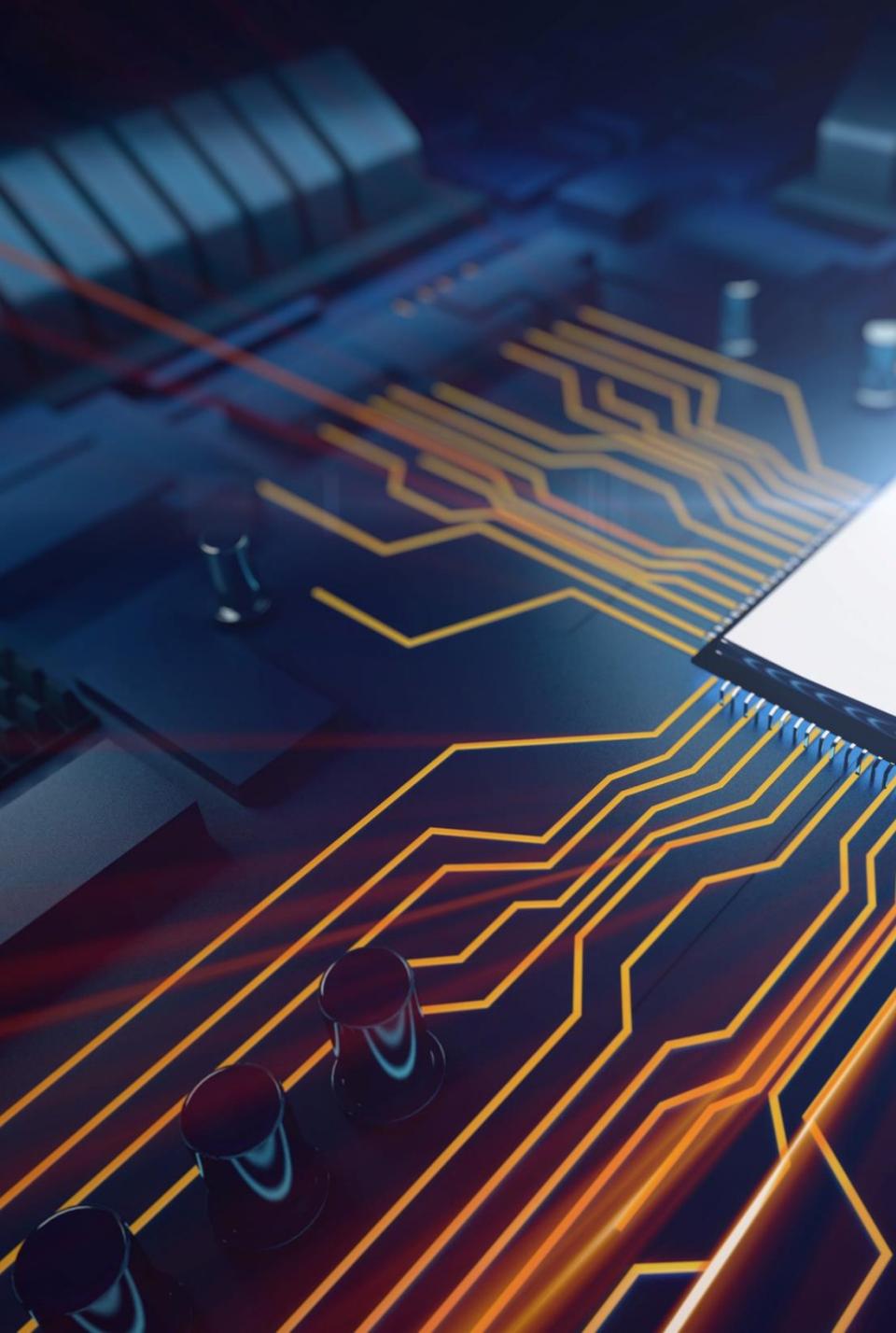
BOI
BASIC
PACKAGE



CIT
reduction
50%
5 years

Eligibility

- Applications submitted **January 4, 2021 to the last working day of 2021**
- Total investment value (excluding land and working capital) **≥ 1 Billion THB**
- Activities in categories entitled to **5 to 8 years of CIT exemption (A1, A2, A3)**
- No extension of project implementation deadline (max 43 months after project approval)



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Business Opportunities in Thailand

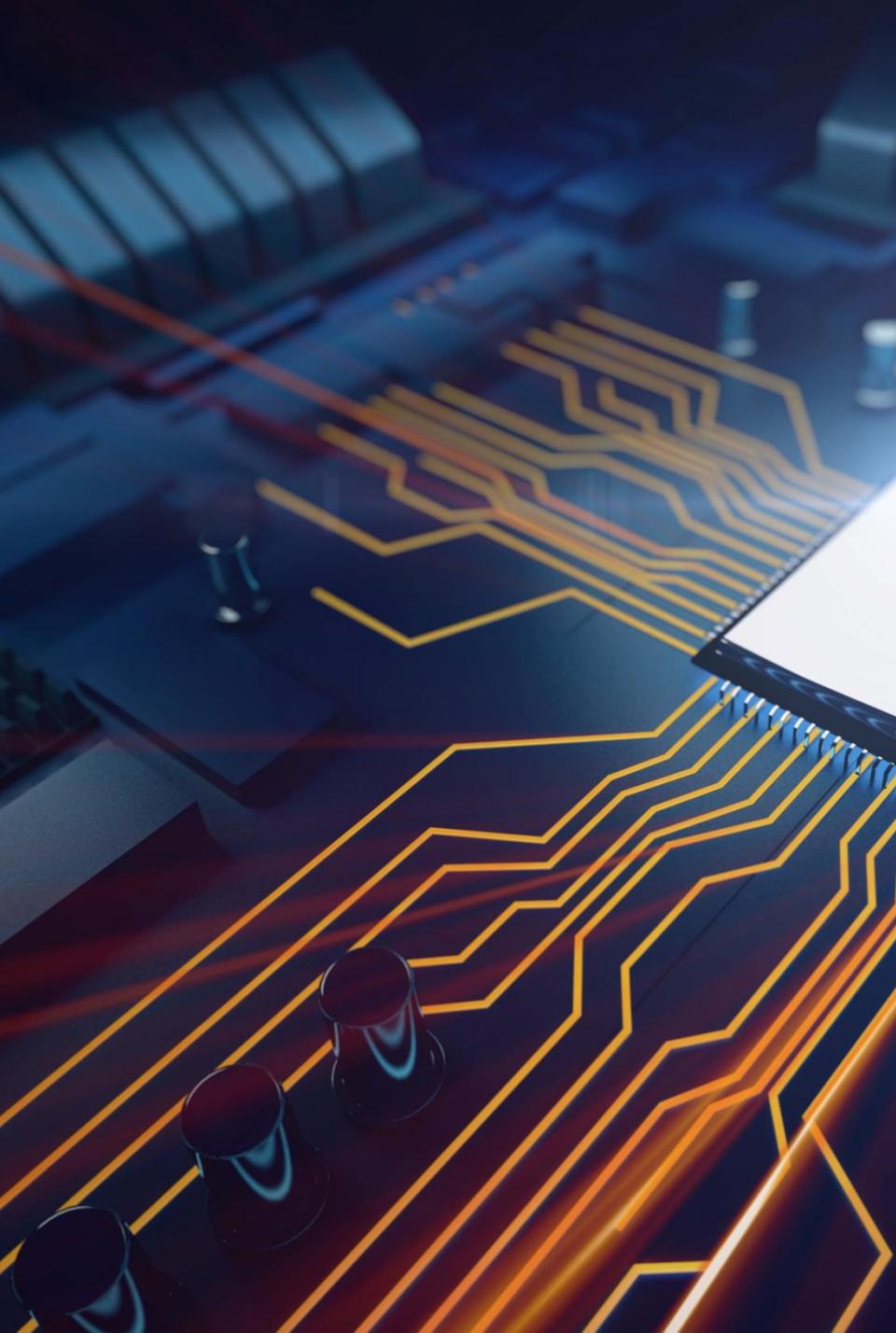


Think Resilience

THINK THAILAND

Business Opportunities in Thailand





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Thailand's Electronics Industry Supply Chain

Supporting Industries



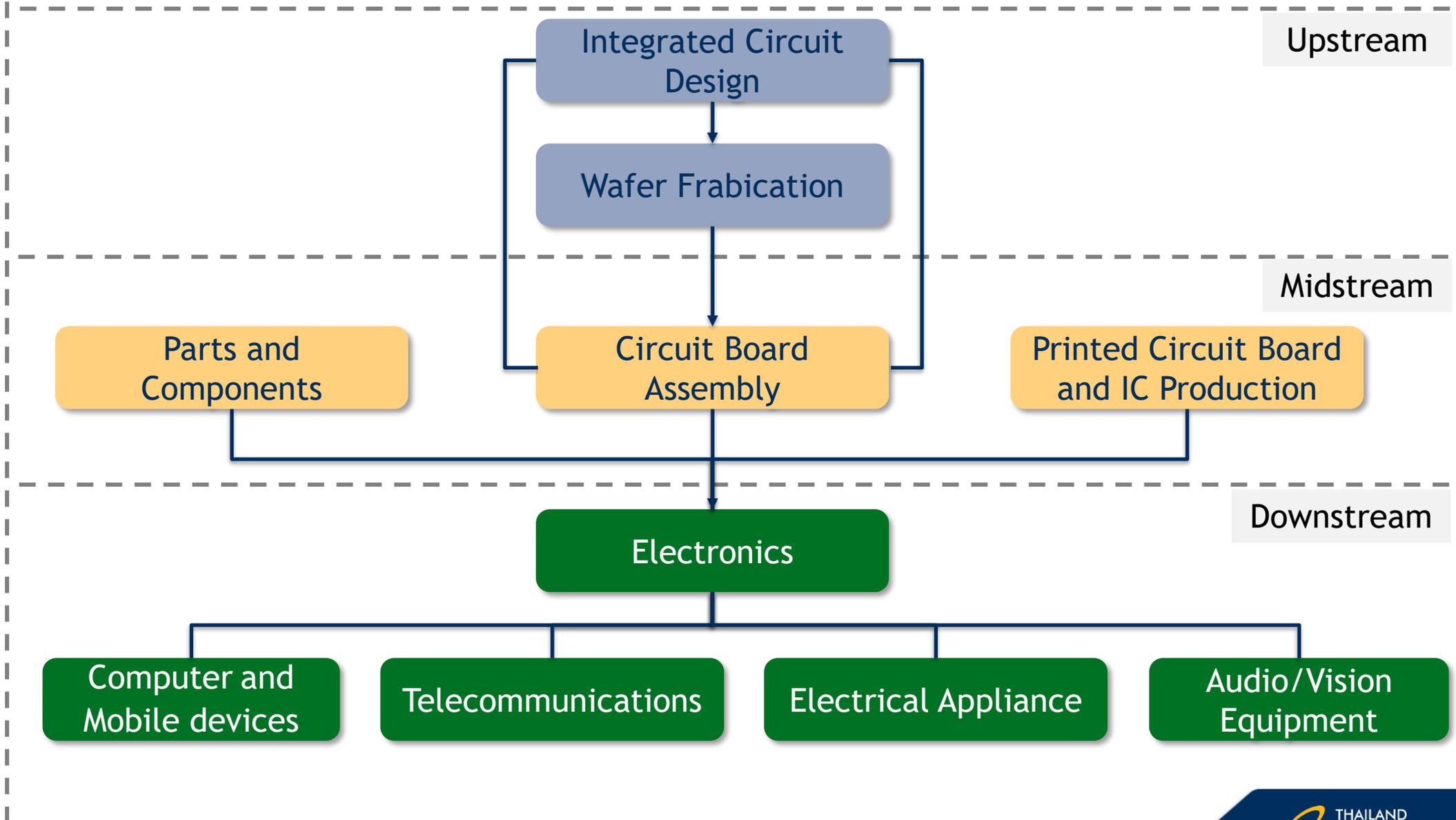
Mold



Metal component



Plastic component



Upstream

Midstream

Downstream

Source: Electrical and Electronics Institute, Bangkokbank Research

Smart Electronics: Strong Supply Chain



3rd E&E Exporter in ASEAN



13th E&E Exporter in the World

KEY PLAYERS

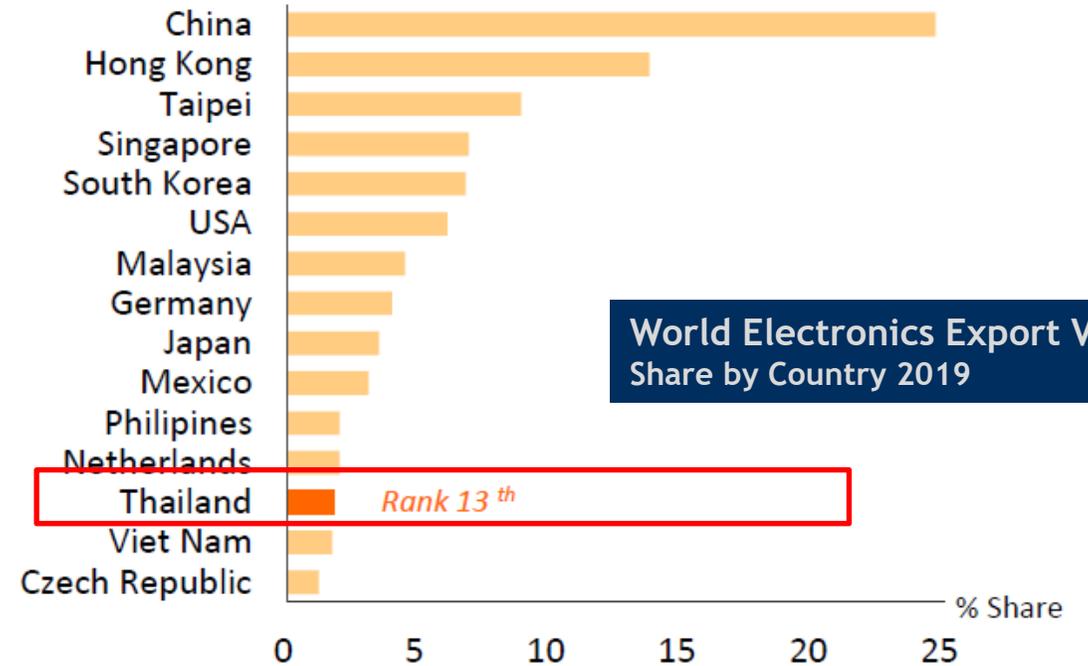
HDD:



IC:



Smart Appliances:



Source: Trade Map

Key Players in Smart Appliances and Electronics

With a reputation as one of the largest electrical and electronics appliance producers in Asia, a number of leading global electrical appliance manufacturers have established their production plants in Thailand. A diverse range of electrical and electronics products are produced with the employment of advanced technology in the production including smart refrigerator, smart washing machine and smart air conditioner

Key players in the market

SONY

Fisher&Paykel



SAMSUNG



Panasonic



Haier

HITACHI
Inspire the Next

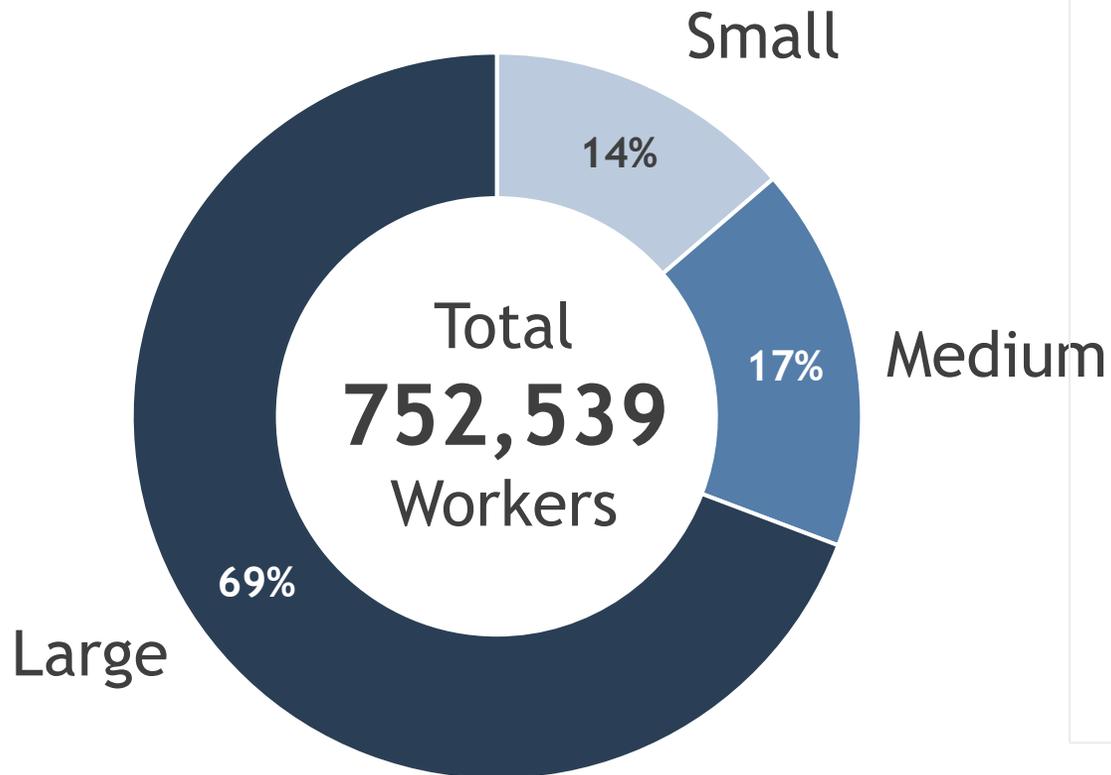


TOSHIBA

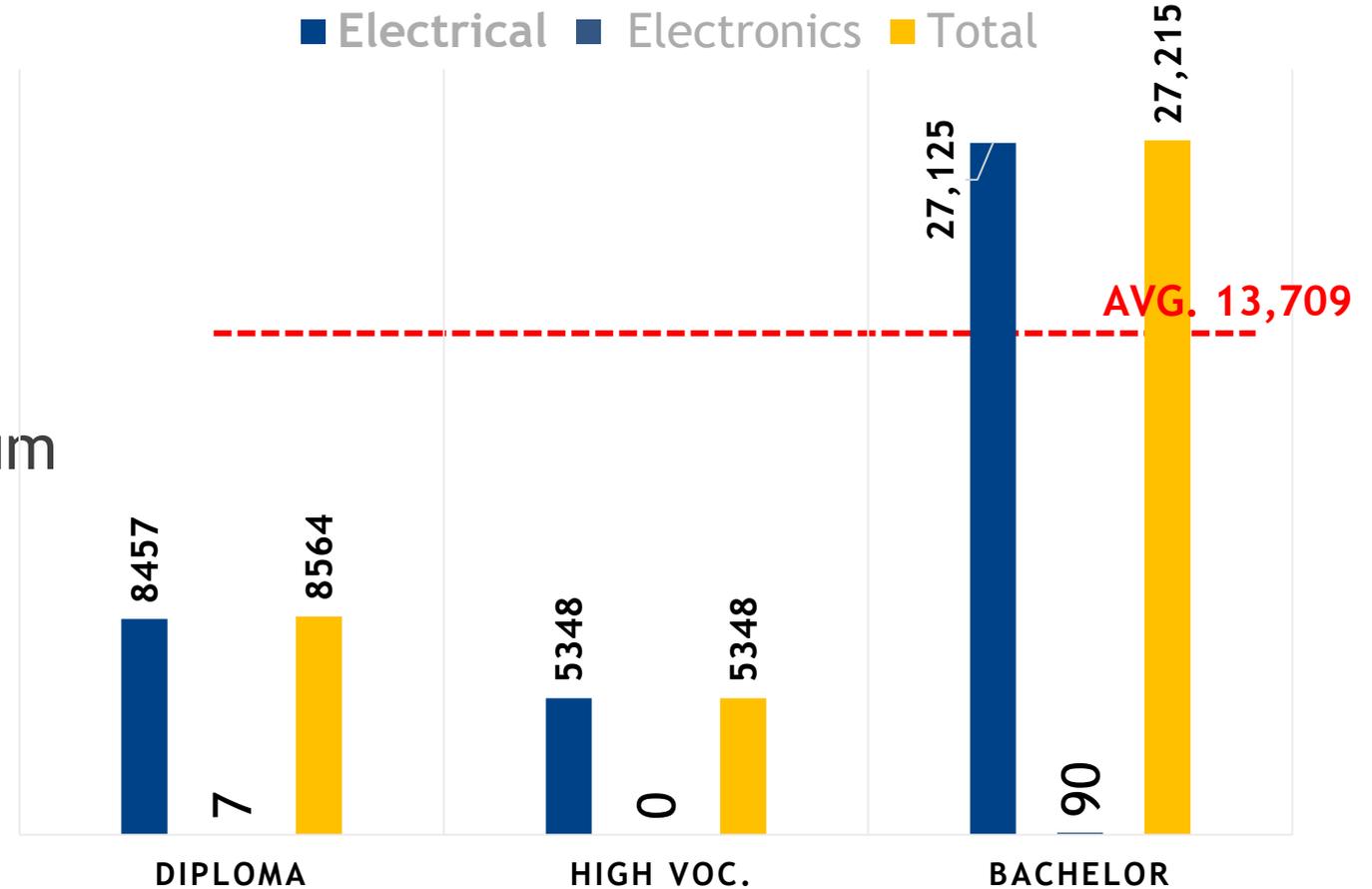


Availability of Human Resources in E&E Industry

Number of Workers in E&E Industry (Feb 2020)¹



NEW GRADUATE IN RELATE FIELDS (2020)²



Source: ¹ Electrical and Electronics Intelligence Unshows that Thailand is home a large pool of human resources.

it and ² <http://techno.vec.go.th>,

Office of the higher Education Commission 2020

Thailand Human Capital Index (HCI) Compared to the World

Global Rank	Country	HCI Value
1	Singapore	0.88
2	Hong Kong	0.81
3	Japan	0.80
3	South Korea	0.80
3	Canada	0.80
3	Finland	0.80
3	Macao SAR	0.80
3	Sweden	0.80
9	Ireland	0.79
9	Netherland	0.79

ASEAN Rank	Country	HCI Value
1	Singapore	0.88
2	Vietnam	0.69
3	Brunei Darussalam	0.63
4	Thailand	0.61
4	Malaysia	0.61
6	Indonesia	0.54
7	Philippines	0.52
8	Cambodia	0.49
9	Myanmar	0.48
10	Lao PDR	0.46

Source: World Bank. (2020). *The Human Capital Index 2020 Update : Human Capital in the Time of COVID-19.*

Supporting from Organizations



Undertakes, supports, and promotes the development of electronics and computer technologies through research and development activities



Promotes and supports the development and export of electrical and electronic products, as well as serving as a center of information for the industry



Research centers provide services ranging from technology transfer from universities and technology centers to financial assistance and business incubation



Supports and promotes the Organic and Printed Electronics Industry in Thailand through R&D, One-Stop-Service and to make Thailand the location of O&PE infrastructure



Promotes and supports the development of the electronics design industry in Thailand by producing a skilled and innovative engineer supply pool for the electronics industry



Develop and build capacity in materials technology by conducting research, development and engineering technology transfer manpower development, including infrastructure development

Human Resources Development Factors

Examples of E&E Related Academic Courses



CHULALONGKORN UNIVERSITY

- Electrical Engineering with specific courses in biomedical / quantum / nano / computer electronics



KING MONGKUT'S INSTITUTE OF TECHNOLOGY LADKRABANG

- Electronic Engineering with major in
 - semiconductor, smart sensor, and IoT
 - medical, automotive, and integrated circuits
 - digital, embedded system, and AI



KING MONGKUT'S INSTITUTE OF TECHNOLOGY LADKRABANG

- Electrical Engineering
- Communication and Electronics Engineering

Incentive on Human Resource Development¹

1. Tax Deduction for HRD

- Expenses on Human Resource Development can **deduct the income tax with 100% of actual HRD expenses.**

2. HRD Low-Interest Loan

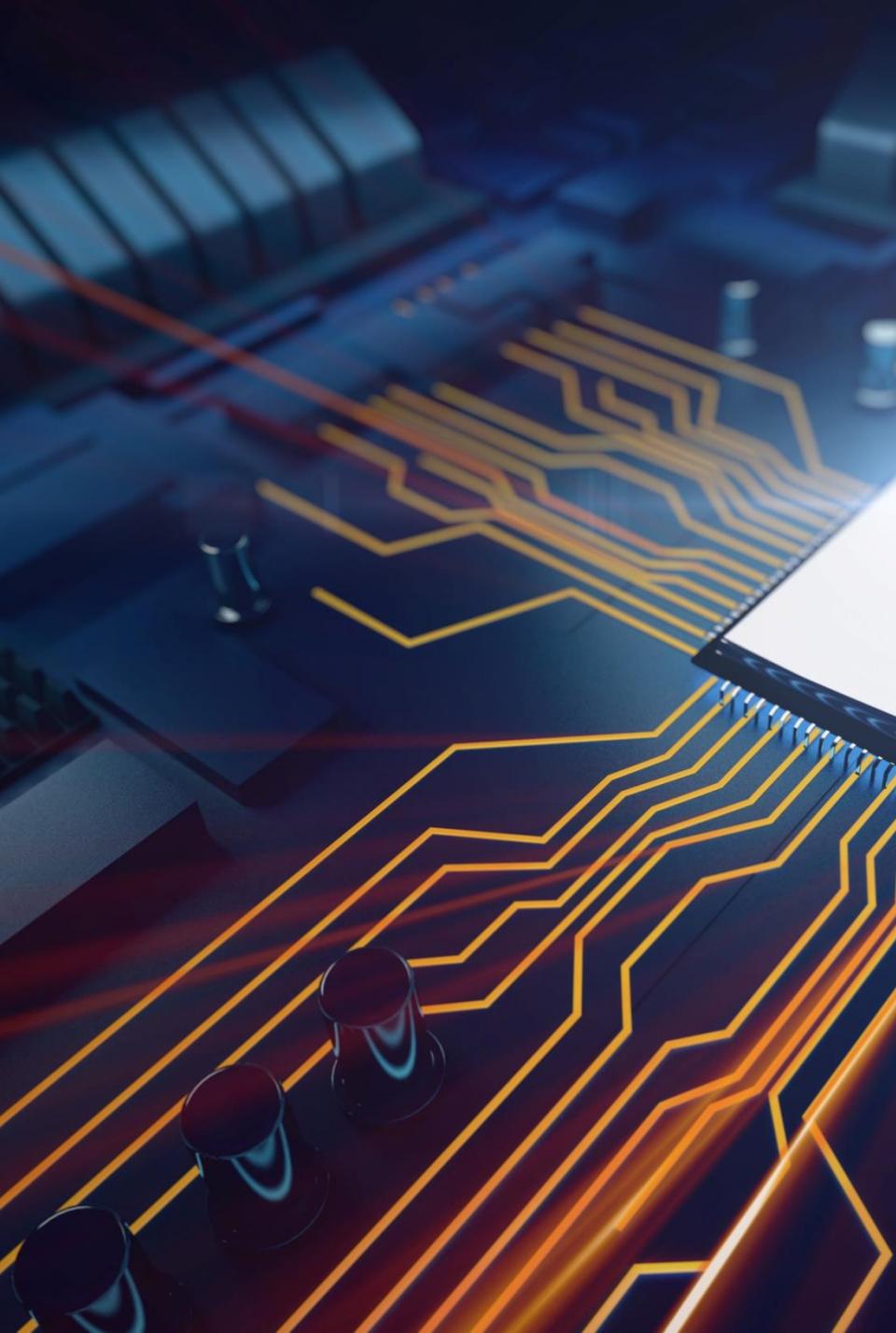
- Loan Cap. - **THB 1,000,000 (approximately USD 32,821) per project**
- Payment dues - within 1 Year
- **Interest - 0-3%**
- Can **renew the Loan** once the payment is done

3. Government Subsidies

- **Subsidies** on innovation / technology related field training courses of **THB 100,000 (approximately USD 3,282)**

Note: Exchange Rate 1 USD = 30.4685 THB (As of March 2, 2021, Bank of Thailand)

Source: ¹ Skill Development Promotion Division, Ministry of Labor



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Activity-based Incentives in Electrical & Electronics Industry

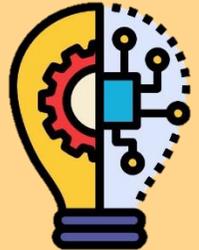
Incentives are based on main key factors

1) Product Technology – Smart Electronics or Smart Appliances

2) Primary Function Device – IC, HDD, Sensor

3) Process Technology

- Using Surface Mount Technology (SMT)
- Investing on R&D or Product Development or Software Development
- Investing on Advanced Machine – SMT on BGA Package or HDI PCB



Definition of Smart Electrical Appliances & Smart Electronics

by Electrical and Electronics Institute

Smart electrical appliances & Smart Electronics Device



1) must have electronic components which can detect and receive the data as a core component



2) must have a function, used to connect with other devices or equipment or network through wireless system

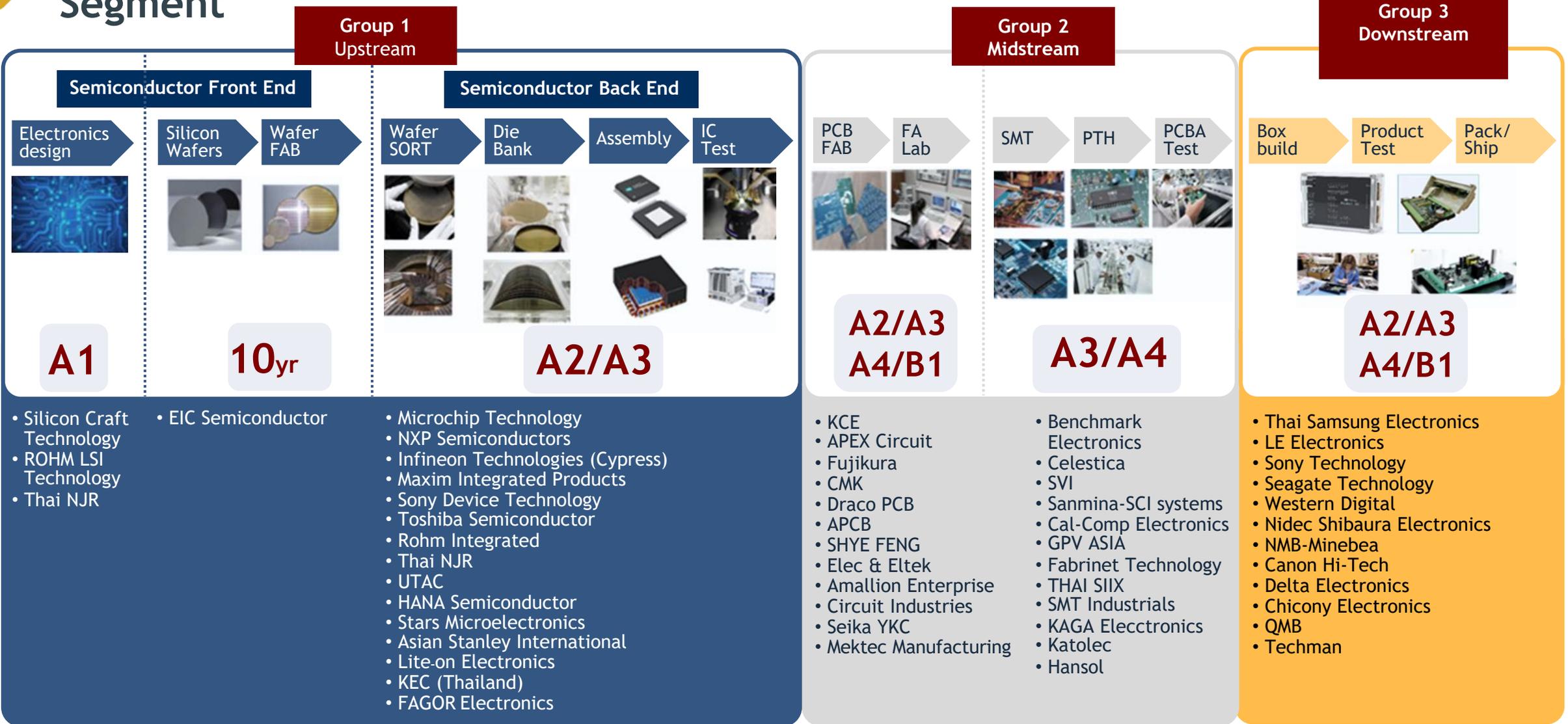


3) must have an operating or processing system embedded into such equipment or devices

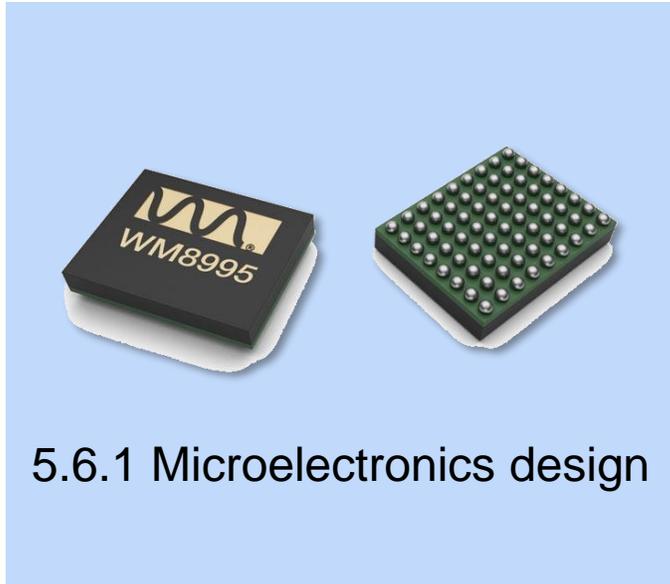
Applications



Thailand's E&E Supply Chain with Some Companies as Examples in Each Segment



Examples of Eligible Activities for Electronics Part



A1

8 years
CIT exemption
(no cap)

Examples of Eligible Activities for Smart Electrical Appliances & Smart Electronics

5.1.1 Manufacture of Smart Electrical Appliances

5.3.8 Manufacture of Smart Electronics

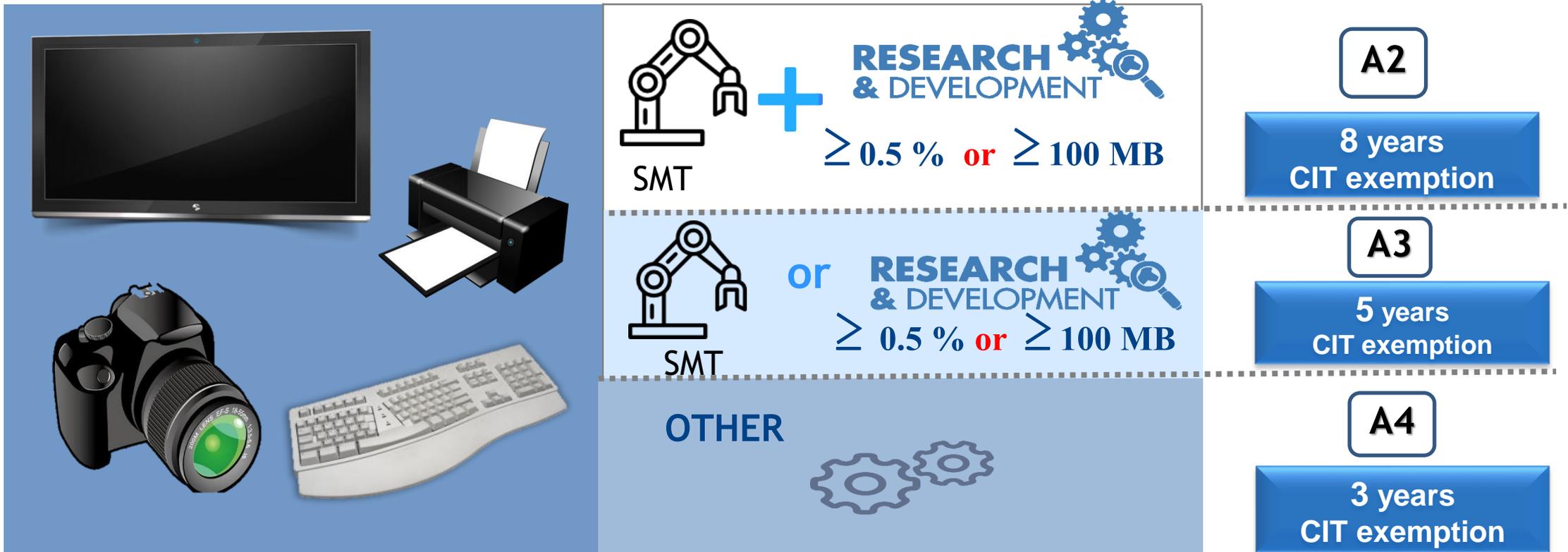
5.3.2.1 Manufacture of Emission, Transmission, Reception Devices for Optical Fiber and Wireless System



Examples of Eligible Activities for Electronics Product

5.3.5 Manufacture of Audio Visual Product

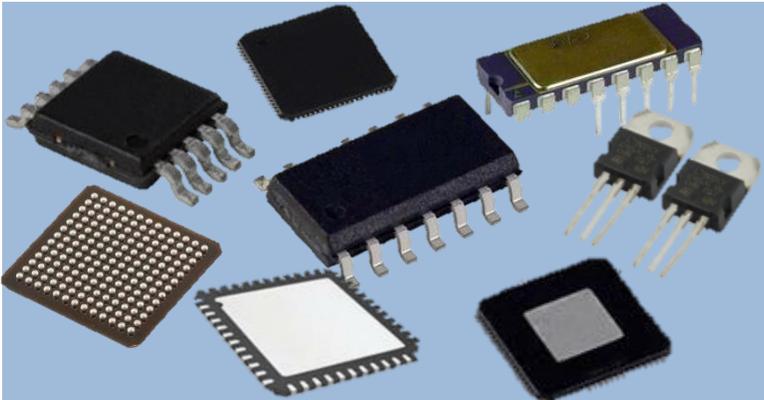
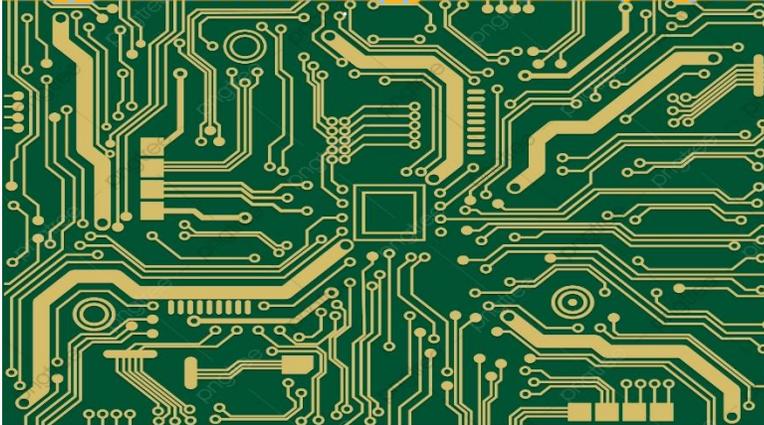
5.3.6 Manufacture of office electronics



Examples of Eligible Activities for Electronics Part

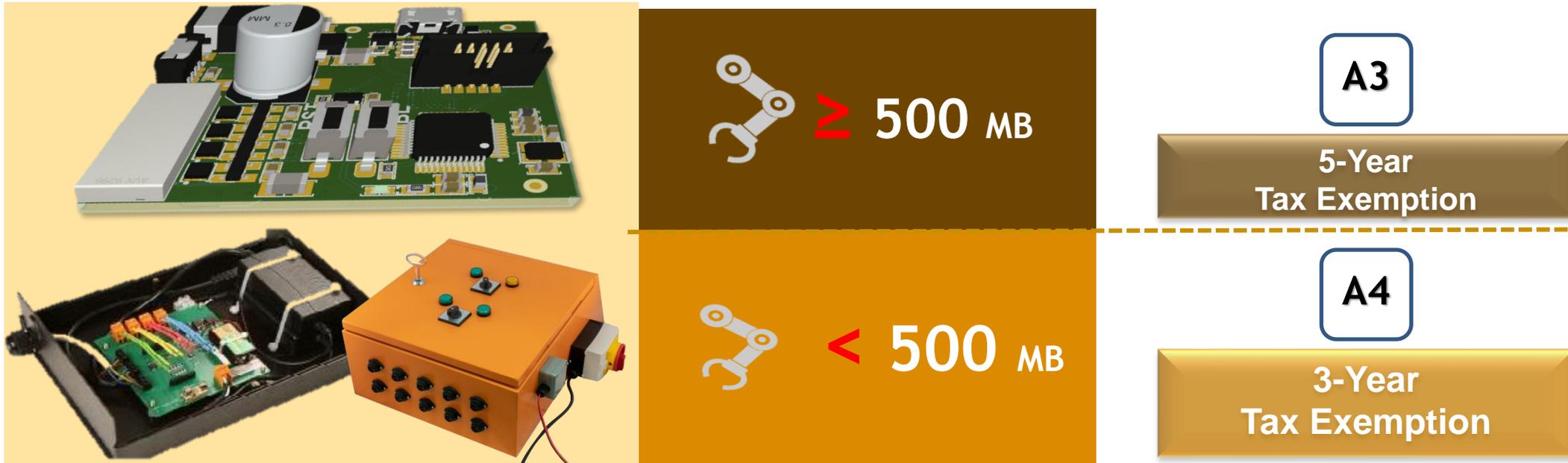
5.4.9 Manufacture of Semiconductor or Part

5.4.12 Manufacture of Flexible Printed Circuit Board and/or Printed Circuit Board and/or Part

	 $\geq 1,500$ MB	A2	8 years CIT exemption
	 $< 1,500$ MB	A3	5 years CIT exemption
	 $\geq 1,500$ MB	A2	8 years CIT exemption
	 $< 1,500$ MB	A3	5 years CIT exemption

Examples of Eligible Activities for Electronics Product & Part

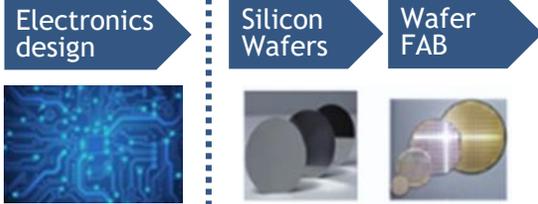
5.4.14 Manufacture of Printed Circuit Board Assembly (PCBA) and Build BOX



Incentive Package for Semiconductor and Related Industries

Group 1 Semiconductor

Semiconductor Front End



Semiconductor Back End



WAFER

CIT **10** yr

Semiconductor/ Part

CIT **8** yr  $\geq 1,500$ MB

CIT **5** yr  $< 1,500$ MB

Group 2 PCBA

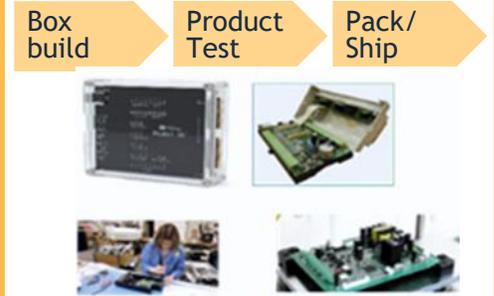


PCB
Multiple Layer or Flexible

CIT **8** yr  $\geq 1,500$ MB

CIT **5** yr  $< 1,500$ MB

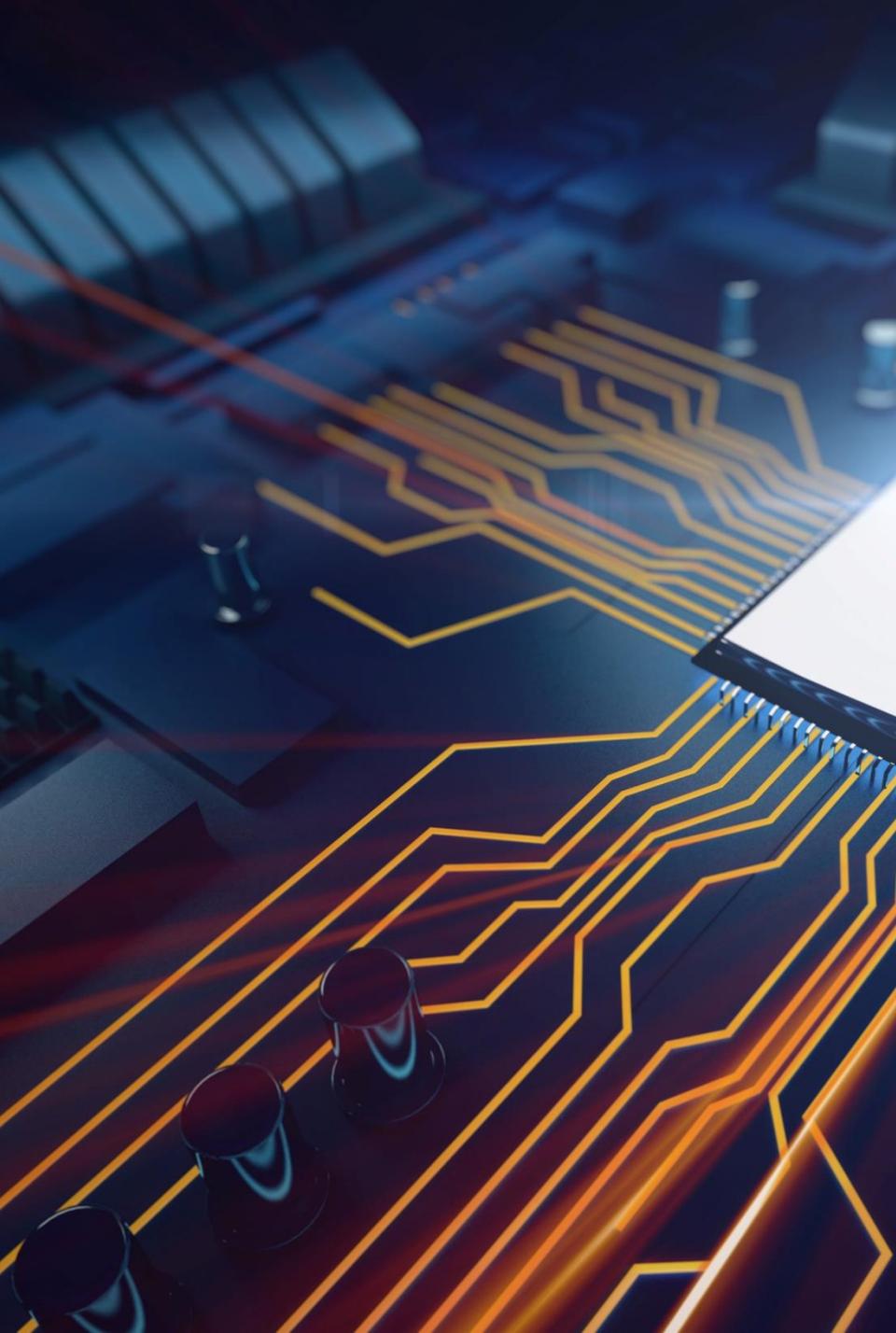
Group 3 Box Build, Consumer Products



Printed Circuit Board Assembly
(PCBA)

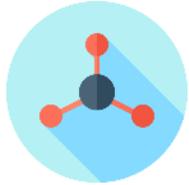
CIT **5** yr  ≥ 500 MB

ยกเว้น
CIT **3** yr  < 500 MB



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One Start One Stop Investment Center (OSOS) More Convenience, Less Time, More Efficiency!



Consolidating staff from numerous investment-related agencies



Easing & speeding procedures for new investors



Provides comprehensive information and advice on establishing operation in Thailand



Provides useful contacts with key public and private organizations



1-Stop for visas & work permits in 3 hours



Assist investors with various applications



18th Floor, Chamchuri Square Building, 319 Phayathai Road, Pathumwan Bangkok 10330, Thailand

Tel: 66(0)2 209 1100
Fax: 66(0)2 209 1199
Email: osos@boi.go.th

SMART VISA: Taking Thailand to New Heights with Foreign Talent and Technology



Privileges for SMART Visa



Maximum 4 years Visa
*Except Smart S



Permission to work with no work permits required



No re-entry required



Fast Track Service at International Airports

Thank You



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