

UCT to enrich Penang's Front-End Semiconductor Capital Equipment Ecosystem

Ultra Clean Holdings (UCT), one of the world's biggest suppliers of critical subsystems for the semiconductor and related manufacturing industries, announced the establishment of a manufacturing facility in Penang.

The 340,000 sq. ft. plant, which will be located in Batu Kawan Industrial Park, will focus on manufacturing semiconductor special equipment for system integration and gas delivery systems. Construction of the plant is scheduled to begin by end-2020, with initial production slated for the second half of 2021. Once operational, the plant is expected to create some 650 high-value jobs over the next five years, including roles in manufacturing, engineering, research & development and quality management.

NASDAQ-listed UCT is a major player in fluid & gas delivery critical subsystems, and a solution provider for mechatronics, module integration as well as ultra-high purity cleaning and analytical services. The company's revenues topped US\$1.1 billion in 2019, growing at a remarkable compounded average rate of 23% per annum since 2016. The Batu Kawan facility will complement UCT's global footprint, which includes manufacturing facilities in the US, Singapore, China, the Czech Republic and the Philippines, and a strong customer base that mainly comprises wafer fabrication equipment (WFE) Original Equipment Manufacturers (OEMs). The WFE segment is UCT's biggest in terms of revenue, accounting for 76% of total revenue in 2019 with its biggest client being Fortune 500 company and WFE heavyweight Lam Research, which contributed 45% to UCT's total revenue last year¹.

UCT was among the top ten suppliers of critical subsystems to the semiconductor and related manufacturing industries in 2019 - a segment with an estimated market value of US\$11 billion². UCT's presence in Penang will enhance the State's electrical and electronics (E&E) ecosystem, particularly in the front-end semiconductor capital equipment segment.

Global semiconductor manufacturing equipment sales to hit an all-time high of US\$70 billion in 2021, serving as a catalyst to critical subsystem players

SEMI, the global industry association that represents electronics manufacturing and design supply chain players, estimates that global semiconductor equipment sales by OEMs will grow 6% to US\$63 billion in 2020, and a further 11% to reach a record US\$70 billion in 2021. Within the WFE segment, global sales are expected to rise 5% in 2020 and 13% in 2021, driven mainly by continued growth in memory spending. DRAM and NAND in 2020 will surpass 2019's levels and is projected to grow by over 20% in 2021. This, in turn, will drive the growth of demand for critical subsystems, which include fluid delivery, vacuum, process control, power delivery and robotics.

Penang is gaining momentum in attracting investments from the front-end of the semiconductor equipment supply chain

Early this year, Penang announced a strategic investment by Lam Research, setting up a manufacturing facility in Batu Kawan Industrial Park. With extensive technology that spans numerous high-tech disciplines, Lam Research's presence in Penang will have far-reaching implications on Penang's E&E ecosystem. Lam Research's entry will invariably attract strategic vendors to follow suit, and provide supply chain localization opportunities. Lam Research's and UCT's respective strategic investments are testament that Penang is gaining momentum in attracting investments from leading front-end equipment global equipment supply chain players. In fact, Penang is already home to two other Top 10 suppliers of critical subsystems², namely, Switzerland's VAT Group and US-headquartered Advanced Energy. Both of these companies have been expanding in Penang over the past 2 years.

These new and re-investments mark a milestone in Penang's industrial evolution, and demonstrate how key strategic investments can shape and influence the development of the local industrial ecosystem and economy. **With Penang's robust ecosystem in back-end equipment, automation and semiconductor testing and assembly, the development of the front-end equipment supply chain will power Penang further to serve the industry's end-to-end needs.**

As the Silicon Island of Asia, Penang is irrefutably a key pillar to Malaysia's external trade, particularly in the E&E industry. Malaysia's E&E sector recorded a trade surplus of RM127 billion in 2019, representing 93% of the country's total trade surplus, while Penang recorded RM99 billion total trade surplus during the period. In terms of investments, the State secured RM58.5 billion in approved manufacturing investments in the E&E and machinery & equipment (M&E) industries during the period from 2010 to March 2020, representing 39% of Malaysia's total approved investment in these two industries.

¹ <https://www.uct.com/English/investors/events-and-presentations/default.aspx>

² https://www.vlsiresearch.com/public/cms_pdf_upload/press_200409/Top-10-Critical-Subsystems-Suppliers-of-2019.htm