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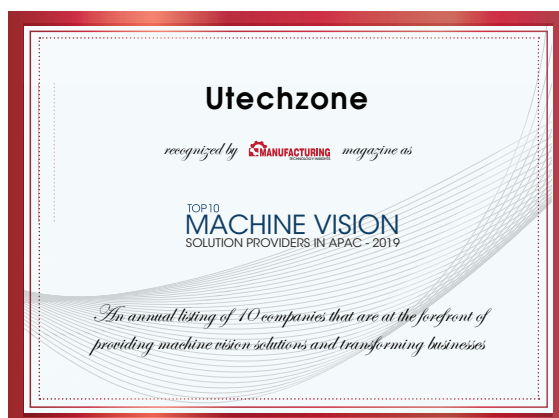
Top 10 Machine Vision Solution Providers in APAC - 2019

With the advent of digital technologies, the world witnessed the commencement of several marvels such as robotics and artificial intelligence that have evolved to become an extension to human cognizance and capabilities. Moreover, there have been significant developments to perfect these attributes and do a finer job. One such development that is spearheading the prospects of digital technology is machine vision aka MV. Growing rapidly with a soaring demand for vision-guided robotic systems in industries such as pharmaceutical & chemical, food & beverage, automotive, and packaging, MV has become the benchmark for robotics experiencing a widespread application in quality inspection and automation.

Eliminating the human eye error in detecting, observing, and examining production activities of industrial

manufacturing, MV is all set to replace manual measurements and inspection. Equipped with the power of exceptional smart cameras and image processing to perform measurements and inspections, MV is slated to gain considerable momentum in the food & packaging, automotive, and pharmaceutical verticals in the coming years.

As MV transitions to consolidate its stance, several new players specialized in the technology have surfaced to showcase their unique expertise with MV and its use cases. Acknowledging this transition of the new age digital technology, a panel of industry experts, CEOs, CIOs and the editorial team at Manufacturing Technology Insights have shortlisted a column of industry players who have showcased exceptional market potential in the modern MV space. The following list features the “Top 10 Machine Vision Solution Providers in APAC - 2019.”



Company:
Utechzone

Description:
Renders a complete solution for a variety of industrial quality control testing, replacing traditional manual visual inspection, and improving the quality control efficiency

Key Person:
Joseph Tsuo
CEO

Website:
utechzone.com.tw

Utechzone

A New Touchpoint for AOI Equipments Manufacturing



“**T**he manufacturing industry will continue stepping toward higher automation. The importance of machine vision is surging with the market having tremendous potential,”

says Joseph Tsuo, the CEO of Utechzone. As Asia-Pacific is becoming the main manufacturing base for the whole world, Utechzone with its strategic position in the market empowers various industries including printed circuit boards (PCB), LCD, and semiconductor manufacturers. Since 1992, under the guidance of Tsuo, the firm has emerged as the leading automatic optical inspection (AOI)/automated vision inspection (AVI) systems manufacturer in Taiwan. To substantiate the statement, Tsuo cites an example of the first IC substrate AOI system made in Taiwan. The system has been widely sold to cover more than 90 percent of IC substrate manufacturers worldwide, which proves that Utechzone is not just a leader in Taiwan, but a company that steers ahead of its peers on a global scale.

Powered by a high-resolution charge-coupled device (CCD), multiple optic modules, precise mechanisms, complex electrical controls, and sophisticated algorithms, Utechzone’s AOIs/AVIs leverage machine vision to detect product defects and reduce the limitations of legacy optical instruments. Here, CCD captures images of inspection targets under specific lighting structures and subsequently, algorithms help determine defects. Further, Utechzone’s in-house R&D center in Taiwan ensures optimal quality in the manufacturing of every product. Tsuo mentions that aging human inspection practices are steadily becoming inefficient as it increases fatigue among personnel. With AOI/AVI, the company brings forth a data-driven approach to identify defects and further segregates them into different categories using Artificial Intelligence to supplement the product quality.

However, initially, Utechzone focused only on the printed circuit board manufacturing such as IC substrate, HDI, flip chip, flex PCB, and so on. After years of hard work, Utechzone not only keeps the highest market share for IC substrate manufacturers but continues to widen coverage to provide solutions for flip chip, HDI, and flex PCB manufacturers.

With success garnered in PCB AOI/AVI, Utechzone applied its expertise in flat-panel display (FPD) inspection. As the majority of FPD manufacturers are based in China, Utechzone established more than 20 customer service centers in Mainland China to cater to the problems of all its consumers. With the rate of development of next-generation panel sizes, Utechzone is consistently upgrading its technology and algorithms to bring state-of-the-art developments in the sphere. It also offers customized solutions according to unique requirements of manufacturing components including OLED, AMOLED, LTPS, and IGZO.

“**Utechzone has emerged as the leading automatic optical inspection (AOI)/automated vision inspection (AVI) manufacturer in Taiwan**

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Utechzone now also possess the highest market share for LCD CF/Cell AOI and LCD API in the Greater China area. In 2018, Utechzone extended to chip on film (COF) and semiconductor inspection, aiming to provide a total solution and become the AOI/AVI systems manufacturer with the greatest coverage to balance industrial fluctuations.

“Our AOI replaces the brain, eyes, and arms, enabling human beings to experience high precision at a reasonable cost,” says Tsuo in concluding the definition of AOI. Having started with just four personnel, the firm now employs more than 400 employees with revenue expanding to NTD 3,115,762 in thousands in the fiscal year 2018. To keep up with the growth in the future, Utechzone has agents or affiliated companies in Korea, Japan, Vietnam, and Singapore to diversify its footprint from Taiwan and emerge as a market leader in Asia-Pacific. 