



## **Golden Award**

Edge AI NB Touchpad with Accessibility Mode & Gesture





ELAN Microelectronics Corp. 義隆電子股份有限公司

Company Website

## Winning Reason

This unique touchpad was created to support users with disabilities by using edge computing AI image recognition models, giving diverse users control with the touch of a thumb or any convenient joint on the simple interface for quick mouse operation. The touchpad can adjust the right-click activation range and double-click speed while also incorporating gesture recognition mechanisms. These features make computing more convenient and accessible for people with disabilities, for a technically innovative product that also helps level the social playing field.

## **Product Feature**

ELAN use self-developed Edge AI algorithm (YOLO) to learn and adapt to the unique hand shapes of different individuals with disabilities. By leveraging AR technology, the system ensures objects could reach every positions on the touchpad and every traces, addressing various corner cases. Furthermore, Transfer Learning is applied to adapt the model to each individual' s unique hand, enabling accurate operation for all users. ELAN utilizes AI algorithm to learn various hand gestures, ensuring precise recognition of gesture trajectories. This allows users to accurately activate applications through gestures. Using AI algorithm to learn non-finger type of touch actions and smoothly used on touchpad. This non-finger type of touch actions are often excluded due to palm-rejection recognized.

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