

# NEC Electronics Corporation

## Nordson DAGE Case Study

Nordson DAGE is the market leading provider of award winning bond testing systems for destructive and non-destructive mechanical testing of electronic components. This case study demonstrates our commitment to providing solutions that help our customers succeed.

NEC Electronics Corporation is a multi-national company employing over 24,000 people worldwide. The company develops, manufactures and services the latest semiconductor technology that is used in a wide range of industries including automotive, industrial and consumer electronics.

### In Action

The packaging technology division of NEC Electronics, located at the global headquarters in Japan, use Nordson DAGE bond testing equipment in their product development as Mr. Fumiyoishi Kawashiro, Assistant Manager explains: “The constant demand for smaller form factors, higher performance and increased functionality in every type of electronics device means we are continually working to develop packaging innovations. We work with all types of electronics devices from portable and consumer devices to PCs and network servers. The Nordson DAGE bond testers enable us to ensure our innovations will meet the demanding standards of our customers.”

To help meet these requirements the packaging technology division develops innovations such as higher pin counts, smaller footprints, and higher densities (allowing more chips to be mounted per unit of surface area on device boards). One of these advances is a stacked memory packaging technology that allows eight memory chips and one controller chip to be delivered in a single compact package.

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Nordson DAGE 4000HS bond tester performing impact shear test

“The Nordson DAGE bond testers play a crucial role in the development process in the testing of solder joint reliability” said Mr Kawashiro, “as such miniaturization of large scale integration of circuits can lead to a reduction in the mechanical stress buffer role played by the solder joints between the interposer and the board. The Nordson DAGE 4000 machine is used to perform solder ball joints shear and pull tests and the Nordson DAGE 4000HS machine performs high speed shear tests to investigate the durability of the solder ball joints against impact loads”.

## Why Nordson DAGE?

When evaluating which bond testing equipment to purchase it was a simple choice. Kawashiro-san explains, “We chose Nordson DAGE as not only are they the industry standard but testing on a Nordson DAGE machine acts as a seal of approval due to the integrity of results.”

Kawashiro-san goes on to highlight another decisive factor, especially relevant in a global organization such as NEC Electronics, “The Nordson DAGE equipment has exceptionally good data correlation so their machines can be used in locations worldwide and for a wide range of applications.”

## Increased Efficiency

Since using the Nordson DAGE machines, the laboratory at NEC Electronics Corporation has seen efficiency increase dramatically. “The team has been very impressed with the Nordson DAGE equipment and found it extremely intuitive” describes Kawashiro-san. “The results speak for themselves. When we started to use the Nordson DAGE 4000 machine it speeded up our testing process by 300%. Based on this, we purchased the Nordson DAGE 4000HS machine which improved the detection rate by a massive 600%.”

“ I am constantly recommending Nordson DAGE to people, including all of our subsidiary companies. ”

**Fumiyoshi Kawashiro**  
**Assistant Manager**  
**NEC Electronics Corporation**

## Outstanding Service

From the outset, Kawashiro-san has been impressed with the level of support provided by Nordson DAGE: “From our initial contact with Nordson DAGE we have experienced an excellent level of service; always friendly and helpful. We were impressed with the quick delivery and smooth installation, at which Nordson DAGE provided excellent training ensuring that everybody in the team understood the system well.” concluded Kawashiro-san.

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**Fumiyoshi Kawashiro**  
**Assistant Manager**  
**NEC Electronics Corporation**

**For more information, please contact your Nordson DAGE regional office or speak with your Nordson DAGE representative, all of which are listed on [www.nordsondage.com](http://www.nordsondage.com).**

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