Case study
PFU Techno Wise Limited

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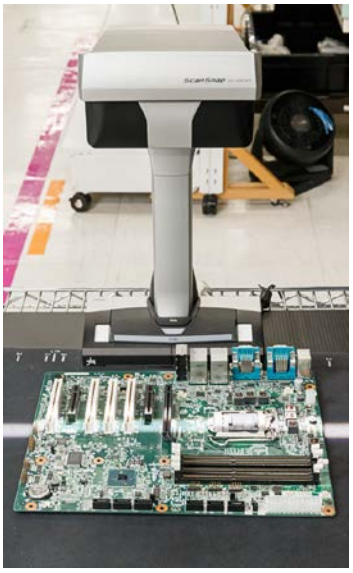
Hiroyuki Nishikawa, Director, Parts Production, PFU Techno Wise Limited



The customer

Country: Japan
Industry: Manufacturing
Founded: 1979

The challenge

To maintain traceability, PFU Techno Wise records the serial numbers of components from other vendors that are used on its circuit boards. While past practice was to enter these by hand on a paper checksheet, this was difficult and time-consuming work because staff would have to write down them a few digits at a time, repeatedly switching between pen and magnifying glass.

The solution

Installing an SV600 contactless scanner made it possible to record multiple serial numbers at once, thanks to its ability to perform scans without touching the often uneven surface of circuit boards, and to its having the depth of field to bring all parts of the board into focus.

The customer

Established in 1979, PFU Techno Wise is a one-stop supplier for everything from design to prototyping to high-volume production of IT devices. With production lines capable of producing a wide variety of products in small quantities, it has established an infrastructure for using ICT to combine both on-demand and conventionally planned manufacturing. Boasting some of the most advanced production lines in Japan, its production capabilities extend from consumer products such as ScanSnap, to industrial-use hardware that requires advanced customization.

Complete traceability data collection with one scan of a circuit board

The SV600 is installed at the end of the circuit board production line. A worker places each completed board under the SV600 to scan its top and bottom sides. The process is quick and does not hold up production in any way.

"This is where we scan the serial numbers of the CPUs and numerous other circuit board components from third-party suppliers. This is done to ensure traceability in the event of a subsequent fault, a process we call 'trace collection'," explained Hiroyuki Nishikawa, Director of Parts Production at PFU Techno Wise Limited.

The contactless SV600 scanner can indeed scan even items like circuit boards, which have an uneven surface. Furthermore, because the depth of field is sufficient to bring all parts of the board into focus, all of the component serial numbers can be collected at once regardless of where they are on the board. PFU Techno Wise reaps the maximum benefits of the SV600.

The benefits

- More reliable data collection (elimination of human error)
- Reduced time and effort (data collection completed at the push of a button)

Products and services

- ScanSnap SV600

Challenge

There was a time when this task used to cause a lot of problems. Yoshimi Kato, the person who suggested using the SV600, told us about the trial and error they went through before installing the scanner.

"We used to write each serial number by hand on a paper checksheet. The small print size and length of the numbers made it a real grind, requiring us to keep switching between magnifying glass and pen."

While they tried using a digital camera to record the numbers and thereby avoid having to go through all this effort, it was not an ideal solution because they had to vary the angle of the shot and check the focus each time, depending on the size of the circuit board.

Benefits

This led to the bright idea of using an SV600 to scan an entire board at once. When they tried it, it proved to be a great success. Along with solving the focus problem, traceability data can be collected and stored as an image through a simple "place and scan" process thanks to the ability of the SV600 to automatically clip the image to the size of the circuit board.
This delivered significant savings in both time and effort, while also eliminating the need for paper. It also improved reliability by eliminating the risk of misrecording data. Ms. Kato's bright idea has been commended within the PFU Group.

"The collection of traceability data in case of a fault is one of those hidden obligations that we undertake as part of our responsibility as a manufacturer. What is particularly significant about the improvements that the SV600 has delivered in the efficiency and reliability of our work is that it has freed up effort that can now be devoted to other areas," noted Mr. Nishikawa.

The circuit board production line currently has four SV600s that are in regular use providing rigorous support that guarantees the trust of customers who rely on the company's products.

Traceability data collection sequence

[1] When the barcode is scanned, the production line system identifies the product and displays details on a monitor installed on the work bench.

[2] Pressing "Scan" on the screen activates the SV600.

[3] The SV600 performs a contactless scan. Both the top and bottom sides of the circuit board are scanned. The photograph shows the

[4] After checking the scan on-screen, an operator sends the data to a database. This simple procedure is sufficient to ensure traceability.

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