

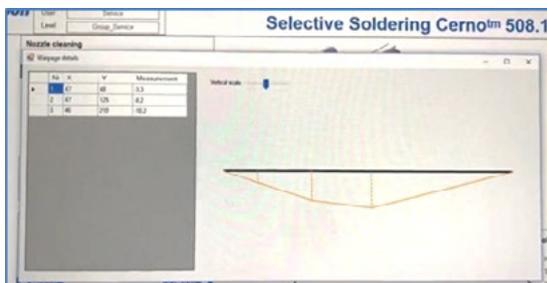
Board Warpage Sensing

Laser-Based Measurement for Improved Process Control



Overview. The Board Warp Sensing system measures the height differences of a printed circuit board assembly as it is preheated and calculates the downward deflection. The system automatically corrects all Z-axis values compensating for any warpage of the printed circuit board and eliminates the need for traditional and labor intensive manual adjustment of the soldering program.

Data from the Board Warp Sensing system is input into the PhotoScan software which automatically adjusts Z-axis program values compensating for any board deflection.



Board warpage sensing software interface

Features and Benefits

- Measures board warpage and downward deflection of circuit board during preheating
- Board warpage sensing system eliminates the need for labor intensive manual adjustment of soldering program
- Easy setup significantly minimizes operator interface reducing the possibility of human error and shortening programming time
- Board warpage sensing system utilizes laser-based measurement technology requiring minimal preventative maintenance

■ The Board Warpage Sensing system is an available optional feature on Cerno® 508.1, Integra® 508.2, 508.3, 508.4 and 508.5 models

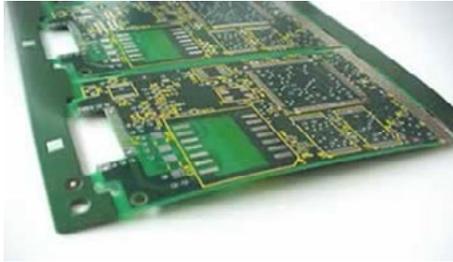
Integrated Solution. The Board Warp Sensing system fully integrates with closed-loop process controls contained in Nordson SELECT's PhotoScan software providing seamless operation for your selective soldering process. Nordson SELECT's closed-loop process controls enable successful results for a full range of soldering applications and ensures stable and repeatable results for high-yield production.

Experience. With over a decade of selective soldering experience and more than a thousand systems currently in production, Nordson SELECT is committed to providing innovative solutions for all selective soldering needs. Our global support network, including state-of-the-art application development labs, provides customers with world-class know-how and application expertise.

Board Warpage Sensing

Barcode Warpage Examples

Circuit boards populated with heavy components or have routed or scored panels tend to warp, or sag, towards the unsupported center of the board in the Y direction. This is often intensified when the board is preheated. The Nordson SELECT Board Warpage Sensing system uses a laser to measure the Z-axis deflection and develops an offset correction. During production the solder nozzle incrementally reduces the Z-axis height as it nears the lowest area of the circuit board.



Typical printed circuit board warpage

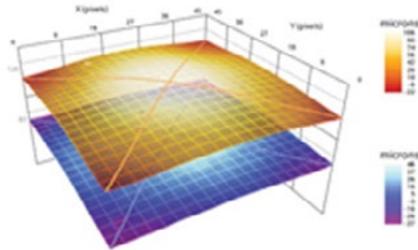


Illustration of printed circuit board warpage

Compatible with Cerno® 508.1, Integra® 508.2, 508.3, 508.4 and 508.5 models

For more information speak with your local sales rep or contact your regional office.

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