



Dec 2009

UPDATES

Application news updates

About us

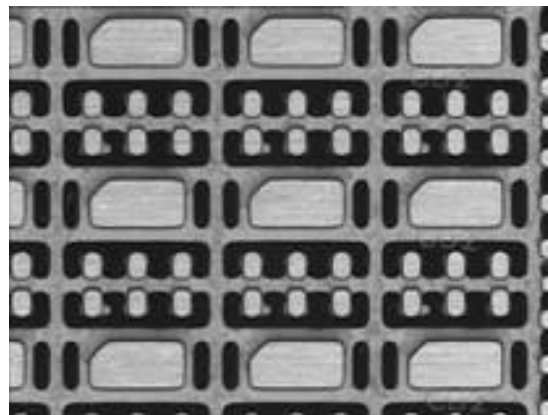
Hypertronics has been in the laser industry since 1991. Starting out as a laser distributor, we have grown to develop and manufacture our own high quality laser systems and vision inspection/verification systems. Our relentless effort and investment in R&D, coupled with our talented pool of competent engineers, have enabled us to come up with some of the most advanced and practical laser solutions in the industry.

Our strength lies in our nimble flexibility in working with customers to come up with innovative, cost effective and practical solutions to meet their requirements. By integrating our expertise in the area of *laser, laser applications, software, vision, optics, mechanical, electronics & electrical, and controls*, we offer **high precision, high speed laser solutions to meet tough applications worldwide.**

Application at glance



Audio Keypad Marking



Transparent Chip Package Marking

Laser Marking on Audio Keypad

Laser Marking on Keypad usually out-perform conventional ink marking in term of quality, cost and output in long term. The laser marking process is to remove the top layer paint on the surface to reveal the background layer color.

Our laser setup consists of HTFB series fiber laser and Scanhead module controlled by our Hypermark laser marking software. The Scanhead was equipped with focal lens that provides a 30 μ m spot size. The objective on process is to remove the surface paint to create the keypad mark.

Result:



Figure 1: Before Laser Mark



Figure 2: After Laser Mark

As to achieve precision laser mark, we set up HTFB series Fiber Laser with ScanVision™ module. HYLAX proprietary ScanVision™ Laser System incorporates vision camera system, in-line with laser beam path, through the galvanometers beam positioning system. Real time vision compensation for work piece drift or fiducial find accurate to a few microns tolerance can be achieved.

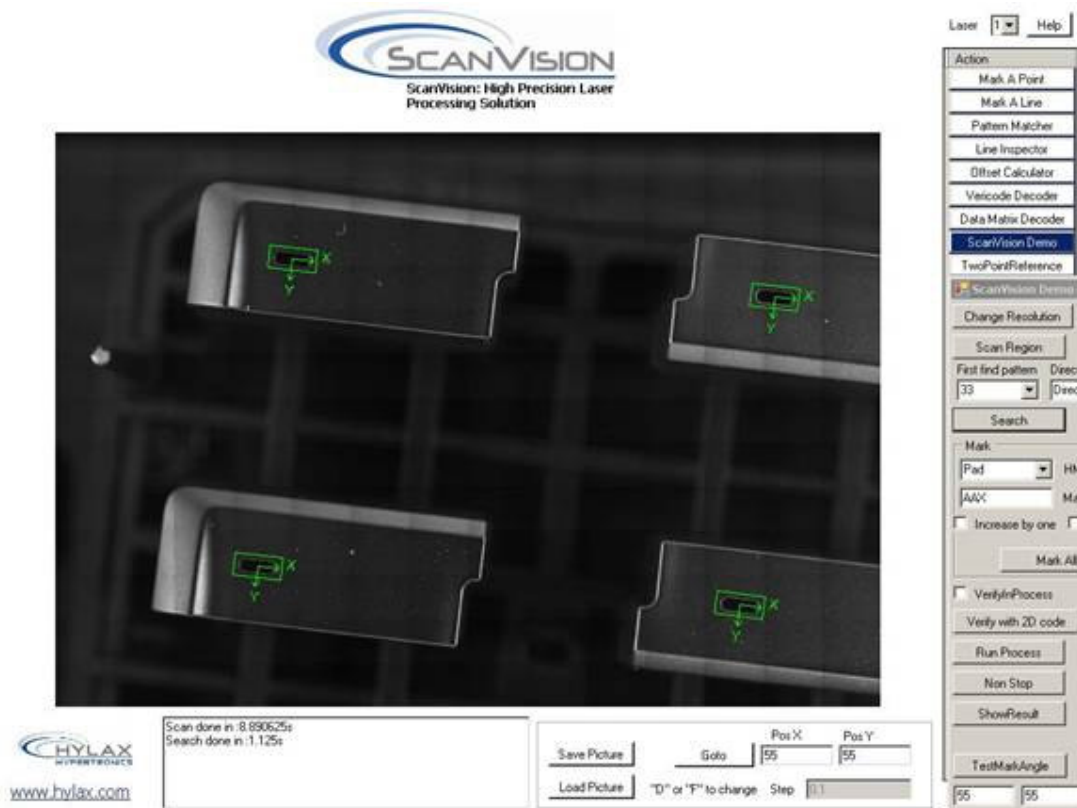
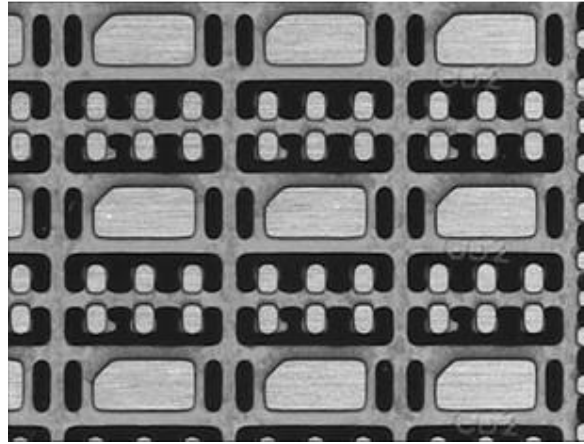


Figure 3: Green box represent the learned pattern for position alignment

Laser Marking on Transparent Chip Package

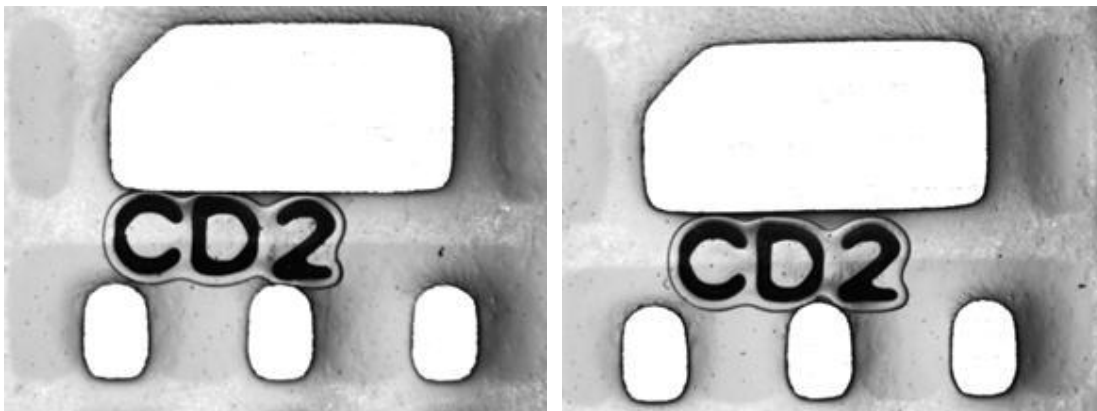
Chip package marking getting more challenge as chip package size nowadays getting smaller. Laser marking process is emerged to achieve micro level marking which posed challenge to ink mark.



Our laser setup consists of HTCO series CO2 Laser and Scanhead module controlled by our Hypermark laser marking software. The Scanhead was equipped with focal lens that provided a 50 μ m spot size. The objective on process is to mark character size of 0.3mm.

Result:

Height –300 μ m Width – 250 μ m
Spacing – 40 μ m Line Width – 50 μ m



As to further enhance laser mark quality, post mark vision inspection is implemented to give customer quality control checking on the marked sample.



Figure 4: Green box represent the character inspection

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