

Machine Vision Improves Pill Inspection

Pharmaceutical manufacturers have strict inspection guidelines for their products. Medicine tablets, for example, must be consistent in thickness, hardness, and weight. For chewable and time-release tablets, the most important of these is hardness.

To test hardness, a tablet is crushed between two mechanical jaws and a load cell measures the force required to break it. This works well if the tablet is perfectly round, but for any other shape the measurement will vary depending on the way the tablet is oriented. For example, crushing an oval tablet oriented along its long axis requires a different amount of force than if it is oriented along the short axis. Automated testing systems could not orient tablets in the same direction for each test, so users resorted to methods such as orienting each tablet manually or measuring a large amount and averaging the results. These methods were inconsistent, time-consuming, and wasteful.

A new automated testing system developed and marketed by Elizabeth Hata International uses a machine vision system to solve this problem. The ElizaTest 3+ tester feeds tablets into a testing module, where a camera image is captured by a Data Translation [DT3155](#) monochrome PCI frame grabber installed in a PC. Custom software analyzes the image and directs the module to orient the tablet to the correct axis. Programmers at Elizabeth Hata utilized Data Translation's Frame Grabber SDK™ software development kit to implement the frame grabber into the application. The system is used for experimental work as well as consistency measurements for current products.

For more information, click on [DT3155](#) or call (800) 525-8528.