Condor *Sigma* Vision system

Image capture

The XYZTEC Vision system is ideal for providing high resolution images. These images can be used for customer presentations, operator training, or failure analysis reporting.

Software system

Our vision system is an integral part of the Condor *Sigma* software. The standard image capture camera has an offset from the tool test point. If desired, the software can be set up to capture an image of a failed pull, shear or any other test just completed. With one click the system will instantly calculate the offset and move to the camera position to capture the image. Captured images are stored with the measurement data. The image can be recalled when necessary to enable further analysis.

Image options

XYZTEC offers three camera options as part of the image capture capability. In addition to the left side offset camera, we offer a right side offset camera that can be used in conjunction with a different objective for higher magnification or

Partially transparent Condor *Sigma* measurement unit showing the integrated camera solution

greater field of view. When two magnifications are required, two rigidly mounted cameras provide better inherent accuracy than one camera with a zoom.

We also offer a camera that can be mounted on a trinocular microscope or from the side. These cameras can provide live video capture. This is a great function for automation, teaching and data capture for customer presentations.

Camera installed on trinocular microscope

Specifications

Camera	2592x1944 pixel resolution 5 Mega pixel progressive scan sensor >65 dB dynamic range
Magnification 3x objective= 400x	2x2 mm field of view 2 µm optical resolution 30 µm Depth of focus
Magnification 6x objective= 800x	1x1 mm field of view 1.5 µm optical resolution 20 µm Depth of focus
Illumination	Ring light
Magnification is based on a screen with a resolution of 1440x900 pixels	

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Built-in LED lighting

XYZTEC's image capture system utilizes the latest LED technology. The software controls the LED brightness and color. Automatic or manual operation are supported. If desired, settings for conditions such as brightness, intensity and LED color selection can be defined. We offer multiple color choices and the ability to operate in flash mode.
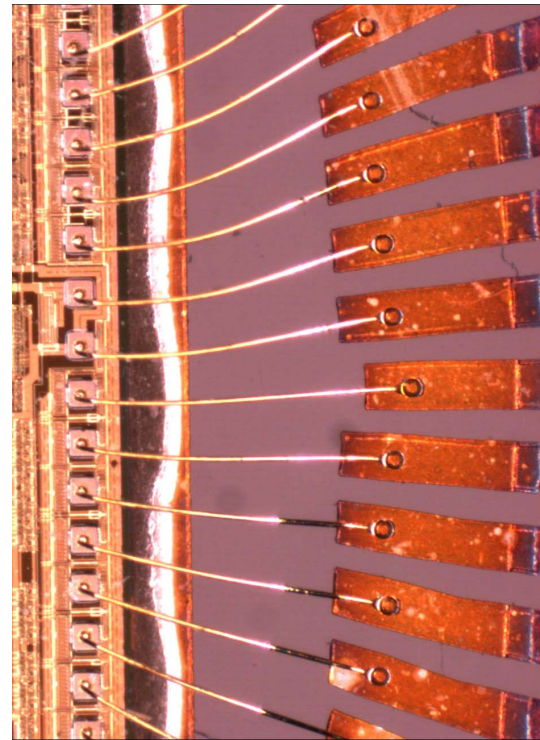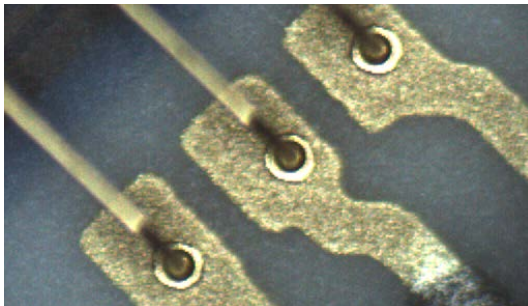
XYZTEC Vision solution captured with 3x objective

Fiducial Mark Recognition

Capability for accurate positioning

For fully automated tests, a fiducial mark system can be ordered as part of our image capture system. This capability allows for accurate positioning of tools prior to the start of an automated test sequence.

In automation mode, the software scans for fiducial marks. After identifying their X-Y coordinates, the Condor *Sigma* can begin a fully automated test sequence. Our software can import CAD data or it can be taught by teach and repeat.

The frame grabber camera function allows the operator to capture images before and after a test sequence.
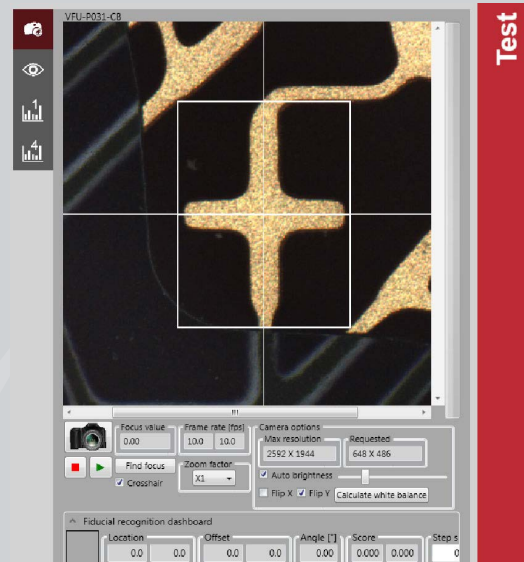
XYZTEC Fiducial mark recognition

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