

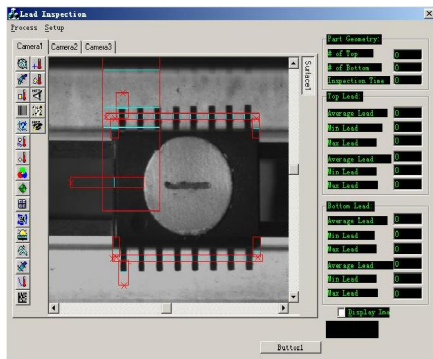


Machine Vision Software Packag The Software Solution for Real Time Machine Vision!

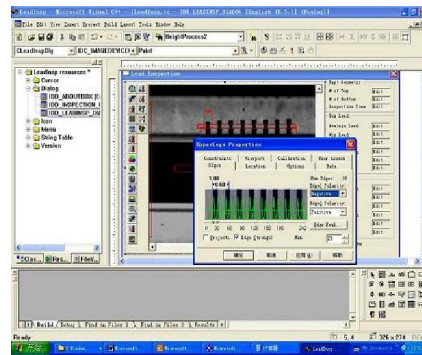
XCaliper是第二代PC-based机器视觉软件开发工具，产于美国，主要有以下特点：

- ①操作简单、易学易用，大大缩短开发周期，平均开发周期只有其它软件包的1/3。
- ②在程序完成并进行现场调试的阶段，只需在线调整工具的参数值并保存，修改的参数马上生效，无需重新编译，节省2/3的现场调试周期。
- ③XCaliper图像处理软件的测量工具功能强大，可分析至1/70的亚像素精度，减少了对硬件分辨率的要求，节省开发成本，提高了分析精度和重复性。
- ④以上功能是通过一组OCX控件实现的，可以直接插入VB，VC，Delphi等开发环境，可以很方便地和数据库、Office等其它软件以及程序的其它部分进行数据交换，适合大型、复杂的工业控制系统的需要。
- ⑤开放式的开发环境使得XCaliper可以和几乎任何硬件采集系统结合，包括各种板卡，USB、1394 camera等（甚至将 来新的硬件），只需将图像句柄传送给XCaliper，就可以处理了。同时如果有必要，在处理过程中可以添加自己的 算法和处理模块，有很高的灵活性。

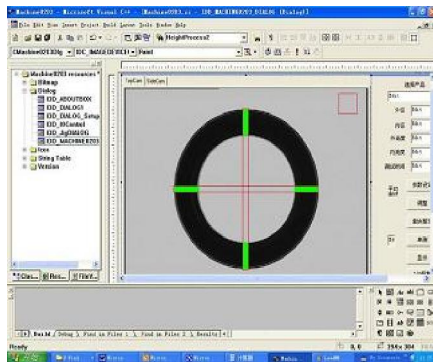
XCaliper 应用范例：



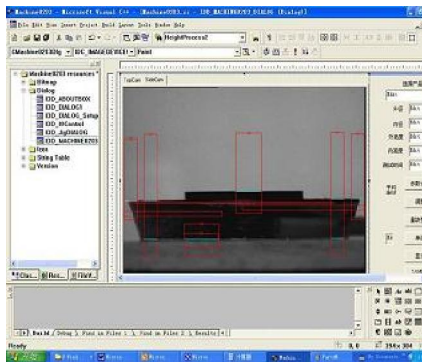
集成电路管脚检测：(操作界面)



程序编译界面：在开发环境中添加控件，加载一幅图像和相应的工具并调整工具的参数，并实时读出工具的结果，到目前的状态不需要添加一行代码。随后只要在程序中添加简单的代码读出工具的结果就可以了



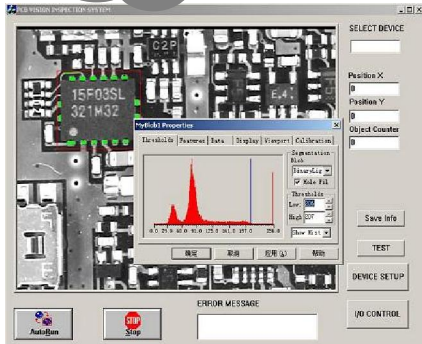
机械零件检测：(程序编译界面)



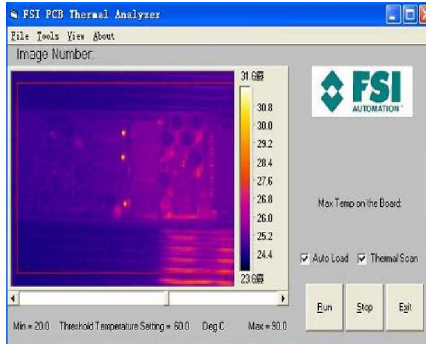
在开发环境下分别加载两个摄像头拍摄图像和相应的工具，并调整参数。



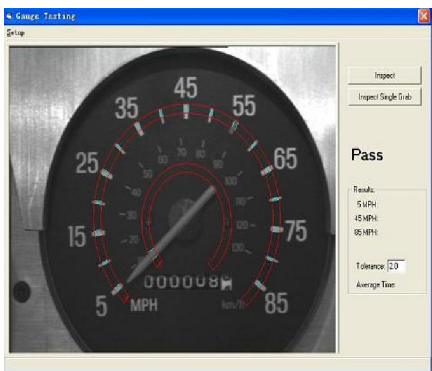
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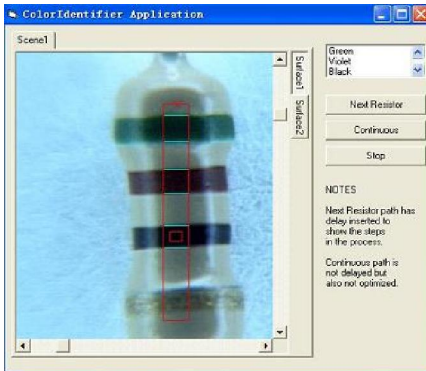
PCB检测（在线调试）：现场调试过程中修改工具参数，马上生效，无需重新编译，缩短2/3的调试周期。



专用IR红外热敏图像分析工具



采用两个Arc Caliper工具和几行代码，可直接读出当前仪表盘指针的刻度值。用于汽车仪表盘的终检。



采用XCaliper的色彩分析工具，在线自动分析电阻色环的颜色并判断其阻值。也可应用于印刷品的色彩分析。

Technical Information:

XCaliper features a full set of robust tools with an intuitive, easy-to-use interface. The tools provide support for image acquisition, pattern learning and identification, edge detection and gauging, image processing, color identification, histogram analysis, and I/O control. However, XCaliper is far more than a set of high performance tools. XCaliper provides a platform for the support of programmable machine vision in the Windows NT environment. It supplies support for analyzing and organizing machine vision problems in a consistent manner. Configured as a set of OLE custom controls, XCaliper can be programmed using standard software development environments, such as Microsoft Visual Basic and Visual C/C++. A system developed with XCaliper can be configured and deployed using standard PC hardware running Windows NT, thus eliminating the need for costly custom hardware and custom software development on proprietary real-time systems. Because XCaliper is PC-based, it leverages your investment by placing you in the mainstream of the huge market for the PC platform and the available knowledge of PC users and developers. Since XCaliper is part of the growing OCX development environment, you can use it in conjunction with a wide and constantly expanding universe of add-in custom tools through which you can perform many types of ancillary activities, such as graphical display of results, tabular display and spreadsheets, data base access via SQL tools, and SPC analysis. XCaliper's scene and surface framework in the ImageDevice provides a unique and extremely developer-friendly way to interactively organize the input sources, image display and vision tools for your machine vision application. In addition, the drag-and-drop placement of tools either from the VB/VC toolbars or from an optionally exposed toolbar in the image device are also extremely intuitive.