

# OptoFidelity

## DIT Display Inspection Tool

### With OptoFidelity Display Inspection Tool you can:

- Automatically check the display content pixel by pixel
- Measure the contrast ratio against specification
- Verify the colors and intensities of complex segment display



OptoFidelity Display Inspection Tool (DIT) is a professional display testing tool for checking the quality of high-resolution LCD, LED and segment displays. With this tool you can test both electrical / optical quality and functionality of the display. Display functionality can be verified either in pixel-level or shape-level.

OptoFidelity Display Inspection Tools works in the LabVIEW and TestStand environments of National Instruments. The application package contains easy to use training tools and ready-made application examples.

## OptoFidelity Display Inspection Tool adapts to your needs

OptoFidelity DIT supports all machine vision matrix cameras, so you can select the optimal camera solution for your application. Distortion caused by camera and lens is corrected by full Spatial Calibration feature.

## Easy to use tools

Full, pixel by pixel inspection of a display has never been this easy. Just set up the camera and lens, adjust FOV, and grab three images from the display-and you are ready to begin inspecting the display. Verifying the quality and color of segment display shapes is also very simple. OptoFidelity DIT is shipped with comprehensive set of setup and teaching tools.

## High Dynamic Range (HDR) inspects the low contrast displays

OptoFidelity DIT comes with an optional feature which automatically generates HDR images from the display. This is an advantage, especially if the displays under test have very low contrast / brightness characteristics.

## Display Inspection Tool (DIT) benefits

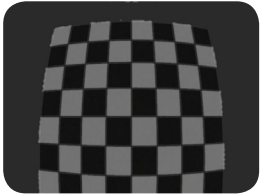
- National Instruments LabVIEW and TestStand compatible
- Simple to use. Just set up the camera and lens, adjust FOV, and grab three images from the display - and you are ready to begin inspecting the display.
- Supports all cameras
- HDR feature inspects the most demanding displays
- Pixel by pixel verification against synthetic bitmap for dot matrix displays
- Dead pixel detection (classifies cold and hot pixels)
- Advanced verification tools for LED matrix and segment display inspection (DIT-LS) with target color learning
- Flexible tools for defect visualization and reporting purposes
- Proprietary resampling algorithm, optimized for LCD's
- OptoFidelity DIT is shipped with comprehensive set of setup and teaching tools.



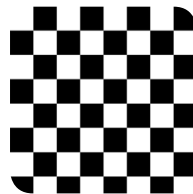
Shape based inspection with easy to use color & shape learning tools

## Simplified presentation of the display inspection process

Spatial Calibration, Image Crop



Spatial pixelwise and intensity scaling



Bitmap Comparison



reference.bmp

## Technical specifications

- Measurement accuracy: Pixel level comparison (total accuracy depends on the camera & lens performance, as well as the spatial calibration quality)
- PC requirements\*: Pentium III or faster. MS Windows 2000/XP/7, 32/64 bit. Min 10 MB of free HDD space
- Software requirements\*: NI LabVIEW 2010 sp1 or higher with Vision Development Module / Vision Debug Deployment licence. NI TestStand 2010 sp1 or higher (optional)
- Camera resolution requirements: Minimum of 3-4 camera pixels / inspected target image pixel (both horizontally and vertically)
- Both color (DIT-LS) and monochrome (DIT) cameras can be used
- Reference image requirements: freely defined monochrome image (DIT),

\*Please refer to the HW & SW requirements of corresponding National Instruments software

OptoFidelity is specialized in test automation. Our test selection is versatile from turn-key test systems to custom-designed solutions. We offer also several test instruments which can be used separately or for building a complete, fully automated tailor made test system. Most of our products are scalable and can also be integrated to customers own test automation system or our partners software testing tools.

Our way of work is customer based, devoted, trustworthy and based on a strong know-how. Our business relies on respect towards our customers.

  
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