Machine Vision Solder Expert

The vision system helps you to improve and control your automated soldering process. The system is adaptable for different robot systems (Janome, Fanuc, Denso, Epson etc.). The vision software contains a communications structure for each robot system and so it is easy to build up a communication to the robot systems and use the vision system. The communications interfaces are RS-232C, EtherNet, PROFINET and digital I/0.

You can also choose between different cameras, depending on your application. Due to the fast processing time of the vision system, there is no significant delay in your process.

The software is user-friendly and the different applications are easy to teach. Our applications of the vision system are:
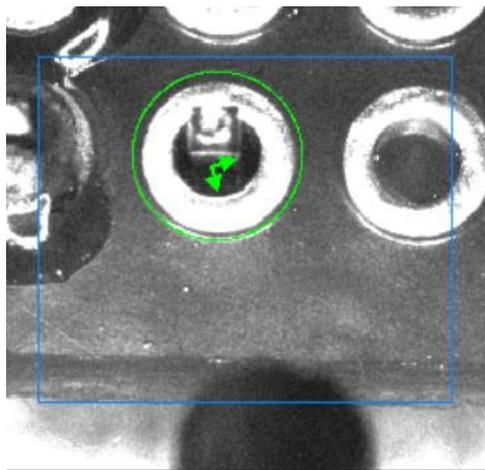
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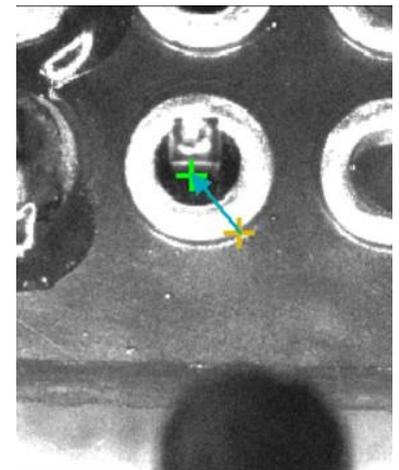
1. Position correction

In an automated process it is almost impossible to ensure that the solder pad is always at the same position. The vision system detects the solder pad, calculates the shift from the origin position and transmits the data to the robot system
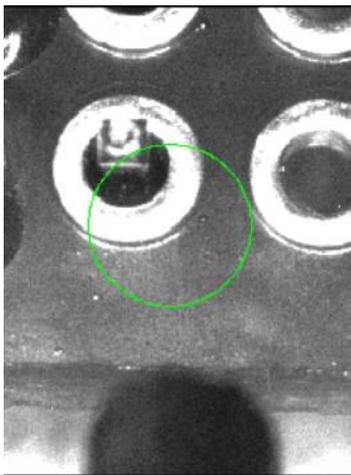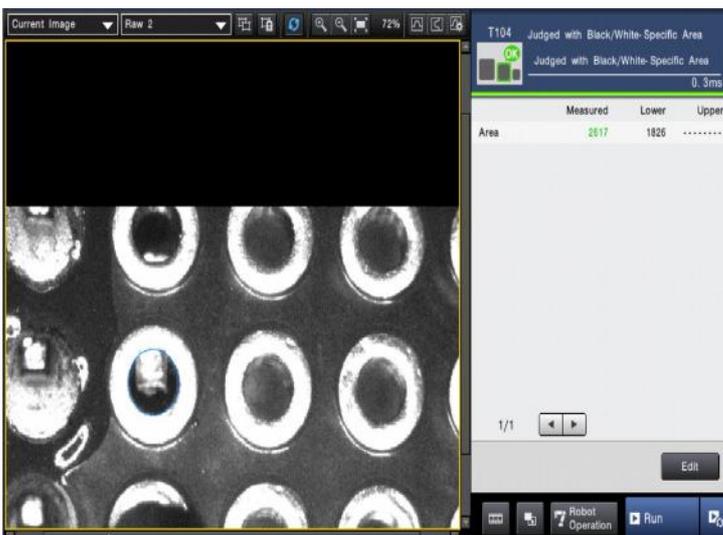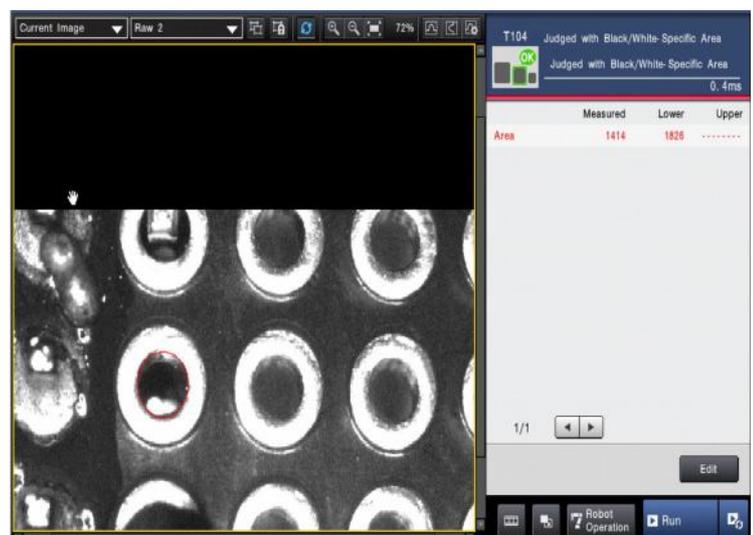

Shift of the pad

Detection

Calculation of the shift

2. Pre soldering inspection

With the pre soldering inspection you can control if the solder pad is alright. For example, you can check if the pin is missing due to a problem in an earlier process step.
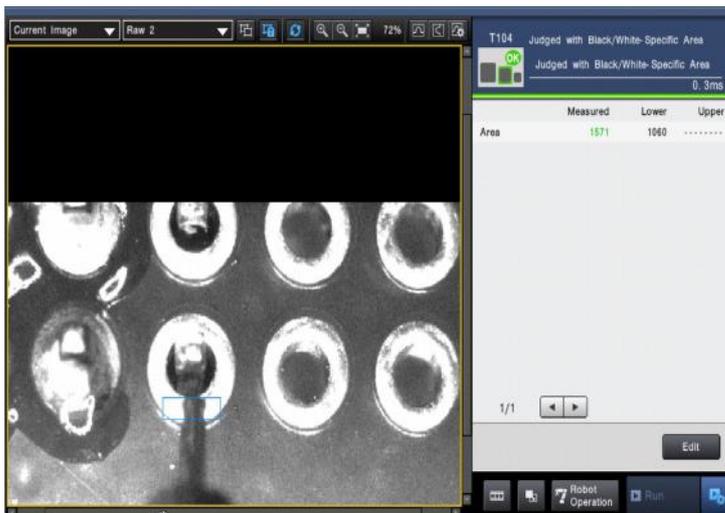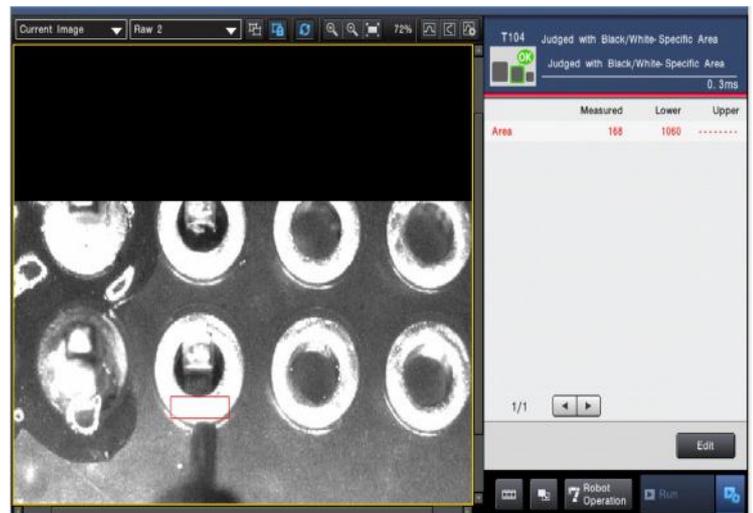

Good sample

Bad sample

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3. Wire detection

For some application it is very important to start with heating the pad not until the wire is very close to the pad. With the vision system it is possible to detect the wire and so the amount of tin is the same on each solder joint.
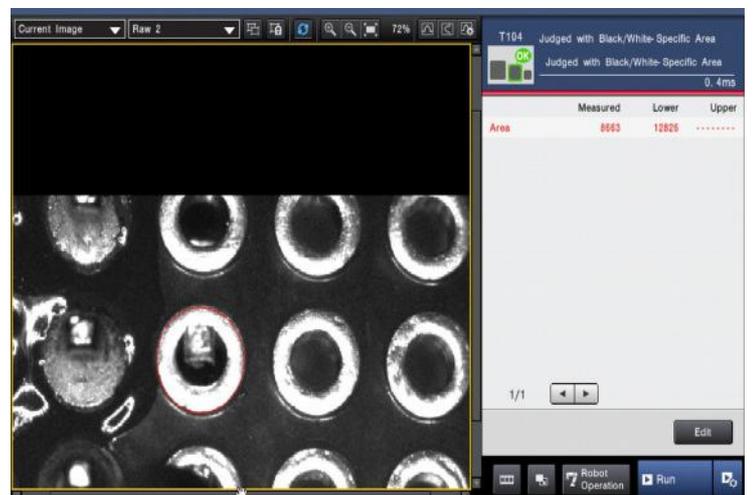

Wire detected

No wire detected

4. Post soldering inspection

After the soldering process you can check if there is a solder joint. So you can easily detect samples, which are not soldered or not completely soldered.

Soldered sample

Not soldered