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A smart machine vision system for PCB inspection. (English) [Zbl 0981.68566](#)

Monostori, László (ed.) et al., Engineering of intelligent systems. 14th international conference on industrial and engineering applications of artificial intelligence and expert systems, IEA/AIE 2001, Budapest, Hungary, June 4-7, 2001. Proceedings. Berlin: Springer. Lect. Notes Comput. Sci. 2070, 513-518 (2001).

Summary: We present a Smart Machine Vision (SMV) system for printed circuit board (PCB) inspection. It has advantages over the traditional manual inspection by its higher efficiency and accuracy. This SMV system consists of two modules, LIF (Learning Inspection Features) and OLI (On-Line Inspection). The LIF module automatically learns inspection features from the CAD files of a PCB board. The OLI module runs on-line to inspect PCB boards using a high-resolution 2-D sensor and the knowledge provided by the LIF components. Key algorithms developed for SMV are presented in the paper. The SMV system can be deployed on a manufacturing line with a much more affordable price comparing to other commercial inspection systems.

For the entire collection see [\[Zbl 0968.68555\]](#).

MSC:

[68U99](#) Computing methodologies and applications

[68T45](#) Machine vision and scene understanding