

Robotic cross-lines laser indicator and range finder

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Abstract

A novel robotic vision and control system using cross-lines laser indicator and range finder simultaneously is developed. This modular have fine crossed lines indication of 1.2mm sharpness at 5 m distance, and simultaneously ranging accuracy of 3 mm up to the range of 100 m. The theoretical derivation, CAD/CAM design, and lens design together with experimental results will be presented in detail.

Keyword : Robotic vision, remote sensing, laser indicator, laser range finder, optical design.