Abstract

640 x 480 Real-Time Range Finder Using High-Speed Readout Scheme and Column-Parallel Position Detector

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In this paper, we present the first real-time range finder with the capability of VGA (640 x 480) resolution based on a light-section method. We propose an adaptive thresholding circuit and column-parallel time-domain approximate ADCs to realize high-speed readout for real-time range finding. Sub-pixel position calculation based on intensity profile by the readout scheme achieves high-accuracy range finding. A column-parallel position detector suppresses redundant data transmission for a real-time measurement system.