

The Design of Intelligent Image Sensor

李承翰、高富建

E-mail: 9601089@mail.dyu.edu.tw

ABSTRACT

Brightness obviously affects the pixel value of an image sensor. Image identification from a traditional sensor may generate a bias and surveillant misunderstandings because of weather. The purpose of the research is to develop an intelligent image sensor for image identification. The intelligent sensor integrates an optoelectronic converting circuit and an embedded system and can convert the brightness to an analog voltage. From the voltage value, we can establish a contrast list to show the relationship of the analog voltage and image pixel values. Using the list and applying the linear interpolation method, we can eliminate the effect of the brightness and raise the identification rate. The intelligent image sensor can not only largely decrease the identification bias but also save storage space and costs compared to the traditional solution.

Keywords : Embedded System ; Intelligent Image Sensor ; Image Identification

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