

## **Embedded system for biometric identification based on iris detection**

### **Abstract**

Biometric identification provides a reliable and secure user authentication for the increased security requirements. The deployment of advanced computer vision methods for biometric identification system in an embedded platform are severely constrained in their limited processing capabilities, limited memory, limited power source, and algorithms for biometric identification that provide sufficient accuracy tend to be computationally expensive, leading to unacceptable authentication times. This paper describes the design and preliminary implementation of an embedded system for biometric identification based on iris detection (BIOI<sup>2</sup>D). Single Board Computer itself is portable and can be used for various purposes such as network based identification system on human face, robot vision platform and embedded web server. In this paper, hardware and software design as well as the experimental result are presented.

### **Author Keywords**

Biometrics; Embedded system; Linux; Single board computer