

Development of an embedded smart home management scheme

ABSTRACT

This paper describes the development of an embedded smart home management scheme over the Ethernet network. The platform of the smart home management system is built using bespoke embedded system design. An embedded control module developed by exploiting the Web Services mechanism, consist of 15 monitoring channels based on XML SOAP standards. Each channel is integrated to dedicated smart home management scheme and performs bi-directional real-time control. In the event of server unavailability, a mobile based communication module using GSM has been deployed as an alternate management mechanism. The proposed embedded-enabled solution offers bi-directional real-time management as well as optimized performance for smart home environment.

Keyword: Embedded system; Smart home; Web Services; Interoperability