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A Novel Smart Sensing Platform for Vital Signs and Motor Activity Monitoring

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Abstract

Tele-monitoring associated with vital signs and motor activity represents nowadays an important issue considering the necessity to increase the number of medical services for the aged people living in their houses. The latest developments in the field of mobile devices, wireless communications and Internet access promote these types of solutions. The chapter presents a critical analysis of smart sensing solutions existing in the market and proposes a novel architecture designed for fast prototyping of sensing systems for human motor and cardiac activity monitoring. An extended description of the hardware, firmware, and software associated with proposed smart sensing platform is described in the chapter.

Keywords

Cardiac activity monitoring motor activity monitoring Ubiquitous systems Modular sensing platform Sensors Hardware redesign Code reuse Wireless sensor networks (WSN)

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