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Open Hardware and Software Smartwatch Platform

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In this paper we present the complete development of an open-hardware and open-source smartwatch, encompassing the design and assembly of a custom printed circuit board (PCB), fabrication of a 3D-printed case, and implementation of a sophisticated real-time operating system (FreeRTOS)-based application. The resulting smartwatch boasts a modular architecture, enabling researchers and hardware and software enthusiasts to modify and adapt the design to their specific requirements as a platform for IoT experimentation and development.

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