



**GadgEon**  
Engineering Smartness



## Smartwatch for Kids

Kids smartwatch that helps parents manage kids activities, accurate location, and real time communication with their child.

### Challenge

- Low power operation
- Extended range

### Outcome

- Development of complete device firmware
- Drivers for GPS and other peripheral sensors like accelerometer, magnetometer, Haptic, fuel gauge, RTC etc
- Power optimization for long-term operations on coin-cell battery with automatic sleep & wake-up

WHAT DID GADGEON DO?	PLATFORMS/ TECHNOLOGIES USED
<p>1) Architecture of the device Hardware and firmware</p>	<ul style="list-style-type: none"> <li>• Developed firmware for wearable smart watch.</li> <li>• Firmware driver development for GPS and other peripheral sensors like accelerometer, magnetometer, Haptic, fuel gauge, RTC</li> <li>• Watch GUI screens which responds to taps and messages from smartphone via BLE. Implemented top and side tap patterns as the inputs to the watch and response for the text messages from phone.</li> <li>• Time synchronization from phone and GPS</li> <li>• Design and implementation of various icons and fonts for display</li> <li>• Power optimization for long term operations on coin-cell battery with automatic sleep &amp; wakeup feature by monitoring the accelerometer &amp; fuel gauge readings.</li> <li>• BLE pairing using “Just Works”</li> <li>• Implemented feature to locate phone on the watch display with arrow and distance displays with respect to the heading information from phone.</li> <li>• Unique vibratory and beep patterns for incoming Notifications, alerts, text messages etc.</li> <li>• iOS application development <ul style="list-style-type: none"> <li>• Map screen which locates Watch and the phone.</li> <li>• Options to send text messages and notifications to watch.</li> <li>• Popup and alerts for specific features.</li> <li>• Implemented Heading and distance calculating algorithm.</li> </ul> </li> </ul>





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