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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# SmartBond™ DA14681 Wearable Development Kit

A fully-featured development platform on your wrist

Wearable manufacturers face a highly competitive market. Success depends on delivering the right features and functionality with long battery life at the right time. The **SmartBond™ DA14681** wearable development kit helps manufacturers maximize their chance of success by minimizing time-to-market and development effort for next-generation wearables.

The kit comprises a complete hardware and software design for a sports watch offering heart rate monitoring, activity tracking and environmental sensing. It is based on the **SmartBond™ DA14681** Wearable-on-Chip™. As a **SmartBond™** device, it offers the highest performance, lowest power consumption and smallest footprint. This highly integrated complete Bluetooth® low energy SoC combines flexible processing power for advanced applications, integrated battery charging and banking level security. The kit also features a complete range of sensors plus NFC payment, so manufacturers can start prototyping with no extra hardware.

Offering a user-friendly experience, the kit comes with a complete software package that is specifically designed for wearables. This includes several royalty-free advanced algorithms for health and fitness applications such as sensor fusion, sleep monitoring, heart rate monitor etc. With full documentation and tooling, the kit is easy to set up; allowing developers to get to work straight out of the box.



## Benefits

The **SmartBond™ DA14681** wearable development kit is the fast track from prototype to product.

- Accelerates time to market
- Enables you to develop next-gen ultra-low power wearable products
- Complete software and tools set to reduce the complexity of product development.

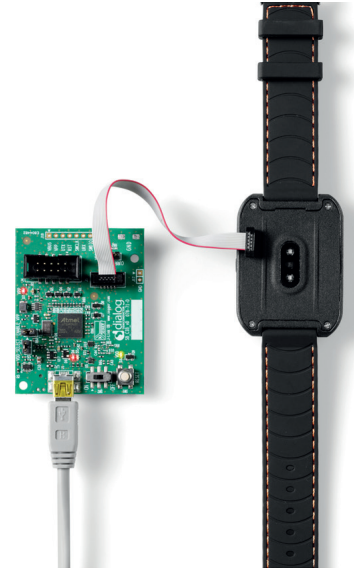
## Applications

- Activity trackers
- Sport watches



## Features

- On board DA14681 SoC
  - 84DMIPS ARM processor
  - Fully integrated charger, stage of charge and DCDC
  - Integrated security engine
  - Bluetooth 4.2
- 6-axis accelerometer and gyro sensor
- 3-axis digital geomagnetic sensor
- Integrated environmental sensor for pressure, humidity and temperature
- Cost effective and high performance optical heart rate monitor from Dyna Image
- 128x128 pixels ultra-low power Memory LCD
- Low power capacitive touch button
- NFC payment support with onboard secure element and NFC
- Li-ion battery with micro USB interface for recharging
- On-board debugging interface with a debugging daughter board
- Embedded software package that includes
  - o graphical UI library
  - o advanced health and fitness algorithms, including calorie counting, sleep and heart rate monitoring
  - o 9-axis sensor fusion algorithm
    - 0.5 MIPS on Cortex M0 for 9 DOF sensor
    - 4.5 kB code size
    - 0.5 kB RAM size
  - o Bluetooth low energy connectivity
- Android and iOS applications with source code



For more information and purchasing please visit

<https://support.dialog-semiconductor.com/connectivity/reference-design/da14681-wearable-development-kit>

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