

# 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.

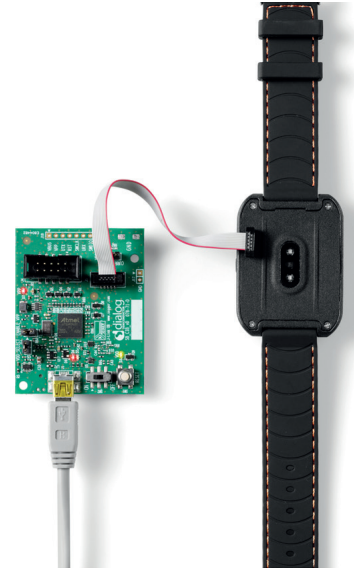
- Accelerates time to market
- Enables you to develop next-gen ultra-low power wearable products
- Complete software and tools set to reduce the complexity of product development.

## 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>

**Dialog Semiconductor Worldwide Sales Offices -** [www.dialog-semiconductor.com](http://www.dialog-semiconductor.com) email: [info@diasemi.com](mailto:info@diasemi.com)

**United Kingdom**  
Phone: +44 1793 757700

**The Netherlands**  
Phone: +31 73 640 88 22

**Japan**  
Phone: +81 3 5425 4567

**Singapore**  
Phone: +65 648 499 29

**Korea**  
Phone: +82 2 3469 8200

**Germany**  
Phone: +49 7021 805-0

**North America**  
Phone: +1 408 845 8500

**Taiwan**  
Phone: +886 281 786 222

**Hong Kong**  
Phone: +852 3769 5200

**China (Shenzhen)**  
Phone: +86 755 2981 3669

**China (Shanghai)**  
Phone: +86 21 5424 9058

This publication is issued to provide outline information only, which unless agreed by Dialog Semiconductor may not be used, applied, or reproduced for any purpose or be regarded as a representation relating to products. All use of Dialog Semiconductor products, software and applications referred to in this document are subject to Dialog Semiconductor's [Standard Terms and Conditions of Sale](#), available on the company website ([www.dialog-semiconductor.com](http://www.dialog-semiconductor.com)) unless otherwise stated.

Dialog and the Dialog logo are trademarks of Dialog Semiconductor plc or its subsidiaries. All other product or service names are the property of their respective owners.

© Copyright 2016 Dialog Semiconductor. All rights reserved. 0517SK1



**Стандарт  
Электрон  
Связь**

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

**Наши контакты:**

**Телефон:** +7 812 627 14 35

**Электронная почта:** [sales@st-electron.ru](mailto:sales@st-electron.ru)

**Адрес:** 198099, Санкт-Петербург,  
Промышленная ул, дом № 19, литера Н,  
помещение 100-Н Офис 331