Bluetooth Low Energy keyboard reference design

(ACTIVE) TIDM-BLE-KEYBOARD

Description & Features | Technical Documents | Support & Community | Order Now

View the Important Notice for TI Designs covering authorized use, intellectual property matters and disclaimers.

Bluetooth Low Energy keyboard reference design

Fully assembled board (shown above) developed for testing and performance validation only, not available for sale.

Description

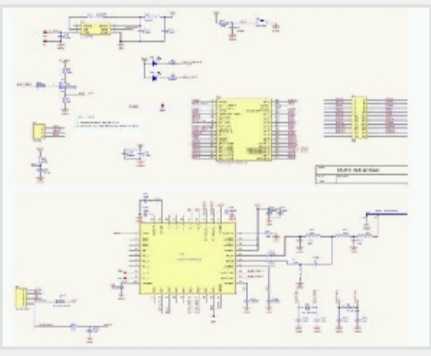
This solution implements a keyboard for any operation system which supports HOGP (Hid Over GATT Profile). It is designed to have ultra low-power consumption for a substantial time working with Bluetooth Low Energy technology. CC2541 and MSP430 are used in this design to handle BLE stack, key-matrix scan and power management work.

Features

- Low-power, 3mW average when typing at about 300 characters per minute
- Designed with TI Bluetooth Low Energy protocol stack include HOGP implementation
- Full-feature keyboard support up to 128 keys(16 x 8 matrix) without pcb modification
- Turnkey solution for BLE keyboard applications

Schematic/Block Diagram

Quickly understand overall system functionality.



Download Schematic

Design Guide

Get results faster with test and simulation data that's been verified.

Download Design Guide

Source Files

Download ready-to-use system files to speed your design process. Get Viewer.

Download Source Files

Bill of Materials (BOM)

Find the complete list of components in this reference design.

Download BOM

TI Devices (3)

Order samples, get tools and find more information on the TI products in this reference design.

Part Number	Name	Product Family	Sample & Buy	Design Kits & Evaluation Modules
CC2541	SimpleLink Bluetooth Smart and Proprietary Wireless MCU	Wireless Connectivity	Sample & Buy	View Design Kits & Evaluation Modules
MSP430G2444	MSP430G2x44 Mixed Signal Microcontroller	Ultra-low Power	Sample & Buy	View Design Kits & Evaluation Modules
TPS62730	Step Down Converter with Bypass Mode for Ultra Low Power Wireless Applications	Converter (Integrated Switch)	Sample & Buy	View Design Kits & Evaluation Modules

CAD/CAE symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
CC2541	VQFN (RHA) | 40	Download	-
MSP430G2444	TSSOP (DA) | 38	Download	-
	VQFN (RHA) | 40	Download	-
	DSBGA (YFF) | 49	Download	-
TPS62730	USON (DRY) | 6	Download	-

Texas Instruments and Accelerated Designs Inc. have collaborated together to provide TI customers with schematic symbols and PCB layout footprints for TI products.

Step 1: Download and install the Ultra Librarian software ZIP: 62MB

Step 2: Download the Symbol and Footprint .bxl file.

- read more -

Technical Documents

User Guides (1)

Title	Abstract	Type	Size (KB)	Date	Views
Bluetooth Low Energy Keyboard Reference Design Guide		PDF	2328	19 Sep 2014	39

Design Files (3)

Title	Abstract	Type	Size (KB)	Date	Views
Bluetooth Low Energy Keyboard Reference Design Bill of Material (BOM)		PDF	56	17 Oct 2014	15
Bluetooth Low Energy Keyboard Reference Design Schematic		PDF	131	17 Oct 2014	80
Bluetooth Low Energy Keyboard Reference Design Gerber Files		ZIP	49	17 Oct 2014	24

Related Tools & Software

Software (1)

Bluetooth Low Energy Keyboard Reference Design Software
(ZIP, 115 KB) 48 views, 17 Oct 2014

Applications

- Notebook PC
- Tablet: Multimedia

Support & Community

TI E2E™ community

TI E2E™ Community

As a member of my.TI you can join the TI E2E™ Community where you can ask questions, share ideas and collaborate with fellow engineers and TI experts

Contents are provided "AS IS" by the respective TI and Community contributors and do not constitute TI specifications. See Terms of use.

Engage in the Community

- MSP430™ 16-bit Ultra Low Power MCUs
- C2000™ 32-bit Real Time MCUs
- Embedded Software
- Tiva™ C Series ARM® Cortex-M MCUs
- Hercules™ ARM® Cortex Safety MCUs
- Development Tools

Wikis

Visit the TI Wiki

Your History

Products You Recently Viewed

- PR212
- TIDM-LPBP-SIMPLELINKWIFI
- PMP7019.2
- TIDM-VF-WASHINGMACHINE
- TIDA-00170

TI is a global semiconductor design and manufacturing company. Innovate with 100,000+ analog ICs and embedded processors, along with software, tools and the industry's largest sales/support staff.

© Copyright 1995-2014 Texas Instruments Incorporated. All rights reserved.
Trademarks | Privacy policy | Terms of use | Terms of sale