

Sensor Hub BoosterPack

BOOSTXL-SENSHUB



Features

- On-board sensors
 - InvenSense MPU-9150:** 9-axis MEMS motion tracking
 - 3-axis gyro
 - 3-axis accelerometer
 - 3-axis compass
 - Bosch Sensortec (BMP180):** Pressure sensor
 - Sensirion (SHT21):** Relative humidity and ambient temperature sensor
 - Intersil (ISL29023):** Ambient and infrared light sensor
 - TI (TMP006):** Non-contact infrared temperature sensor
- Uses BoosterPack XL connection standard
 - Two pairs of 10-pin headers providing standard LaunchPad interface
 - Primary header (outer row) compatible with other LaunchPads
 - Secondary header (inner row) offers additional Tiva C Series-based expansion signals
- 2× user input buttons and LEDs
- TI's wireless evaluation module (EM) interface connection
- Air Mouse* (PC HID) example application demonstrates sensor fusion technology
- Tool chains supported: Code Composer Studio™ IDE, Keil™ RealView®, IAR Systems Embedded Workbench®, and Mentor Embedded Sourcery CodeBench™
- TivaWare™ for C Series DriverLib under TI BSD-style license

Texas Instruments Sensor Hub BoosterPack (BOOSTXL-SENSHUB) is an add-on board designed to fit the Tiva™ C Series TM4C123G LaunchPad along with all of TI's MCU LaunchPads. It is a Tiva platform for evaluating the use of ARM® Cortex®-M4F based TM4C devices in sensor fusion applications, demonstrating the mathematical and algorithm computation capabilities of the M4F. The stackable headers of the Tiva C

Series TM4C123G LaunchPad BoosterPack XL interface also demonstrate how easy it is to expand the functionality of a Tiva C Series LaunchPad when interfacing to other peripherals via BoosterPacks (BPs). The Sensor Hub BP has an example application that uses much of the functionality offered in this platform when used with a Tiva C LaunchPad and it provides many additional options and capabilities for end users to explore.

Kit Contents:

Sensor Hub BoosterPack Options	MSRP
BoosterPack Only (BOOSTXL-SENSHUB) [†]	\$49.99
Standard Bundle (SENSHUBPACK-123G) [†]	MSRP
- BoosterPack (BOOSTXL-SENSHUB) - Tiva C Series LaunchPad (EK-TM4C123GXL)	\$59.99
Wireless Bundle (SENSHUBPACK-123G-W)	MSRP
- BoosterPack (BOOSTXL-SENSHUB) - Tiva C Series LaunchPad (EK-TM4C123GXL) - Wireless USB Dongle (CC2531EMK) - Wireless EM (CC2533EMK) - Battery BoosterPack (BOOSTXL-BATTPACK)	\$199.99

[†]The "Air Mouse" example requires EK-TM4C123GXL for operation and will be tethered on non-wireless options.



▲ Sensor Hub BoosterPack (BOOSTXL-SENSHUB)

BOOSTXL-SENSHUB Compatibility Table

MCU LaunchPads	Tiva C Series LaunchPad (EK-TM4C123GXL)	MSP430™ LaunchPad (MSP-EXP430G2)	C2000™ LaunchPad (LAUNCHXL-F28027)
Hardware compatibility	✓	*	✓
Software compatibility	✓	*	**

*Consult the TI MSP430 forum: www.ti.com/msp430community

**Consult the TI C2000 forum: www.ti.com/c2000community

For a complete list of available BoosterPacks that can be used with the Tiva C Series LaunchPad, see: www.ti.com/launchpad

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