BoosterPack Ecosystem

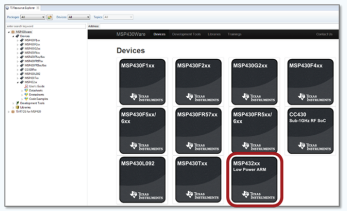
BoosterPack plug-in modules plug into the header pins on the LaunchPad to allow you to explore different applications that your favorite TI MCU can enable. There is a broad range of application-specific and general purpose BoosterPacks available from both Texas Instruments and third parties. Stack multiple BoosterPacks on a single LaunchPad to greatly enhance the functionality of your design. BoosterPacks include:

- Displays
- Wireless Connectivity
- Environmental Sensing

>> See them all @ ti.com/boosterpacks

Software Tools

ti.com/beginMSP432launchpad



TI Resource Explorer

Professional Software tools

LaunchPad is also supported by professional IDEs that provide industrial-grade features and full debug-capability. Set breakpoints, watch variables & more with LaunchPad.

ti.com/ccs	ti.com/mspkeil	ti.com/mspiar
Code Composer Studio™ IDE	Keil™ µVision® IDE	IAR Embedded Workbench ®

Meet the
MSP432P401R

LaunchPad Development Kit

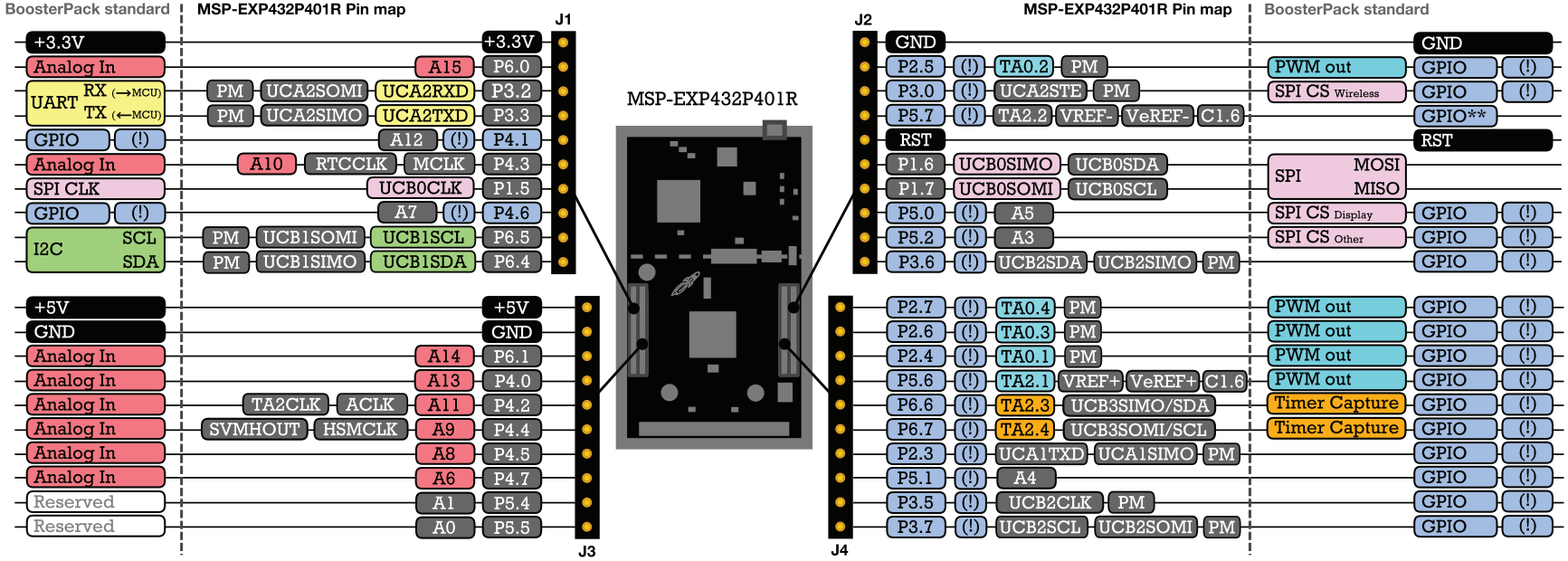
Part Number: MSP-EXP432P401R

TEXAS INSTRUMENTS

Below are the pins exposed @ the MSP-EXP432P401R BoosterPack connector

Also shown are functions that map with the BoosterPack pinout standard. Refer to the MSP432P401R Datasheet for additional details.
NOTE: Some LaunchPads & BoosterPacks do not 100% comply with the standard, so please check your specific LaunchPad to ensure pin compatibility.

(!) Denotes I/O pins that are interrupt-capable
** Some LaunchPads do not have a GPIO here



Resources @ ti.com/launchpad

Code examples
Open Source Design Files
Documentation
Example projects
Videos
Tutorials
Other TI products

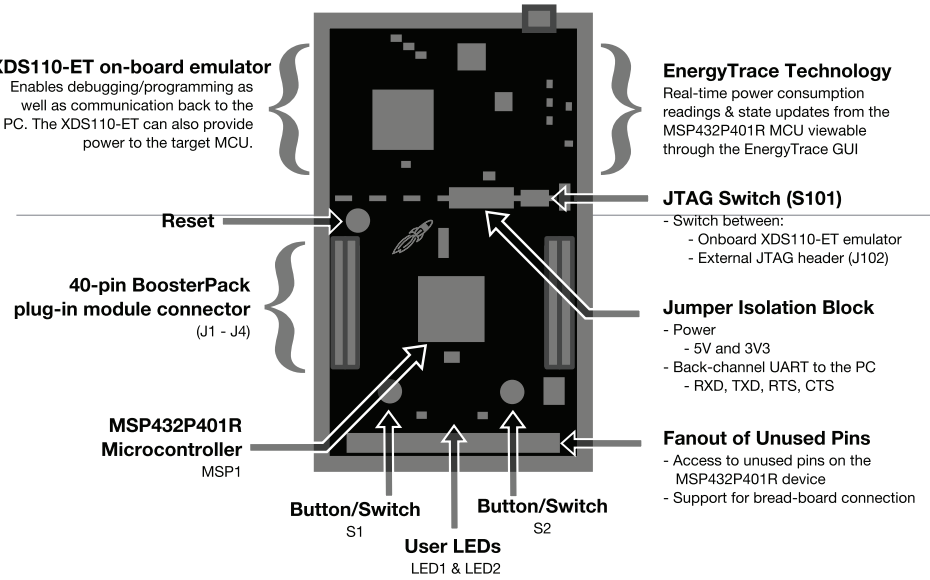
A closer look at your new LaunchPad Development Kit

Featured microcontroller:
MSP432P401R: Low-power at its best, performance at its core

What comes in the box?

- MSP-EXP432P401R LaunchPad
- This Quick Start Guide (QSG)
- Micro-USB Cable
- Software available @ ti.com/beginMSP432launchpad

MSP-EXP432P401R Overview

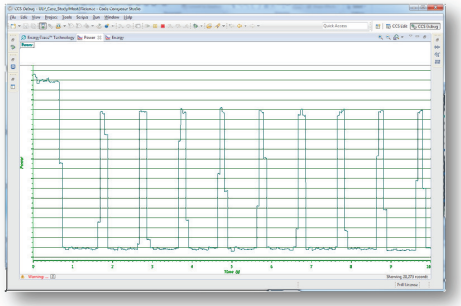


EnergyTrace+™ Technology

EnergyTrace Profile
EnergyTrace captures the real-time energy profile and correlates this data to the device power modes and appplication code

Graphical Power Data
The EnergyTrace Technology window shows a graph over time of power and energy.

ti.com/energytrace



Out-of-box Demo

Find more information @
ti.com/beginMSP432launchpad
ti.com/MSP-EXP432P401R

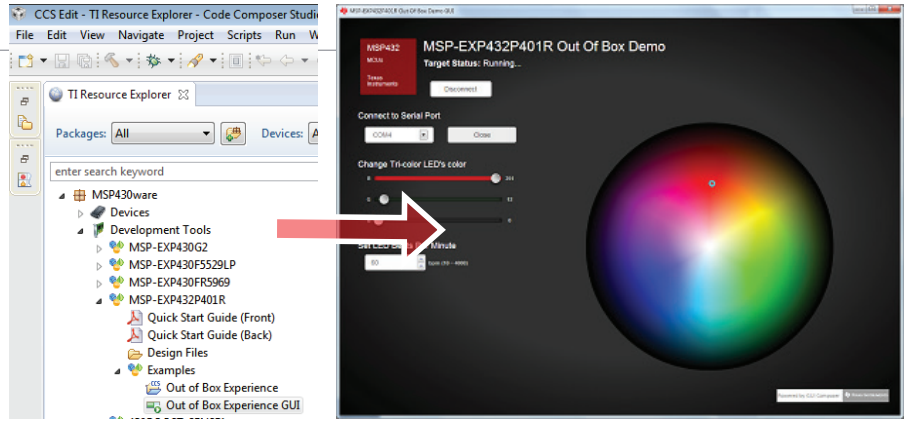
1. IDE and Drivers
Download IDE and drivers at ti.com/beginMSP432launchpad or experience the out-of-box demo live at dev.ti.com

2. Connect to the computer
Connect the LaunchPad using the included USB cable to a computer. A green power LED should illuminate. The LaunchPad will power up and the RGB LED (LED2) will toggle during the startup sequence. Now the LaunchPad will wait for commands from the GUI.

3. Open the Provided GUI
Open the out-of-box GUI executable at: MSPWare > Development Tools > MSP-EXP432P401R > Examples > Out of Box Experience GUI

RGB LED Mode
This mode allows the user to set the color of the RGB LED using the provided PC GUI. Use the color wheel to set the color. Use the sliders to manipulate the channels of Red, Green, and Blue to make any color!

Blink the RGB LED
Use switch S1 to set the blink rate of the RGB LED (LED2). The pace at which the user presses S1 sets the blink speed of the LED. Switch S2 toggles between the colors of the RGB LED, blinking each individual color at different rates. S2 toggles between Red, Green, Blue, and a random RGB color. How fast can you blink the LED?



Ready to Learn More?

- Documentation
- MSPWare
- Driver Library
- Code Examples
- Application Notes
- Porting Guide
- Design Files
- and more!

ti.com/beginMSP432launchpad

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