



Meet the C2000™ Piccolo™ LaunchPad



Additional resources @
www.ti.com/c2000-launchpad-instaspin



- Everything needed to get started in one package
- Rapid prototyping with double-sided headers, buttons, LEDs, and much more
- On-board isolated JTAG emulation
- Generic software support through controlSUITE
- Motor control full application support through MotorWare

C2000™ Piccolo™ LaunchPad Quick Start Guide: LAUNCHXL-F28027F



Meet the C2000 Piccolo LaunchPad evaluation kit based on the InstaSPIN-FOC™ enabled F28027F device. The LaunchPad is a complete USB-based evaluation kit and educational tool providing everything you need to start your system evaluation and development.

1. Software and driver installation

Go to www.ti.com/c2000-launchpad-instaspin. For InstaSPIN-FOC support, download MotorWare™, and for a free version of TI's integrated development environment, download the latest version of Code Composer Studio™ (CCS). Installing CCS will install the necessary drivers for the LaunchPad. If not using MotorWare for InstaSPIN-FOC you should download the controlSUITE™ software package for general device support.



2. Switches and jumpers

S1* (Boot) ON-ON-ON to allow JTAG debug connection
S1 (Boot) ON-ON-OFF for non-JTAG boot to Flash
S4* (Serial) ON to allow XDS100v2 UART connection to F28027F

LaunchPad powered by BoosterPack*: remove JP1, JP2, JP3
LaunchPad powered by USB: place jumpers JP1, JP2, JP3

*Standard settings for InstaSPIN-FOC development



3. Connecting the hardware

If using a BoosterPack, connect and apply power per the settings included in its Quick Start Guide. Connect from your PC to the LaunchPad using the included USB cable. If prompted to install driver, let the install wizard complete with the default settings.

4. Try out an example application

The controlSUITE software package for C2000 LaunchPad contains object oriented peripheral drivers, APIs and several simple application examples to use for general applications. The MotorWare software package contains the same peripheral drivers but adds motor and math modules which are built into the InstaSPIN-FOC sensorless motor control projects. These projects can be run on the LaunchPad paired with supported motor driver BoosterPacks. Both MotorWare and controlSUITE can be explored through CCS v5's resource explorer or through their standalone application (recommended, after installation run MotorWare.exe or controlSUITE.exe)

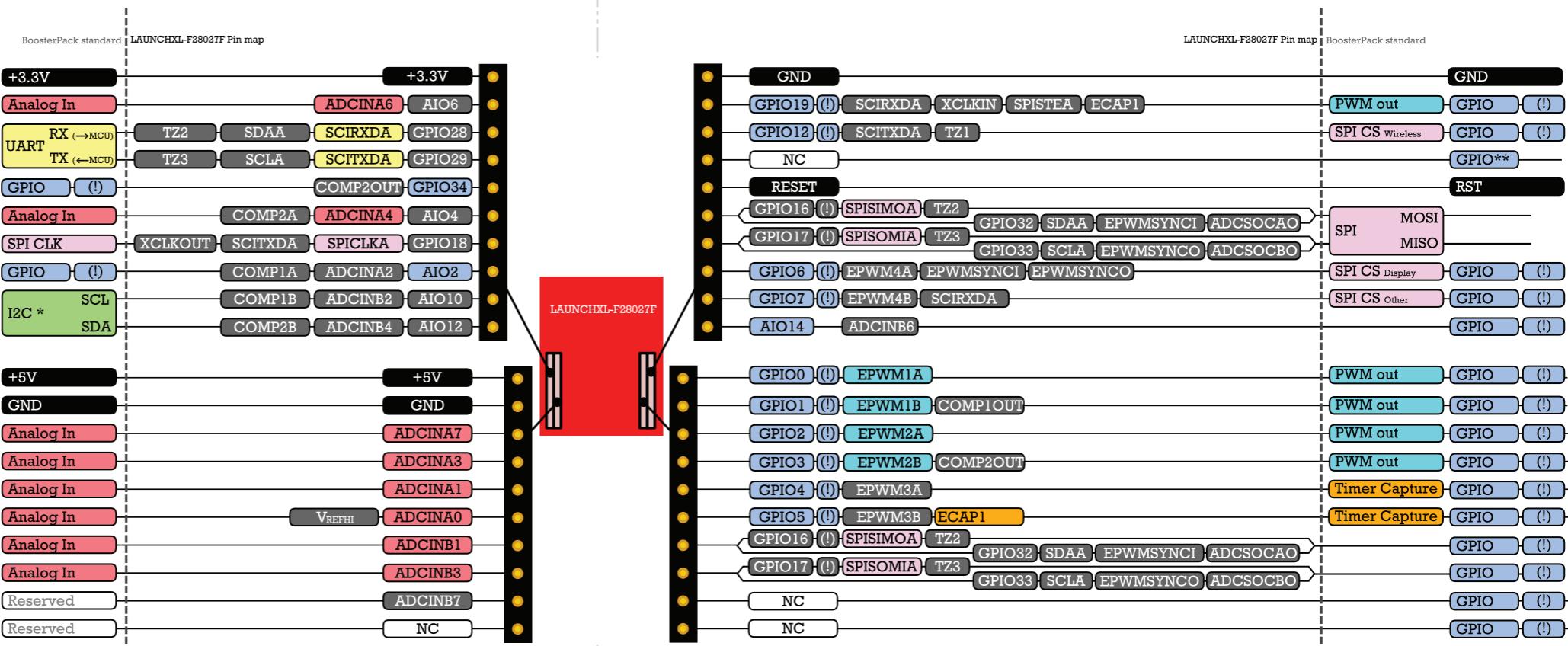
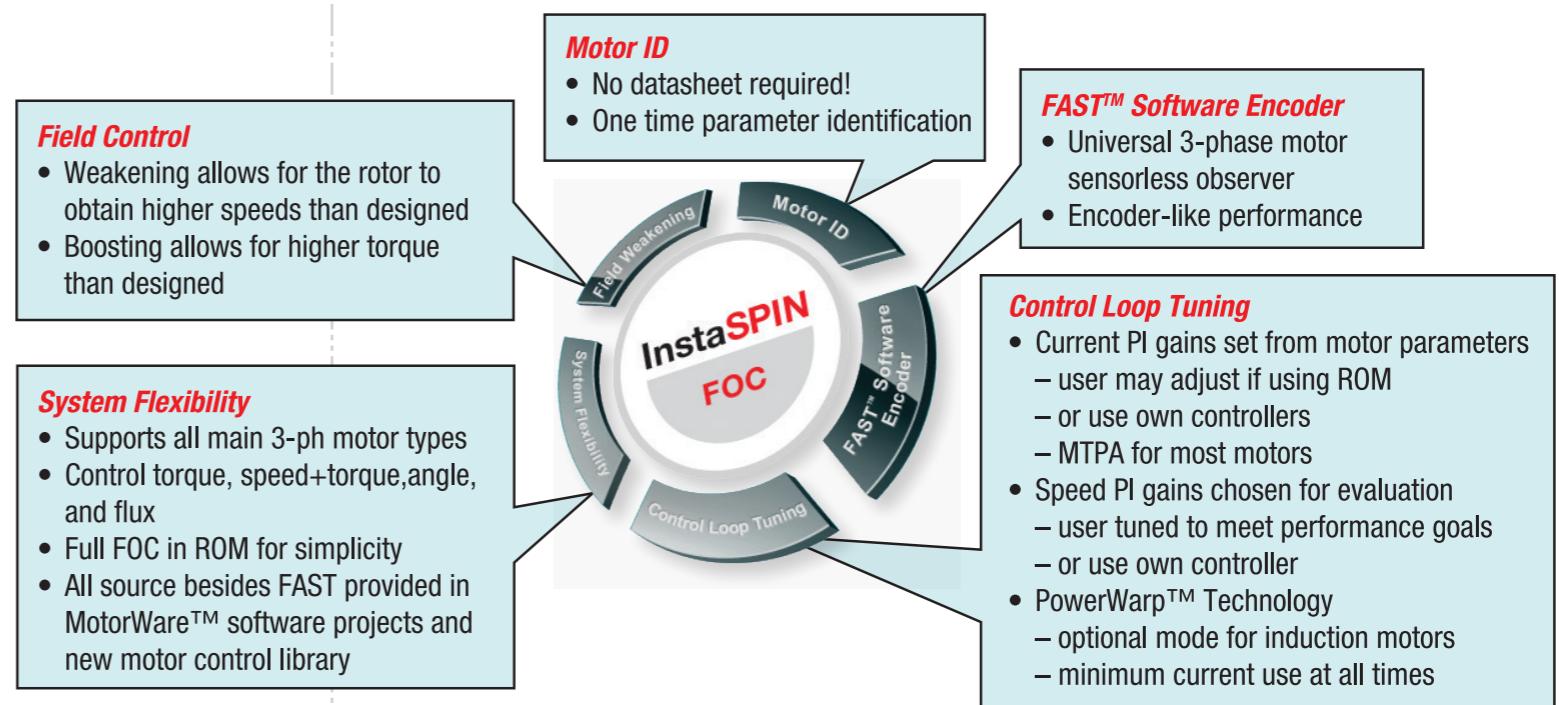
5. Develop your own application and change the world!

The possible applications of this kit are only limited by your imagination, so brew some coffee or tea and get to creating the next big "thing". Make a copy of an example project and modify it until your application is developed. Support for the C2000 Piccolo LaunchPad is available through TI's e2e forums:

www.ti.com/c2000community

Breakthrough InstaSPIN™-FOC motor control technology is here!

InstaSPIN-FOC technology enables designers to identify, tune and fully control any type of three-phase, variable-speed, synchronous or asynchronous motor in just minutes. This new technology removes the need for a mechanical rotor sensor by using TI's new software encoder (sensorless observer) algorithm, FAST™ (flux, angle, speed and torque), embedded in the read-only-memory (ROM) of Piccolo™ microcontrollers.



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