

# Innovator™ Development Kit for the Texas Instruments OMAP™ Platform

## Deluxe Model Quick Start Guide



The Innovator™ Development Kit in combination with the TI Code Composer Studio IDE and the Spectrum Digital emulator give OMAP developers the ability to prototype and validate their designs and build working models in which to develop new hardware and software products using Texas Instruments OMAP Processor Technology.

The combined development kit provides the following:

- Innovator™ Development Kit
- 15 days of free email support
- 30 days parts and labor warranty

The Quick Start Guide has been designed to provide developers a quick start to get the Innovator up and running as soon as possible. The Quick Start Guide should not be relied upon as the only information to assist the developer in using and understanding the Innovator. Please read all documentation provided in the Innovator kit. A more detailed User's Guide is provided on the CD included with this kit.

By following the simple instructions in this document, a developer should be able to, connect the appropriate cables between a computer, the Spectrum Digital emulator and the Innovator Module. This guide will provide instructions on how to install Code Composer Studio on your computer, download emulator and download Innovator test programs. The Innovator and emulator will be powered on. Code Composer Studio will be run. A test program will be loaded into the Innovator Module and run. The user will observe that the Innovator Module and development software has been setup and responding.

Code Composer Studio v2.0 is not included with this kit and must be requested from TI.

The evaluation version of Code Composer Studio installs in its own special directory. If the user elects to purchase a licensed version of Code Composer Studio, the evaluation version should not be un-installed until the developer's work has been copied to the licensed version.

This product includes 15 business days of free email support, beginning with the first reported incident encountered with the Innovator Module. This support is provided by Productivity Systems, Inc. Customer Support Services. PSI Customer Support Services may be contacted at the PSI Innovator Support Web Site located at:

<http://support.prodsys.com/>

The latest documentation and test files can be found at that website. PSI also provides a user-messaging forum for questions about the Innovator™ Development Kit and a list of Frequently Asked Questions (FAQ). PSI recommends that you look there for answers to your questions before sending an email to PSI support.

You may email PSI Customer Support Services at [isup@prodsys.com](mailto:isup@prodsys.com)

PSI's support is for setup and validation of the Innovator™ Development Kit's operation. PSI provides programming development assistance, for an additional fee, in addition to the free support provided. Please contact PSI Sales at [sales@prodsys.com](mailto:sales@prodsys.com) for further information on DSP development assistance.

### System Requirements

- 233MHz or higher Pentium - compatible CPU
- 600MB of free hard disk space
- 64MB of RAM
- SVGA (800 x 600) display
- Internet Explorer (4.0 or later) or Netscape Navigator (4.7 or later) with Internet access
- Local CD-ROM drive

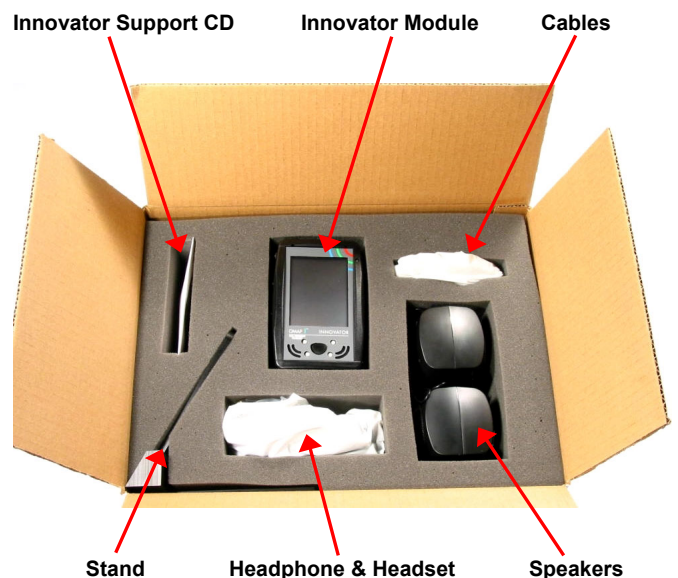
Code Composer Studio v2.0 is supported by Texas Instruments on the following operating systems:

- Windows 98
- Windows 2000 Pro
- Windows NT Workstation

### Getting Started

Verify the following items have been included:

- Innovator Module.
- Power Supply (underneath Innovator Module)
- Stylus (2 each)
- Speakers
- Headphone
- Headset
- One dual port Serial Cable, DB 9-pin
- One USB Client Cable
- Support and documentation CD
- Quick Start Guide
- PSI Registration and Warranty Form



## Registering the Innovator™ Development Kit

In order to receive technical support for your Innovator™ Development Kit, you **MUST** register your individual unit. To register your Innovator™ Development Kit, follow the instructions on the Registration Card included with the Innovator™ Development Kit.

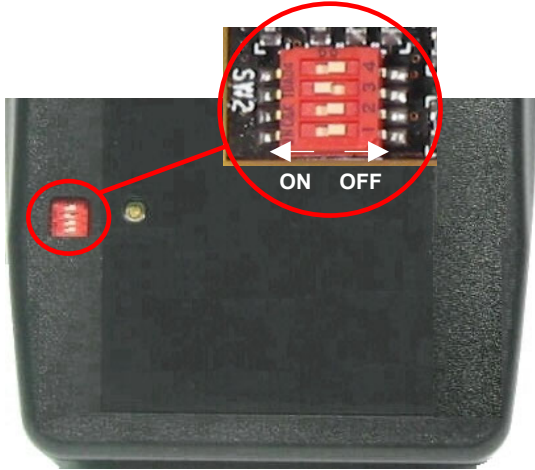
## Switch Settings

The Innovator Module comes with the internal Memory Configuration Switch preset. Please do not change the switch setting to any configuration other than provided by this documentation. Turn the Innovator Module **OFF** before changing switch settings.

## Running an Operating System from User Flash 0

To enable an OS from User Flash 0, ensure the dipswitch on the back of the unit is set as shown below.

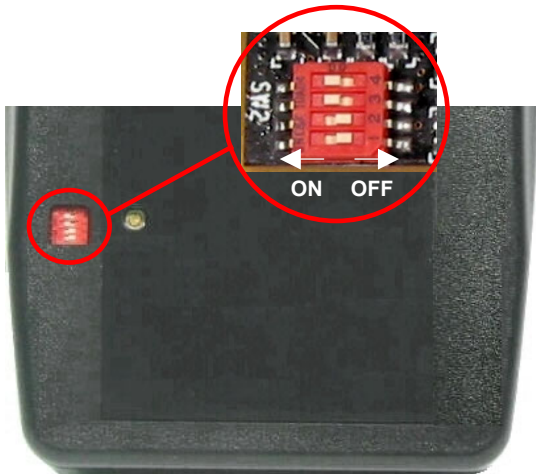
- SW1 – Off
- SW2 – Off
- SW3 – On
- SW4 – Off



## Running an Operating System from User Flash 1

To enable an OS from User Flash 1, ensure the dipswitch on the back of the unit is set as shown below.

- SW1 – Off
- SW2 – Off
- SW3 – On
- SW4 – On



## Connecting Power

To connect power to the Innovator Module, insert connector from power supply into jack as shown in the picture below. **DO NOT** force the power connector into the jack as it may cause damage to the jack.

**NOTE: It is normal for the power connector to be exposed.**



## Turning the Innovator Module Power Switch On

To apply power to the Innovator, put the stylus into opening on the case as shown below. Push upward on power switch until the Power On LED illuminates green.



## Client USB Cable Installation

Install the Client USB Cable as shown below.



## Serial Cable Installation

Install the Serial Cable as shown below.



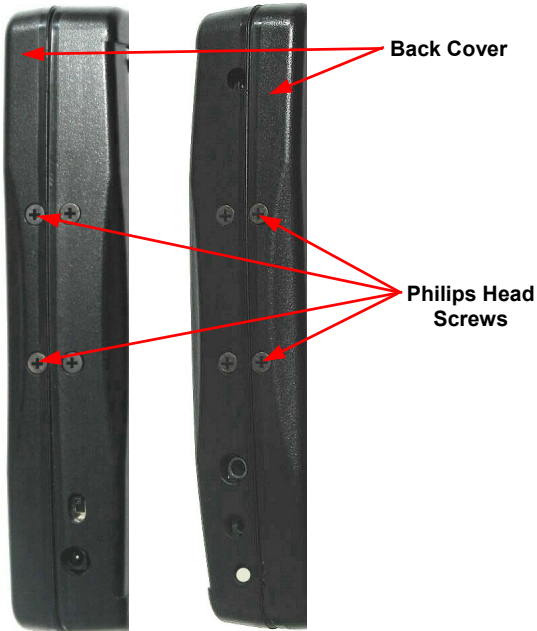
## Innovator Module Disassembly Procedures

This section describes how to disassemble the Innovator. This is normally done when moving from the case to the Breakout board (BoB).

To disassemble the Innovator, proceed as follows:

**Caution:** To avoid damage to the Innovator, please read each step carefully and completely before proceeding with that step.

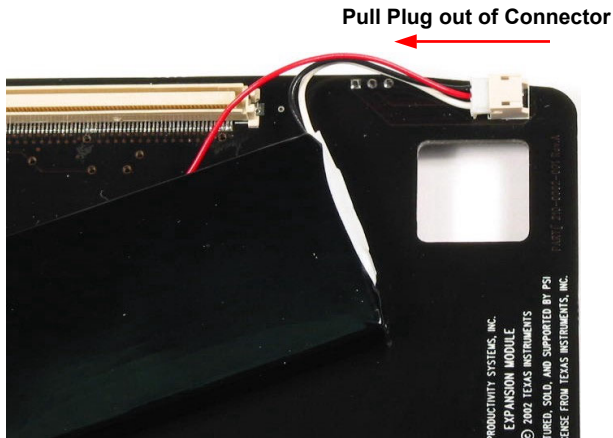
**Step 1:** Using a #1 Philips Screwdriver, remove four Philips Head screws from back cover and set cover and screws aside. Do not remove screws from front cover.



**Step 2:** Disconnect Processor Module from Expansion Module, by pulling them apart at the connectors, and set it aside.

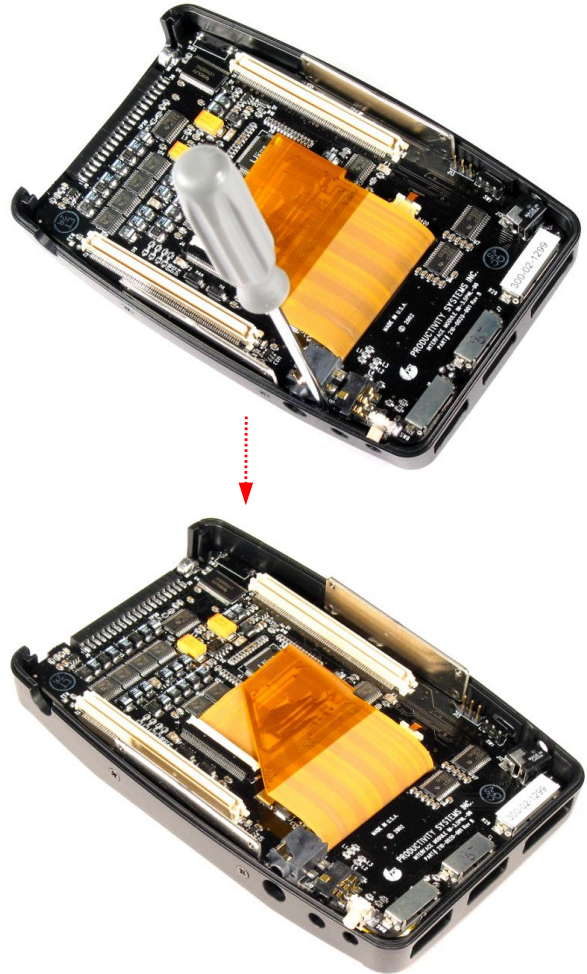
**Step 3:** Separate Expansion Module from Interface Module by pulling them apart at the connectors.

**Step 4:** Unplug battery from Expansion Module connector. Grip plug with fingernail and thumbnail and remove plug from connector. Set module and battery aside



**Step 5:** Using a small flat blade screwdriver, slide blade in between Headphone Jack, Headset Jack and front cover, and gently pry the Interface Module loose from the front cover. It may

be necessary to depress the Sleep/Wake Button to clear the opening in the cover.

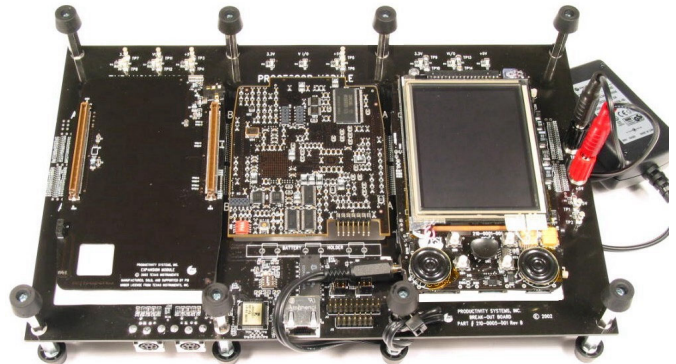


**Step 6:** Slide module assembly out of front cover.

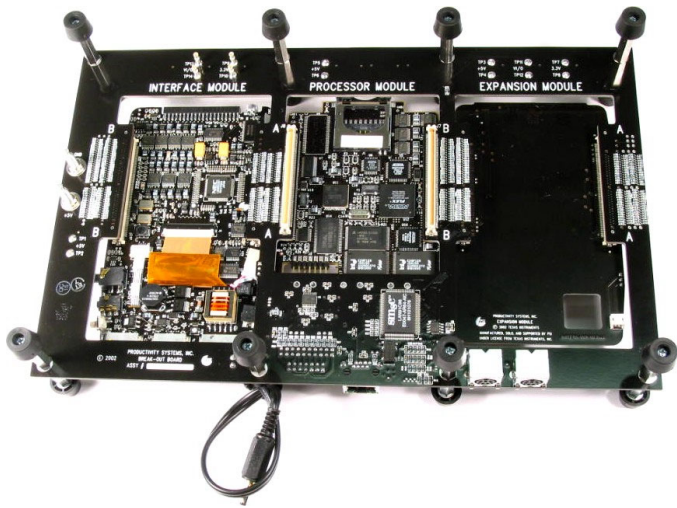
**Step 7:** Separate modules by pulling them apart at the connectors.

## Innovator™ Development Kit Breakout Board (BoB)

The Innovator Breakout Board (BoB) is designed to allow full access to each module. It is useful for checking out Expansion Modules that may be designed to plug into the Innovator. Its unique design allows access to both sides of each of the modules for development and test purposes. **NOTE: SW1 dipswitch 4 must be set to ON to apply power to the BoB onboard circuitry.**



Top View

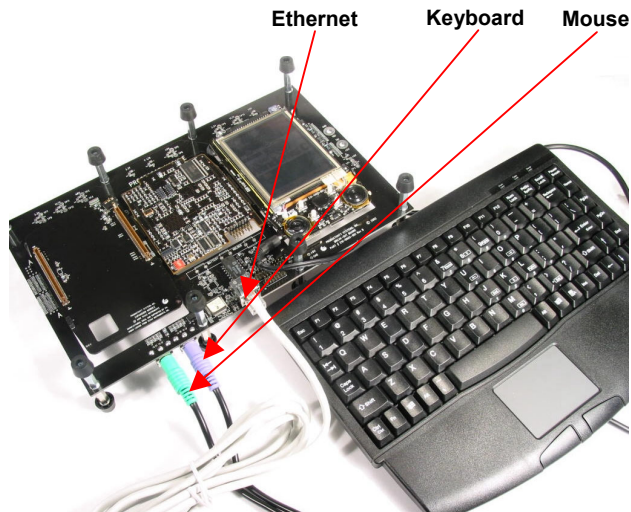


Bottom View

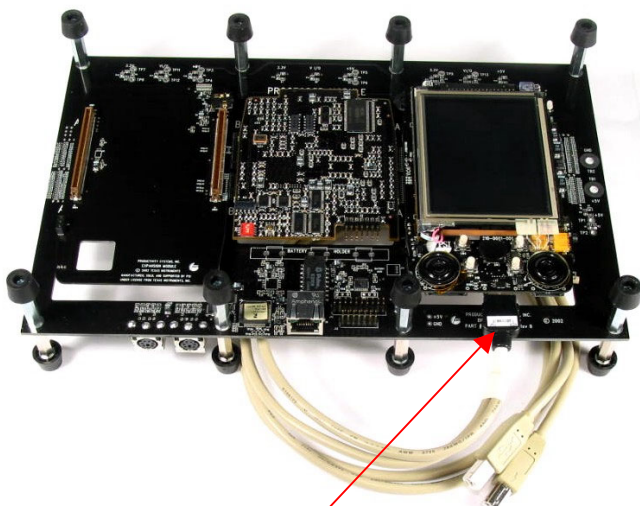
### BoB Module Configurations

For testing purposes, the modules can be configured on the BoB in a number of different ways. Refer to the User's Guide for an illustration of most all of the configuration possibilities.

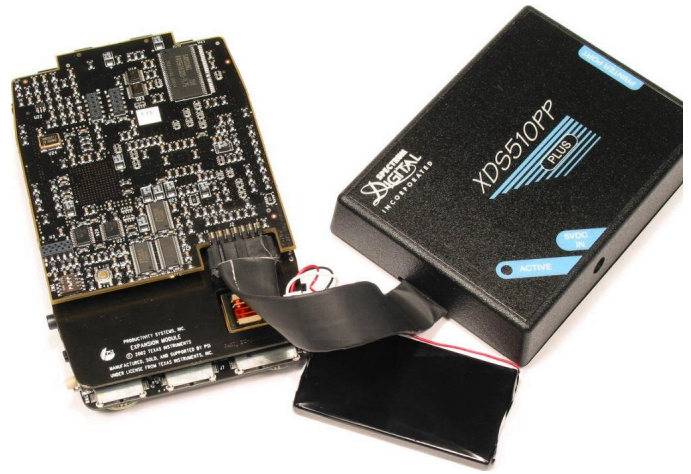
### Breakout Board Connections



Ethernet, Keyboard and Mouse



Host USB Cable



Processor Module JTAG Connection

### Innovator Module Assembly Procedures

This section describes how to reassemble the Innovator.

**Caution:** To avoid damage to the Innovator, please read each step carefully and completely before proceeding with that step.

- Step 1:** Locate connectors P2 and P3 on Expansion Module, place Interface Module connectors over Expansion Module connectors and press the modules together until they fit tight.
- Step 2:** Orient the Processor Module so that SD/MMC connector will be at the top when assembled. Place the Processor Module connectors over Expansion Module connectors and press the two modules together until they fit tight. If the connectors do not mate, check to make sure Processor Module is oriented properly.
- Step 3:** Squeeze all module connections once more to insure there are no gaps in the connections.
- Step 4:** Plug the Battery into battery jack on the Expansion Module with the pins on the plug facing the circuit board. Push plug all the way into the connector. Battery should be positioned on the Expansion Module as shown in the top left photo on this page. Tuck the wires up underneath the Processor Module to keep them from getting pinched when the cover is put on.
- Step 5:** Push the other side of the assembled modules into the cover so that it snaps into place, with the audio jacks and Sleep/Wake button properly aligned with the opening in the cover. Care should be taken not to damage the Sleep/Wake button, depress switch if necessary. Bow the cover out slightly using a small screwdriver or other device so the button will clear the front cover.
- Step 6:** Once the Sleep/Wake button clears the front cover, it may take a little more force to completely seat the assembled modules in place. You should hear a "snap" when this happens.
- Step 7:** Slide the top insert into the top of the front cover so that the openings line up with the connectors on the Interface and Processor modules.
- Step 8:** Ensure the battery wires are up underneath the Processor Module. If wires are exposed, the back cover may not fit properly.
- Step 9:** Place the back cover over the Processor Module and secure back cover in place using two (2) Philips head screws on each side.