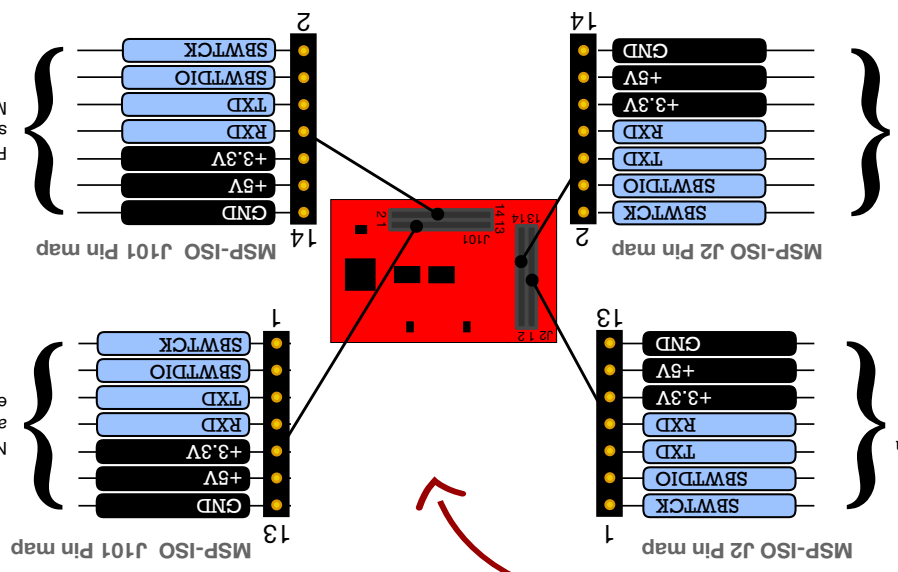
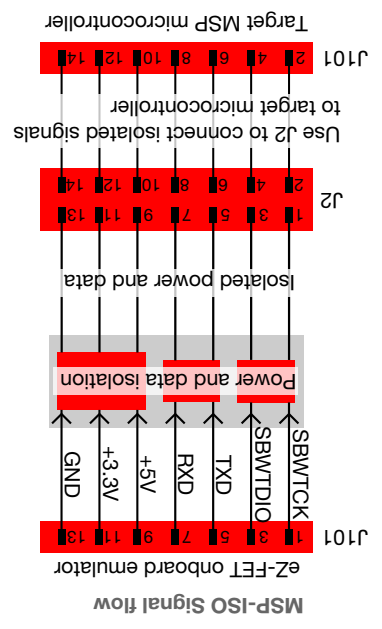


Target return selection:
place jumpers across
rows of J2 to enable
isolated signals to
pass to target MSP
microcontroller on
J101



Isolated power and data
signals from eZ-FET
emulator

Below are the pins exposed on the Isolation Plug-in module.
Note the pins labelled NC have no connection on the plug-in module but pass-through signals from the LaunchPad.
** Some LaunchPads do not 100% comply with the standard, please check your LaunchPad to ensure compatibility.
(i) Denotes I/O pins that are interrupt-capable.



Resources
ti.com/launchpad

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

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:

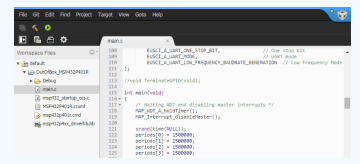
- Displays
- Wireless Connectivity
- Environmental Sensing

>> See them all @ ti.com/boosterpacks



Software Tools

TI Cloud Tools
Get started quickly in your web browser with TI Cloud Tools!



dev.ti.com { - Resource Explorer Cloud
- CCS Cloud IDE

Energia
A simple open-source & community-driven code editor. Easy-to-use functions for blinking LEDs, buzzing buzzers & sensing sensors.



Professional Software tools
LaunchPad is also supported by professional IDEs that provide full debug capability. Set breakpoints, watch variables & more with LaunchPad.



Meet the Isolation Plug-in Module

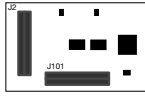
Part Number: MSP-ISO



A closer look at your new Isolation Plug-in Module

What comes in the box?

MSP-ISO
Plug-in Module



This Quick
Start Guide



Software @
ti.com/mspiso

Note:

The Isolation Plug-in Module only works on LaunchPads with eZ-FET Rev1.3 or greater. These LaunchPads isolate all signals and ground planes between the emulator and the target through the J101 header. The enclosed MSP-ISO provides a way to bridge the signals and power while retaining the isolation.

Power Enable J3

TPS76333 Fixed 3.3V Low IQ LDO

- 150-mA Low-Dropout Regulator
- Dropout Voltage, Typically 300 mV at 150 mA
- Thermal Protection
- Over Current Limitation
- Less than 2µA Quiescent Current in Shutdown mode
- Operating Junction Temperature Range -40°C to +125°C

TPS76350 Fixed 5V Low IQ LDO

- 150-mA Low-Dropout Regulator
- Dropout Voltage, Typically 300 mV at 150 mA
- Thermal Protection
- Over Current Limitation
- Less than 2µA Quiescent Current in Shutdown mode
- Operating Junction Temperature Range -40°C to +125°C

ISO7321 Dual-Channel Digital Isolator

- Signaling Rate: 25Mbps
- Integrates Noise Filter on the Inputs
- Low Power Consumption 1.2mA per channel at 1 Mbps
- 33ns propagation delay
- 65-kV/µs Transient Immunity
- Operating Temperature -40°C to +125°C

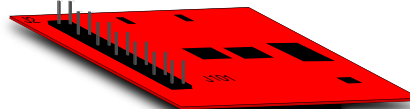
ISO1541 Low-Power Bi-Directional Isolator

- Isolated Bi-directional, I²C Compatible Communication
- 3-V to 5.5-V Supply Range
- ±50-kV/µs Transient Immunity
- Operating Temperature -40°C to +125°C

SN6501 Transformer Driver for Isolated Power Supplies

- Push-Pull Driver for Small Transformers
- Single 3.3V or 5V Supply
- High Primary-side Current Drive 350mA
- Low Ripple on Rectified Output Permits Small Output Capacitors
- Operating Temperature -40°C to +125°C

Isolation Plug-in Board



Instructions:

1. Remove jumpers from J101 header block on MSP microcontroller LaunchPad
2. Plug Isolation Plug-in board's J101 header into the J101 header located on the MSP microcontroller LaunchPad

MSP microcontroller LaunchPad

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WARNING

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User shall operate the Evaluation Kit within TI's recommended guidelines and any applicable legal or environmental requirements as well as reasonable and customary safeguards. Failure to set up and/or operate the Evaluation Kit within TI's recommended guidelines may result in personal injury or death or property damage. Proper set up entails following TI's instructions for electrical ratings of interface circuits such as input, output and electrical loads.

NOTE:

EXPOSURE TO ELECTROSTATIC DISCHARGE (ESD) MAY CAUSE DEGRADATION OR FAILURE OF THE EVALUATION KIT; TI RECOMMENDS STORAGE OF THE EVALUATION KIT IN A PROTECTIVE ESD BAG.

3 Regulatory Notices:

3.1 United States

3.1.1 Notice applicable to EVMs not FCC-Approved:

FCC NOTICE: This kit is designed to allow product developers to evaluate electronic components, circuitry, or software associated with the kit to determine whether to incorporate such items in a finished product and software developers to write software applications for use with the end product. This kit is not a finished product and when assembled may not be resold or otherwise marketed unless all required FCC equipment authorizations are first obtained. Operation is subject to the condition that this product not cause harmful interference to licensed radio stations and that this product accept harmful interference. Unless the assembled kit is designed to operate under part 15, part 18 or part 95 of this chapter, the operator of the kit must operate under the authority of an FCC license holder or must secure an experimental authorization under part 5 of this chapter.

3.1.2 For EVMs annotated as FCC – FEDERAL COMMUNICATIONS COMMISSION Part 15 Compliant:

CAUTION

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Interference Statement for Class A EVM devices

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Interference Statement for Class B EVM devices

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

3.2 Canada

3.2.1 For EVMs issued with an Industry Canada Certificate of Conformance to RSS-210 or RSS-247

Concerning EVMs Including Radio Transmitters:

This device complies with Industry Canada license-exempt RSSs. Operation is subject to the following two conditions:

(1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Concernant les EVMs avec appareils radio:

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Concerning EVMs Including Detachable Antennas:

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication. This radio transmitter has been approved by Industry Canada to operate with the antenna types listed in the user guide with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Concernant les EVMs avec antennes détachables

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante. Le présent émetteur radio a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés dans le manuel d'usage et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

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3.3.1 *Notice for EVMs delivered in Japan:* Please see http://www.tij.co.jp/lscs/ti_ja/general/eStore/notice_01.page 日本国内に輸入される評価用キット、ボードについては、次のところをご覧ください。
http://www.tij.co.jp/lscs/ti_ja/general/eStore/notice_01.page

3.3.2 *Notice for Users of EVMs Considered "Radio Frequency Products" in Japan:* EVMs entering Japan may not be certified by TI as conforming to Technical Regulations of Radio Law of Japan.

If User uses EVMs in Japan, not certified to Technical Regulations of Radio Law of Japan, User is required to follow the instructions set forth by Radio Law of Japan, which includes, but is not limited to, the instructions below with respect to EVMs (which for the avoidance of doubt are stated strictly for convenience and should be verified by User):

1. Use EVMs in a shielded room or any other test facility as defined in the notification #173 issued by Ministry of Internal Affairs and Communications on March 28, 2006, based on Sub-section 1.1 of Article 6 of the Ministry's Rule for Enforcement of Radio Law of Japan,
2. Use EVMs only after User obtains the license of Test Radio Station as provided in Radio Law of Japan with respect to EVMs, or
3. Use of EVMs only after User obtains the Technical Regulations Conformity Certification as provided in Radio Law of Japan with respect to EVMs. Also, do not transfer EVMs, unless User gives the same notice above to the transferee. Please note that if User does not follow the instructions above, User will be subject to penalties of Radio Law of Japan.

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3.4.1 *For EVMs subject to EU Directive 2014/30/EU (Electromagnetic Compatibility Directive):*

This is a class A product intended for use in environments other than domestic environments that are connected to a low-voltage power-supply network that supplies buildings used for domestic purposes. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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4.2 User must read and apply the user guide and other available documentation provided by TI regarding the EVM prior to handling or using the EVM, including without limitation any warning or restriction notices. The notices contain important safety information related to, for example, temperatures and voltages.

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4.3.2 EVMs are intended solely for use by technically qualified, professional electronics experts who are familiar with the dangers and application risks associated with handling electrical mechanical components, systems, and subsystems. User assumes all responsibility and liability for proper and safe handling and use of the EVM by User or its employees, affiliates, contractors or designees. User assumes all responsibility and liability to ensure that any interfaces (electronic and/or mechanical) between the EVM and any human body are designed with suitable isolation and means to safely limit accessible leakage currents to minimize the risk of electrical shock hazard. User assumes all responsibility and liability for any improper or unsafe handling or use of the EVM by User or its employees, affiliates, contractors or designees.

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