

CC85XXDK Quick Start Guide

1. Kit Contents



The following items are included in the CC85XXDK:

- 2 x Purepath Wireless AudioEB
- 1 x CC Debugger
- 2 x CC85xxEM
- 2 x CC85xx-CC2590EM
- 2 x 2.4 GHz Antennas
- Cables
- Documentation

The RF boards in this kit are FCC and IC certified and tested/comply with ETSI/R&TTE over temperature from 0 to +35°C. The antenna, W1010 from Pulse, is a ¼ wave dipole antenna with 2 dBi gain.

2. Purpose of this Quick Start Guide

This quick start guide will provide step-by-step instructions showing how to set up an audio link between two wireless units provided in the development kit. The procedure is the same regardless of which evaluation module is being used, i.e. either the C85xxEM or the CC85xx-CC2590EM.

The EMs are pre-programmed with firmware to stream audio from the (Master) line-in input of one AudioEB to the (Slave) line-out and headphone output on the other AudioEB. Please follow step 2 to 9. For the latest firmware revision see step 10.

For more details on CC85xx, see the product folder of the CC8520 [1].

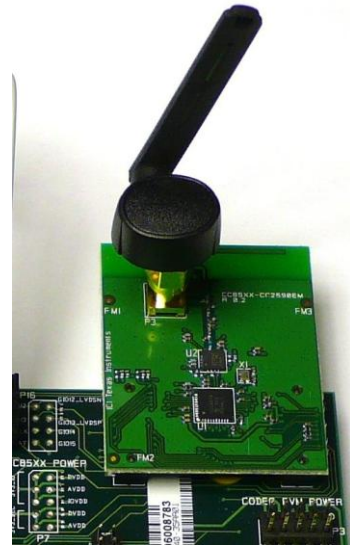


Caution! To minimize risk of injury, avoid touching components during operation if symbolized as hot.



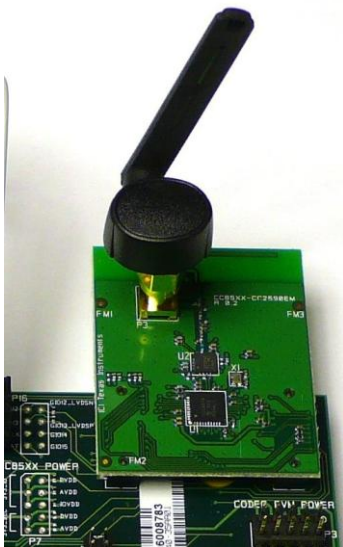
Caution! The kit contains ESD sensitive components. Handle with care to prevent permanent damage.

3. Plug Master EM into PPW Audio EB



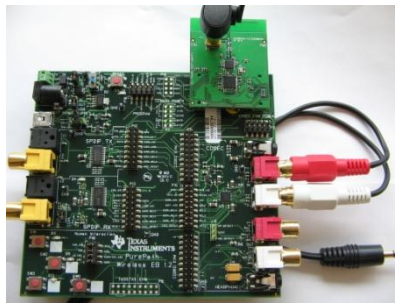
Connect the CC85xxEM or the CC85xx-CC2590EM marked MASTER (label attached on the backside of the board). These boards are pre-programmed with master firmware. Attach the antenna to the SMA connector.

4. Plug Slave EM into PPW Audio EB



Connect the CC85xxEM or the CC85xx-CC2590EM marked SLAVE (label attached on the backside of the board.) These boards are pre-programmed with slave firmware. Attach the antenna to the SMA connector.

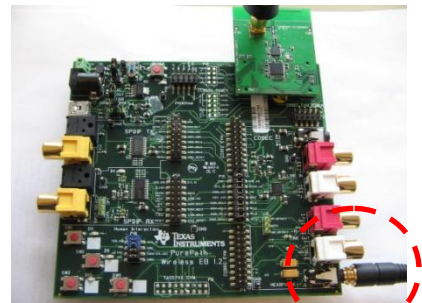
5. Connect Audio Cables to the Master



Connect an audio source (CD-player, MP3-player or similar) to the line-in input of the AudioEB with CC85xxEM or CC85xx-CC2590 with the "MASTER" label plugged in.

The CC85xx-CC2590EM and CC85xxEM with the "MASTER" label are pre-programmed with firmware which sets up the onboard TLV320AIC3101 codec [2] to use analog input on the PPW AudioEB.

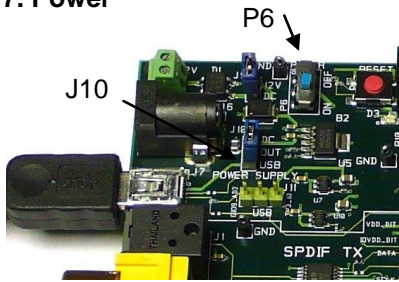
6. Connect Audio Cables to the Slave



Connect an amplifier to line out or connect a headphone to the mini jack of the AudioEB with the CC85xxEM or the CC85xx-CC2590 with the "SLAVE" label plugged in.

The CC85xx-CC2590EM and CC85xxEM with the "SLAVE" label are pre-programmed with firmware which sets up the onboard TLV320AIC3101 codec [2] to use line out and headphone output of the PPW AudioEB.

7. Power



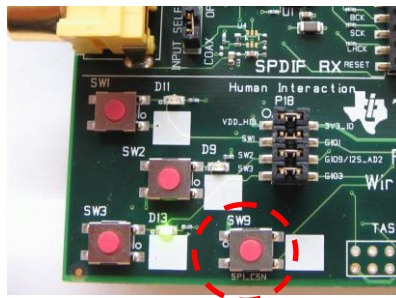
To power the PPW AudioEBs; connect a USB cable to each of the PPW AudioEBs and make sure J10 is in the position "OUT-USB" (Pos 1-2). Finally, switch P6 to "ON". The LED D3 should now be lit.

Note! When using the DC jack connector or screw terminal to power the AudioEB, the power source should be in a range from 5.5V to 15V with a maximum current source capability of 1A.



There should only be one active power source at any one time. Do not leave the board powered when unattended.

8. Pairing



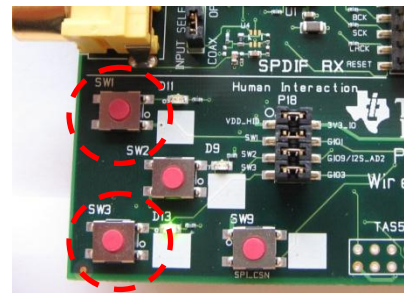
When powered for the first time, LED D9 will blink to indicate that the devices are not connected.

To pair the Slave with the Master; click first on SW9 on Master and then click on SW9 on the Slave within a few seconds after you clicked on the Masters SW9. When the devices are paired and the link is established, LED D9 will be constantly lit.

Note that the pairing operation is only needed the first time. Next time they will pair automatically when powered.

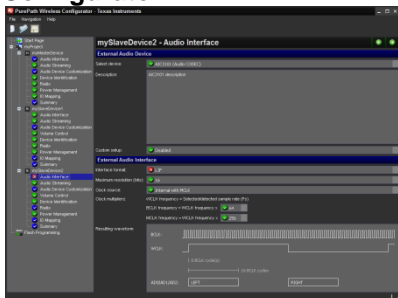
You can now turn on your audio source and start testing!

9. Volume control



The output volume can be adjusted on the Slave by pressing SW 1 to increase the volume and SW3 to decrease the volume.

10. PurePath Wireless Configurator



The next step is to download the PurePath Wireless Configurator (PPWC). PPWC makes it possible to explore all the configuration options of the CC85xx family. After creating device configurations for Master and Slave network roles, PPWC can program the CC85xx devices directly through the CCDebugger (included in the kit).

For more details; download the PPW Configurator and the PPW Configurator Quick Start Guide. Links to download the PPW Configurator can be found in the CC8520 product folder [1]

A. More information

On Texas Instruments' Low-Power RF web site you will find information about our latest products, software, application notes, events and much more. Just go to www.ti.com/lprf

The Low Power RF Online Community has forums, blogs and videos. Use the forums to find information, discuss and get help with your design. Join us at www.ti.com/lprf-forum

The TI LPRF eNewsletter keeps you up to date on e.g. new products, application notes, software and events. Sign up at www.ti.com/lprfnewsletter

We hope you will enjoy working with the CC8520 and associated Low-Power RF products from Texas Instruments.

B. References

[1] CC8520 product page
www.ti.com/product/cc8520

[2] TLV320AIC3101 product page
www.ti.com/product/tlv320aic3101

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For EVMs **not** subject to the above rules, this evaluation board/kit/module is intended for use for ENGINEERING DEVELOPMENT, DEMONSTRATION OR EVALUATION PURPOSES ONLY and is not considered by TI to be a finished end product fit for general consumer use. It generates, uses, and can radiate radio frequency energy and has not been tested for compliance with the limits of computing devices pursuant to part 15 of FCC or ICES-003 rules, which are designed to provide reasonable protection against radio frequency interference. Operation of the equipment may cause interference with radio communications, in which case the user at his own expense will be required to take whatever measures may be required to correct this interference.

General Statement for EVMs including a radio

User Power/Frequency Use Obligations: This radio is intended for development/professional use only in legally allocated frequency and power limits. Any use of radio frequencies and/or power availability of this EVM and its development application(s) must comply with local laws governing radio spectrum allocation and power limits for this evaluation module. It is the user's sole responsibility to only operate this radio in legally acceptable frequency space and within legally mandated power limitations. Any exceptions to this is strictly prohibited and unauthorized by Texas Instruments unless user has obtained appropriate experimental/development licenses from local regulatory authorities, which is responsibility of user including its acceptable authorization.

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

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

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.
-

For EVMs annotated as IC – INDUSTRY CANADA Compliant

This Class A or B digital apparatus complies with Canadian ICES-003.

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

Concerning EVMs including radio transmitters

This device complies with Industry Canada licence-exempt RSS standard(s). 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.

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.

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Cet appareil numérique de la classe A ou B est conforme à la norme NMB-003 du Canada.

Les changements ou les modifications pas expressément approuvés par la partie responsable de la conformité ont pu vider l'autorité de l'utilisateur pour actionner l'équipement.

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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.

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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This development kit is NOT certified as Confirming to Technical Regulations of Radio Law of Japan!

If you use this product in Japan, you are required by Radio Law of Japan to follow the instructions below with respect to this product:

(1) Use this product 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 this product only after you obtained the license of Test Radio Station as provided in Radio Law of Japan with respect to this product, or

(3) Use of this product only after you obtained the Technical Regulations Conformity Certification as provided in Radio Law of Japan with respect to this product.

Also, please do not transfer this product, unless you give the same notice above to the transferee.

Please note that if you could not follow the instructions above, you will be subject to penalties of Radio Law of Japan.

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