

Description & Features

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This CC256x Bluetooth evaluation module reference design is an RF reference design with an antenna which can be easily connected to many Microcontroller Units (MCUs), such as TI's MSP430 or Tiva C series MCUs. The reference design can be copied into your board, allowing for a cost-effective design with reduced time to market. This Bluetooth design is supported by an orderable evaluation module, royalty free software and documentation, test and certification tips, and community support resources. [Visit our wiki for more information.](#)



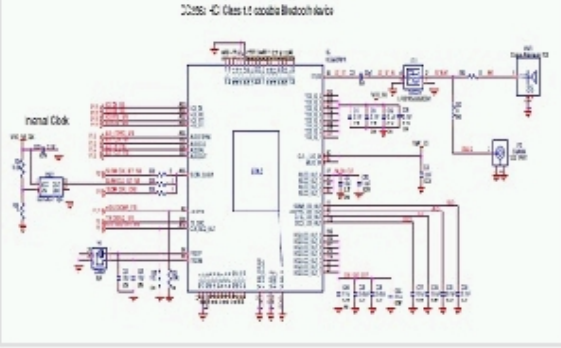
- Flexible solution for broad market
- Bluetooth & Bluetooth low energy in single solution for use with all phones/tablets
- Royalty-free software for TI MCUs
- Low cost solution to add Bluetooth and Bluetooth low energy to any application
- Best-in-class performance for longer range
- Based on 7th Generation Bluetooth technology

i Fully assembled board (shown above) developed for testing and performance validation only, not available for sale.

- CC256XMSPBTBLESW, TI Dual-mode Bluetooth® stack on MSP430™ MCUs

 TI's [Standard Terms and Conditions for Evaluation Modules](#) apply.

Quickly understand overall system functionality.

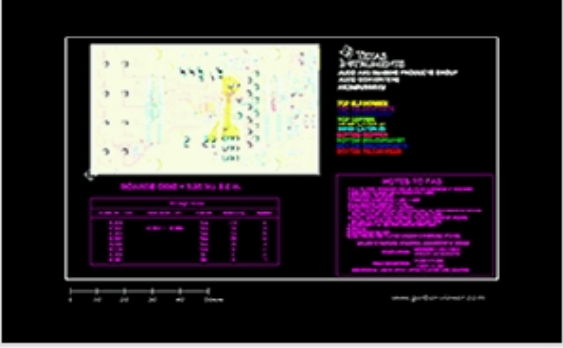
[Download Schematic](#)

Get results faster with test and simulation data that's been verified.

Characteristic	Condition	Min	Typ	Max	Ref. Publication	Unit
Operation frequency range		2400	2	2600		MHz
Channel spacing		0	2	3		MHz
Carrier signal	FSK + 2FSK, chirp, FSK	<0	-	>0		dBm
Maximum output power	GAUSS, FSK + 2FSK	<0	-	>0		dBm
Maximum sensitivity	FSK + 2FSK	<-30	-30	-28		dBm
Dynamic range			1	52		dB
Image + 1st IF	CRPS, adjacent 1stIF	<0	-	>0		dB
Image + 2nd IF	CRPS, adjacent 2ndIF	<-30	-30	>-14		dB
Image + 3rd IF	CRPS, adjacent 3rdIF	<-30	-30	>-14		dB
Image + 4th IF	CRPS, adjacent 4thIF	<-30	-30	>-14		dB
1st LO to 4th LO	Freq. response 1st - 4th LO	<-30	-30	>-14		dBm

Download Test Data

Download ready-to-use system files to speed your design process. [Get Viewer.](#)

[Download Design Files](#)

Find the complete list of components in this reference design.

Order samples, get tools and find more information on the TI products in this reference design.

Part Number	Name	Product Family	Sample & Buy	Design Kits & Evaluation Modules
CC2560	Bluetooth® CC2560 controller	Wireless Connectivity	Sample & Buy	View Design Kits & Evaluation Modules
CC2564	Dual-mode Bluetooth® CC2564 controller	Wireless Connectivity	Sample & Buy	View Design Kits & Evaluation Modules
CC2564MODA	Dual-mode Bluetooth® CC2564 module with integrated antenna	Wireless Connectivity	Sample & Buy	View Design Kits & Evaluation Modules

Part #	Package Pins	CAD File (.bxl)	STEP Model (.stp)
CC2560	VQFN-P-MR (RVM) 76	Download	-
CC2564	VQFN-P-MR (RVM) 76	Download	-
LP2985-18	SOT (DEV) 5	Download	Download
	(YEU) 5	Download	-

Texas Instruments and Accelerated Designs, Inc. have collaborated together to provide TI customers with schematic symbols and PCB layout footprints for TI products.

Step 1: Download and install the [free download](#).

Step 2: Download the Symbol and Footprint from the CAD.bxl file table.

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Application notes (1)

Title	Abstract	Type	Size (KB)	Date	Views
CC256XQFN PCB Guidelines (Rev. A)	Read Abstract	PDF	1805	09 Mar 2015	1,190

Title	Abstract	Type	Size (KB)	Date	Views
CC256xEM Bluetooth Adapter Kit User Guide		Multiple Files		19 May 2015	540

Title	Abstract	Type	Size (KB)	Date	Views
CC256xEM Bluetooth Adapter Kit Design Files (Rev. A)		ZIP	11825	01 Jul 2015	239
CC256x Bluetooth Reference Design Bill of Materials (BOM)		PDF	157	29 Aug 2013	139
CC256x Bluetooth Reference Design Schematic		PDF	241	29 Aug 2013	438

Design Kits & Evaluation Modules (2)

Name	Part Number	Tool Type
Dual-mode Bluetooth® CC2564 evaluation board	CC2564XQFNEM	Evaluation Modules & Boards
Dual-mode Bluetooth® CC2564 module evaluation board	CC2564MODNEM	Evaluation Modules & Boards

Name	Part Number	Tool Type
CC256x Bluetooth Hardware Evaluation Tool	SWRC256	Calculation Tools

Name	Part Number	Software Type
TI Dual-Mode Bluetooth® Stack	TIBLUETOOTHSTACK-SDK	Software Development Kits (SDK)
TI Dual-mode Bluetooth® stack on MSP430™ MCUs	CC256XMSPTBLESW	Software Development Kits (SDK)
TI dual-mode Bluetooth® stack on TM4C MCUs	CC256XM4BTBLESW	Software Development Kits (SDK)

CC256x Bluetooth Reference Design Design Files
(71D 3470 KR) 312 version 30 Aug 2013

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- CC2650EM-4XD-RD
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- PMP11451
- PMP11791