CC1190 - Questions & Answers
February 2010

Commercial

Q: What is the CC1190 ?
A: The CC1190 is an 850-950 MHz RF Front End which allows users to get extended range on their low power wireless solution. This devices provides integrated PA,LNA ,switches matching network and inductors on one monolithic piece of silicon This device can provide up to +27 dBm,(.5W) output power.

Q: Is there a CC1190DK Development Kit?
A: No, not a specific development kit that can be used by itself. We have a CC1190EMK. We will be releasing a CC1190EMK board at RTM in February.

Q: What is the CC1190 EMK Module Kit?
A: The CC1190EMK is an evaluation module kit with two CC1190 EM modules and two antennas. The module can be connected through a coaxial cable to any CC11XX EM eval module for our sub1GHZ transceivers/SoCs. These transceivers/SoCs EMs eval modules are included in the DK development kit for its respective transceiver/SoC.

Q: Are CC1190EMKs available?
A. Yes, they are available for $99.

Q: Where can I find CC1190 layout information?
A: The CC1190 layout information is contained in product folder (http://focus.ti.com/docs/toolsw/folders/print/cc1190emk.html).

Q: When will combo boards (A TI radio plus C1190) be available?

A: CC1101-CC1190-915 EMK	February 2010
B: CC1101-CC1190-868EMK	Mid March 2010
C: CC430-CC1190 EMK	TBD

Q: Where can I get CC1190 samples?
A: Samples can be ordered from the TI sample program.

Q: How can I get CC1190 prices?
A: Prices are available through normal TI pricing channels.

Q: Can the CC1190 be used with RF devices from other manufacturers than TI?
A: Yes, the CC1190 can be used with any 850-950MHZ RF device in the market, but it has been designed to have a seamless interface to the TI parts. When used with other radios, the customer has to do more matching between the CC1190 and the radio.

Q: Do we have a ref design with other radios?
A: No, we do not have this available. We recommend the customers using a other radios to start with the CC1190EM ref design and work from there.

Technical

Q: Is it important to follow the CC1190 reference designs provided by TI?
A: It is very important to follow the TI reference designs. Changes in the CC1190 layout will decrease the performance, and customers will experience higher current consumption and a lower output power.

Q: Can max output power be used at all channels on the CC1101-CC1190 EMK evaluation module?
A: The hardware should be able to transmit at full power at all channels, except for channels near the 902 and 928 bands. Please refer to the note "Using the CC1190 RF Front End in the CC1190 EMK web folder for more information.

Q: What is the 1 dB compression point for the CC1190 transmitter?
A: The input 1 dB compression point is +24 dBm..
Note that these results are for the CC1190 stand-alone EM board. The combo boards may perform differently due to changed impedances.

Q: What is the input power required to have the full 27 dBm output power with CC1190?

A: At 0 dBm input power, we see 26 dBm output power with the power meter. The match is allowing more power +27 dBm reliably at 3.7V supply.

Q: Why is our noise figure higher for CC1190 than for the competitor RF Front End?

A: Our noise figure includes RX/TX switching and filtering, and this is normally not included in the competitor's measurements. The switching and filtering and all external matching components will add 1 dB or more to the noise figure.

Q: What output power can I expect when using the CC1190 combo boards (EMKs)?
A: The CC1101-CC1190- 915 EMK combo board can deliver up to +26dBm and still meet FCC part 15.247 regulations. The CC1101-CC1190 868 EMK combo board can deliver up to +20dBm and still meet ETSI EN300 220 Regulations.

Q: Does TI has a modified SimpliciTi 1.1.0 project which supports frequency hopping ?

A:Currently, the only projects operable in this version are those under the "8051" SoC's on the Smart RF04 card and does not include projects for the MSP430 projects or the CC430 part. A version supporting that will be available at a later date.

Q: When should I use Low Gain Mode in TX and when should I use High Gain Mode?

A: Low Gain mode has a lower signal gain, and is designed to be used when the maximum ouput power is +23dBm or below.

IMPORTANT NOTICE

Texas Instruments Incorporated and its subsidiaries (TI) reserve the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice. Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its hardware products to the specifications applicable at the time of sale in accordance with TI's standard warranty. Testing and other quality control techniques are used to the extent TI deems necessary to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI components. To minimize the risks associated with customer products and applications, customers should provide adequate design and operating safeguards.

TI does not warrant or represent that any license, either express or implied, is granted under any TI patent right, copyright, mask work right, or other TI intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information published by TI regarding third-party products or services does not constitute a license from TI to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

Reproduction of TI information in TI data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. Reproduction of this information with alteration is an unfair and deceptive business practice. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Resale of TI products or services with statements different from or beyond the parameters stated by TI for that product or service voids all express and any implied warranties for the associated TI product or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

TI products are not authorized for use in safety-critical applications (such as life support) where a failure of the TI product would reasonably be expected to cause severe personal injury or death, unless officers of the parties have executed an agreement specifically governing such use. Buyers represent that they have all necessary expertise in the safety and regulatory ramifications of their applications, and acknowledge and agree that they are solely responsible for all legal, regulatory and safety-related requirements concerning their products and any use of TI products in such safety-critical applications, notwithstanding any applications-related information or support that may be provided by TI. Further, Buyers must fully indemnify TI and its representatives against any damages arising out of the use of TI products in such safety-critical applications.

TI products are neither designed nor intended for use in military/aerospace applications or environments unless the TI products are specifically designated by TI as military-grade or "enhanced plastic." Only products designated by TI as military-grade meet military specifications. Buyers acknowledge and agree that any such use of TI products which TI has not designated as military-grade is solely at the Buyer's risk, and that they are solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI products are neither designed nor intended for use in automotive applications or environments unless the specific TI products are designated by TI as compliant with ISO/TS 16949 requirements. Buyers acknowledge and agree that, if they use any non-designated products in automotive applications, TI will not be responsible for any failure to meet such requirements.

Following are URLs where you can obtain information on other Texas Instruments products and application solutions:

Products		**Applications**	
Amplifiers	amplifier.ti.com	Audio	www.ti.com/audio
Data Converters	dataconverter.ti.com	Automotive	www.ti.com/automotive
DLP® Products	www.dlp.com	Communications and Telecom	www.ti.com/communications
DSP	dsp.ti.com	Computers and Peripherals	www.ti.com/computers
Clocks and Timers	www.ti.com/clocks	Consumer Electronics	www.ti.com/consumer-apps
Interface	interface.ti.com	Energy	www.ti.com/energy
Logic	logic.ti.com	Industrial	www.ti.com/industrial
Power Mgmt	power.ti.com	Medical	www.ti.com/medical
Microcontrollers	microcontroller.ti.com	Security	www.ti.com/security
RFID	www.ti-rfid.com	Space, Avionics & Defense	www.ti.com/space-avionics-defense
RF/IF and ZigBee® Solutions	www.ti.com/lprf	Video and Imaging	www.ti.com/video
		Wireless	www.ti.com/wireless-apps

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2010, Texas Instruments Incorporated