

## **DDC1128 EVM Introduction User Guide**

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This user's guide provides an introduction to the evaluation module (EVM) for the [DDC1128](#) from Texas Instruments.

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## 1 DDC1128 EVM Kit Contents

This evaluation module (EVM) is an evaluation kit for evaluating the DDC1128, a 128-channel, current input, 20-bit analog-to-digital (A/D) converter. The EVM consists of two DDC1128 devices, a USB device for interfacing to a PC, an FPGA for device communication, 16MB of memory for temporary data storage, and a high-density socket to allow connection to the analog inputs. Easy-to-use software for the Microsoft® Windows® operating system is included that allows performance evaluation of each device. A socketed analog input board (AIB) is attached to the high-density DDC1128EVM socket for device analysis.

The DDC1128 EVM kit contains the following:

- One DDC1128 EVM board
- One High Density Analog Input Board
- One SMA-to-BNC adapter
- USB-A to Mini-B cable

The DDC1128 EVM is shown in [Figure 1](#).

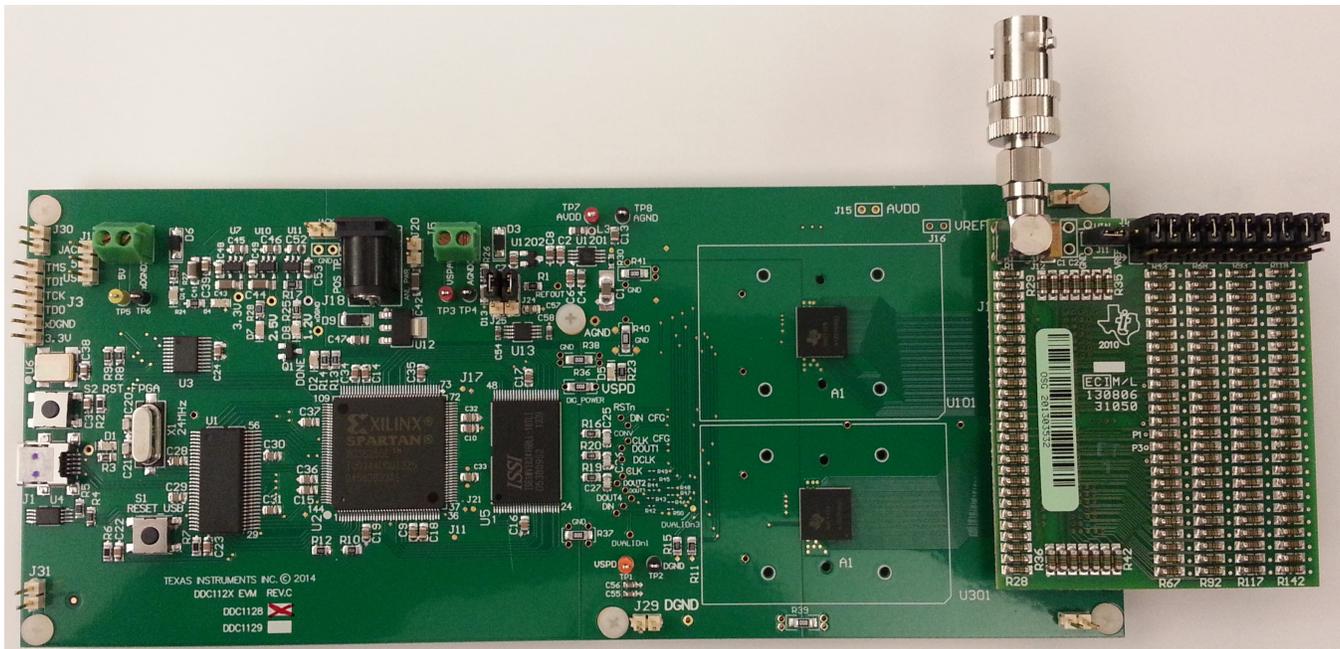


Figure 1. DDC1128 EVM

## **2 DDC1128 EVM Hardware Features**

The DDC1128EVM is a device-under-test (DUT) board that contains two DDC1128 devices on the analog portion of the board. Also included on the analog portion are two 4.096-V reference options and a reference buffer, a high-density analog input socket, and decoupling capacitors. An analog input board (AIB) is connected to the high density socket, and drives the 256 possible device channels.

The digital portion of the DDC1128EVM contains voltage regulators, decoupling capacitors, interface connectors, reset switches, oscillators, a USB interface, a Xilinx Spartan®-3 FPGA, and 16MB of memory. The FPGA generates all the timing signals that are sent to the DDC1128s as well as handles the communication of data between the DDC1128s and the PC.

## **3 DDC1128 EVM Software Features**

The GUI available for the EVM provides an easy interface to evaluate the DDC1128. The onboard FPGA can be directly controlled with the GUI and used to configure the DDC1128 as well as analyze the DDC1128 output data. Several representations of the captured data can be selected in the GUI options so that different qualities can be evaluated. For further analysis and evaluation, the GUI can be used to save the DDC1128 data in text format for offline analysis.

## **4 DDC1128 EVM Documentation**

Complete EVM and AIB adapter schematics are available. The user guide provided with the kit explains a step-by-step installation procedure for the device drivers and evaluation system. Full features and modes available are also explained in the user guide.

Therefore, the DDC1128 EVM is a complete evaluation setup for the DDC1128. For more information on the EVM, or to order the EVM, please write to: [ddc1128\\_info@list.ti.com](mailto:ddc1128_info@list.ti.com).

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