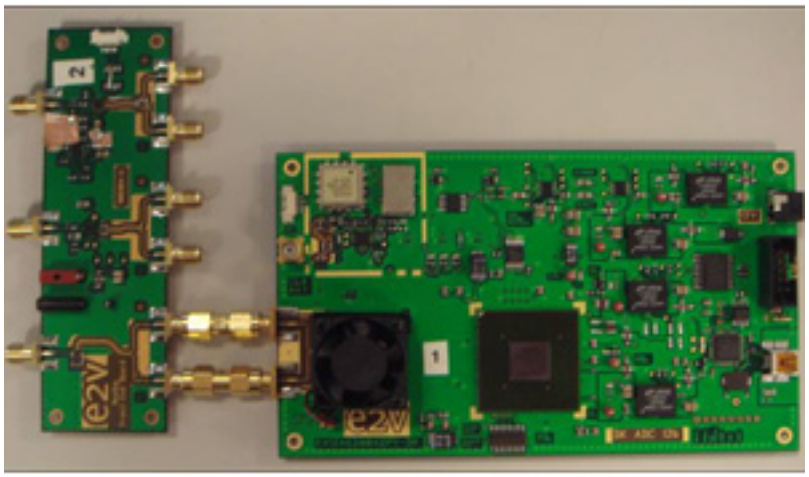
12bit ADC operates at up to 1.5GSps



Building on the performance of its true-single-core high bandwidth family of ADCs with direct RF sampling, e2v has now announced the launch of a demonstration kit for its 12 bit 1.5GSps analogue to digital converter. This Demonstration Kit (DK) allows for faster ADC performance evaluation. It also significantly reduces the R&D costs, design time and design risks for GSPS-speed data acquisition systems.

The EV12AS200 enables further innovation in many applications, including high verticality oscilloscopes, spectrum analysers, high dynamic range point-to-point microwave data links, electronic warfare systems and data acquisition COTS boards.

e2v is able to provide a demonstration unit, using this advanced ADC, for system evaluation. The e2v DK board is a “plug & play” data acquisition evaluation and development tool. The board includes a full clocking capability, multi-output voltage regulation and multi-option ADC input driver solutions, all optimally implemented for premium ADC performance.

The ADC’s digital interface is provided by a high performance FPGA, incorporated on the same PCB, which can also be programmed with user code to demonstrate proof of concept in prototype systems.
Schematics, board layout and acquisition VHDL code is provided to reduce system design time and design risks. A PC based user interface and USB bus allows for quick changes in configuration while using the Demo Kit for ADC evaluation purposes.

The ADC itself (EV12AS200) features a full power input bandwidth of 2.3GHz with a roll-off pattern optimised for operation in the L-Band area. It also features the lowest input voltage range in the 12bit GSPS class with only 500mVp-p without sacrificing performance in direct RF-Sampling.

EV12AS200 is also the only 12bit ADC operating at up to 1.5GSps without the use of any form of internal interleaving. This is key for e2v's EV12AS200 to achieve both a calibration-free stable dynamic performance versus temperature, and nominal dynamic performance that is available immediately at power-up following supply voltage stabilisation, without the need to wait for multi-second silicon warm-up and calibration.

Fine adjustment of input gain and offset, as well as clock skew, are possible using the PC user interface. These facilitate interleaving of multiple converters to achieve even higher sample rates. A separate SYNC input is provided which can be used to synchronize multiple boards and also demonstrate the trigger capability of the component.

For more information visit www.e2v.com [1]

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http://www.ecnmag.com/product-releases/2012/11/12bit-adc-operates-15gsps

Links:
[1] http://www.e2v.com