ANCORTEK

SDR-PM 402 Module

The FPGA-based micro controller/processor SDR-PM 402 module presents a robust hardware design platform built around the FPGA of Altera Cyclone IV, which is optimized for the lowest power requirement for transmitter-receiver applications yet offers ultimate design flexibility with industry-leading programmable logic. SDR-PM 400 is designed specifically for the Software-Defined system with a protocol. By integrating this processor module to a transmitter-receiver system, you can control power and performance of your software-define systems.

This platform includes one channel of 10 ns high speed D/A converter and two channels of 40 MSPS high speed A/D converters, which allow you to generate desired VCO tune waveforms on demand and get the digitalized Intermediate frequency (IF) signal data immediately. The on-board JTAG port provides a tool to program the FPGA chip. A CY7C68013A USB Peripheral Controller is set to high speed mode, which allows you to transfer preprocessed data to your PC at the speed of 480Mb/s.

This board has been pre-programmed with HDL code. A VCO nonlinearity correction function embedded on the board can automatically correct the VCO nonlinearity as long as a SDR-RF module has been connected to the board using a FFC cable and a PC is connected by a USB cable.

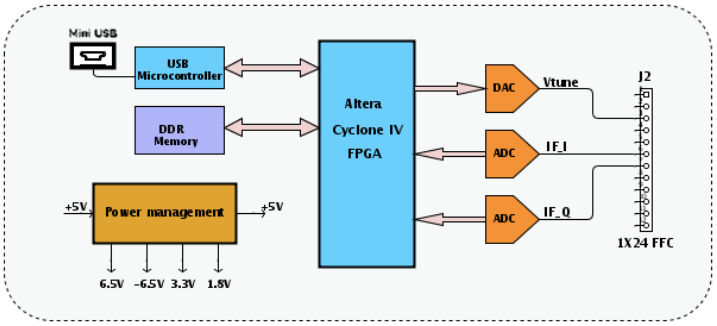
FEATURES

- High performance FPGA chip
- High speed USB2.0 controller
- One 12-bit 10 ns DAC channel
- Two 12-bit 40 MSPS ADC channels
- On board JTAG programming
- 2 GB on board DDR2 memories
- 12 all-purpose I/O to daughter board
- Embedded VCO nonlinearity correction algorithm
- Single +5V DC supply voltage
- On board power management
- +1.8V and +3.3V output
- SDR microcontroller
- General purpose controller
- Standalone processing system

Description of FFC Connector Pins

Pin	Name	Direction	Description	Pin	Name	Direction	Description
1	GND	comm	Ground	13	I/007	in/out	Spare
2	3.3V	in	3.3V	14	I/008	in/out	Spare
3	1.8V	in	1.8V	15	I/009	in/out	Spare
4	GND	comm	Ground	16	I/010	in/out	Spare
5	Vcc	in	+5V	17	I/011	in/out	Spare
6	GND	comm	Ground	18	I/012	in/out	Spare
7	I/001	in/out	Spare	19	Vtune	in	Vtune for VCO
8	I/002	in/out	12C_SCL	20	IF_I	out	IF in phase
9	I/003	in/out	Spare	21	IF_Q	out	IF quadratic
10	I/004	in/out	12C_SDA	22	GND	comm	Ground
11	I/005	in/out	Spare	23	Vcc	in	+5V
12	I/006	in/out	Spare	24	Vcc	in	+5V

SDR-PM 402 Module Block Diagram



SDR-PM 402 Module Specifications

Parameter	Min.	Typ.	Max.	Units
Supply voltage	4.75	5	5.25	V
Supply current	180	200	220	mA
Operating temperature	-40 to+85			C°
Storage temperature	-65 to +150			C°
Dimensions	L=79	W=76	H=13	mm

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We offer customization!
Please contact us regarding your custom development needs.