

XACQ-S2E



What is XACQ-S2E?

XACQ-S2E is a rapid acquisition and prototyping board that allows real-time implementation of digital designs on multiple target platforms. The advanced design combines the processing power of FPGA, DSP and PC in a single platform which makes it ideal for use as a high speed acquisition card for quick development and testing.

Who uses XACQ-S2E?

The flexible and innovative design of XACQ-S2E permits it to be used as:

- A stand alone board bootable from on board FLASH memory
- A hardware accelerator connected to PC through USB 2.0 port
- A daughter board plugged to a TI compatible DSP board using EMIF/EPIF interface

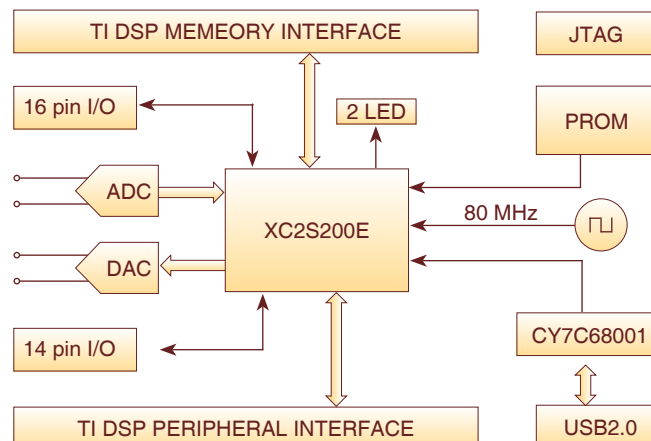
XACQ-S2E can be used as an OFDM transmitter/receiver, a low datarate MIMO demonstrator or single carrier modem development platform.

How does XACQ-S2E work?

XACQ-S2E is packed with leading technological innovations, including Xilinx Spartan200E FPGA, Texas Instrument compatible EMIF interface, Cypress CY7C68001 USB2 chip, and a pair of 10 bit ADC DAC.

The 10-bit ADC DAC pair provides full duplex stereo IQ signal conversion at sampling rates up to 20 MS/s. The bit resolution is adequate for the majority applications including OFDM based systems like ADSL, WiFi, WiMax, PowerLine, DVBT.

XACQ-S2E contains 28 GPIO (general purpose input output) pins, 3 input switches, and 2 LEDs for diagnostic and debug purposes. In addition, a JTAG port is available to program the FLASH memory and on board FPGA through a parallel port programming cable.



Why buy XACQ-S2E?

1. 200K Gate Xilinx XC2S200E FPGA :

Ideal for using front end signal conditioning
Versatile simple to use acquisition platform

2. Onboard USB 2.0 controller :

Fast data transfer to personal computer
Software control of hardware platform

3. Full Duplex Input Output :

Transmission and reception for feedback control

4. Flash ROM :

Standalone bootup

5. 28 GPIO :

Easy testing and development

6. TI-compatible EMIF and EPIF Interface:

DSP, FPGA and PC processing under single control

XACQ-S2E Specifications:



XACQ-S2E top view



XACQ-S2E bottom view

Processing

FPGA	Xilinx 200K Gate XC2S200E
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Programming

Connector	JTAG 10 pin
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Environmental

Operating temperature	0 to 50C
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Mechanical

Tactile buttons	1 FPGA Reset
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	1 General Purpose
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Switches	1 2-way DIP
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Electrical

Input voltage	5V DC using 2.5mm plug
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Power consumption	5 W (Max)
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Dimensions

Size	88mm x 92mm
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Connectivity

Digital	2 x 14 pins GPIO headers
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PC	1 USB 2.0 based on CY7C68001
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Analogue	2 x Input, 2 x Output SMB full duplex
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DSP	EMIF/EPIF interface compatible with Texas Instrument boards
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Sampling

A/D	10 bit 20MHz (max)
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D/A	10 bit 20MHz (max) /
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	40 MHz interpolated
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Display

LED	2
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Clock

Frequency	80MHz
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Accessories

Cable	XJTAG-PP JTAG parallel port
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	programming adapter
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Specifications are subject to change without notice

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