

SEEED-102060146

Red Pitaya STEMlab 125-14 Diagnostic Kit for FPGA application



PRODUCT DETAILS

Features

- Flexible Development Opportunities: Explore limitless FPGA Applications like oscilloscopes, spectrum analyzers and more
- Versatile Compute & FPGA with the STEMLAB125-14 Main Board
- Dual-Core ARM Cortex-A9 MPCore
- Xilinx Zynq 7010 FPGA

- 512MB RAM, MicroSD Storage (Up to 32GB)
- Ethernet, USB, WiFi (Dongle Required)
- Complete Accessories for Getting Started:
- 16GB, Class 10 SD Card
- 1m Ethernet Cable
- 5V2A Power Supply
- 2x Oscilloscope Probes
- 2x SMA to BNC Adapters
- 2x 50 Ohm Termination
- 2x SMA T Adapter
- Logic Analyser PRO
- WiFi Dongle
- ALU Case
- Ready for Deployment: CE, FCC Certified
- 512MB RAM, MicroSD Storage (Up to 32GB)
- Ethernet, USB, WiFi (Dongle required, not included)
- Basic Accessories for Getting Started: 16GB, Class 10 SD Card, 1m Ethernet Cable, 5V2A Power Supply
- Ready for Deployment: CE, FCC Certified

Description

The Red Pitaya STEMlab 125-14 Diagnostic Kit contains everything needed to start developing with the Red Pitaya STEMLab 125-14 board. The board features a dual-core ARM® Cortex® A9 and Xilinx Zynq 7010 FPGA MCU, offering both fast and slow analog I/O. The STEMLab 125-14 has 14-bit input/ output channels for highly accurate measurement results, and is suitable for use in professional environments such as industrial control systems or smart city controllers. It can be used as desired for various electronics applications as an oscilloscope, spectrum analyzer, LCR Meter, and more. In addition, you can explore free, open-

source applications contributed by the community on the <u>Red Pitaya</u> <u>Marketplace</u>.

Applications

- Oscilloscope
- Industrial PID Controller
- Signal Generator
- Spectrum Analyzer
- Bode Analyzer
- LCR Meter

Specifications

Specification	Details
Processor	Dual-Core ARM Cortex-A9 MPCore
FPGA	Xilinx Zynq 7010
RAM	512MB
System Memory	MicroSD up to 32GB
Connectivity	Gigabit Ethernet USB 2.0 WiFi (Dongle required, not included)

RF Inputs	Channels	2
	Sample Rate	125MS/s

	ADC Resolution	14 bit
	Full Scale Voltage Range	± 1V / ± 20V
	Input Coupling	DC
	Bandwidth	DC- 60MHz
	Input Impedance	1 ΜΩ
RF Outputs	Channels	2
	Sample Rate	125MS/s
	ADC Resolution	14 bit
	Full Scale Voltage Range	± 1V
	Load Impedence	50Ω
	Shortcut Protection	Yes
	Typical Raising / Falling Time	2V / 10ns
	Bandwidth	DC - 60MHz
Peripherals	Digital IOs	16
	Analog Inputs	4 Channels, 0-3.5V 12 bit
	Analog Outputs	4 Channels, 0-1.8V 12 bit

	Communication Interfaces	I2C, UART, SPI
	Available Voltages	+5V, +3.3V, -4V
Synchronisation	Trigger input through extension connector Daisy chain connection over SATA	

Part List

- 1 x Red Pitaya STEMlab 125-14 board
- 1 x Micro-SD card (16GB, class 10)
- 1 x Micro-SD card adapter
- 1 x Ethernet cable (1m)
- 1 x International power adapter (5V, 2A)
- 1 x ALU case
- 1 x Logic analyzer PRO
- 2 x Oscilloscope probes
- 2 x SMA to BNC adapter
- 2 x 50 ohm termination
- 2 x SMA T adapter
- 1 x WiFi dongle