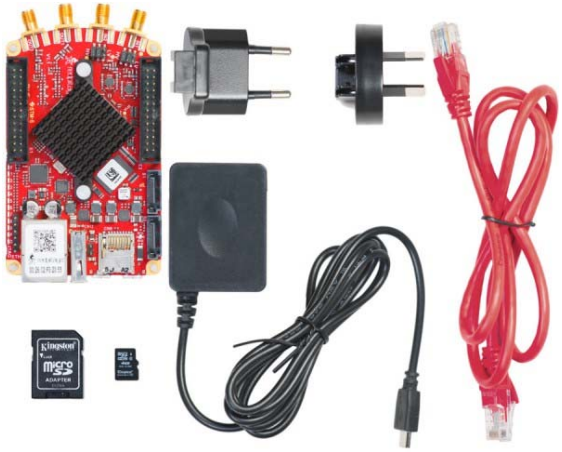
STEMlab 125-14 Starter Kit

Order number: 27761



Product information "STEMlab 125-14 Starter Kit"

STEMLab 125-14 (with original Red Pitaya v1.1)

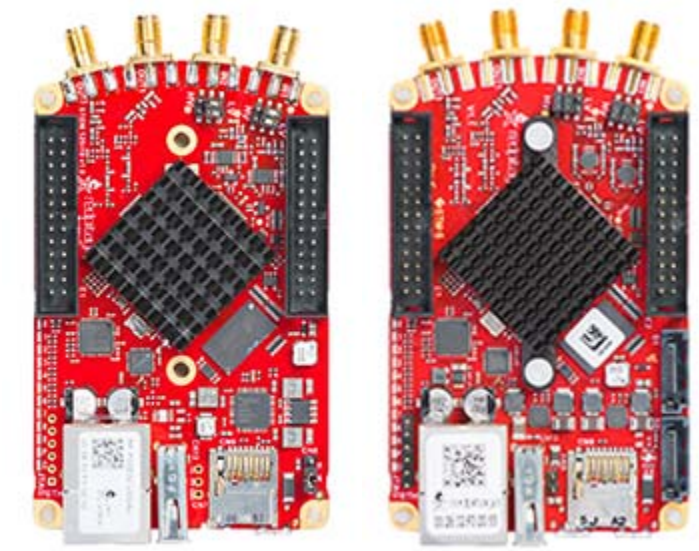
Formerly Red Pitaya Starter Kit.

STEMLab is available in two versions and both offer the same functions and features with the difference in technical specification of high-frequency inputs and outputs, RAM capacity some other differences (find more info in the comparison table bellow). They are addressed to target different groups and / or needs. Where STEMLab 14 has 14bit input / output channels for highly accurate measurement results in professional environment, STEMLab 10 has 10bit input / output channels and is perfect for universities, students and makers.

Package Content

- STEMlab 125-14 board (Red Pitaya v1.1 board)
- Accessories (preloaded SD card 4GB C6, interchangeable power supply, 1 m Ethernet cable)

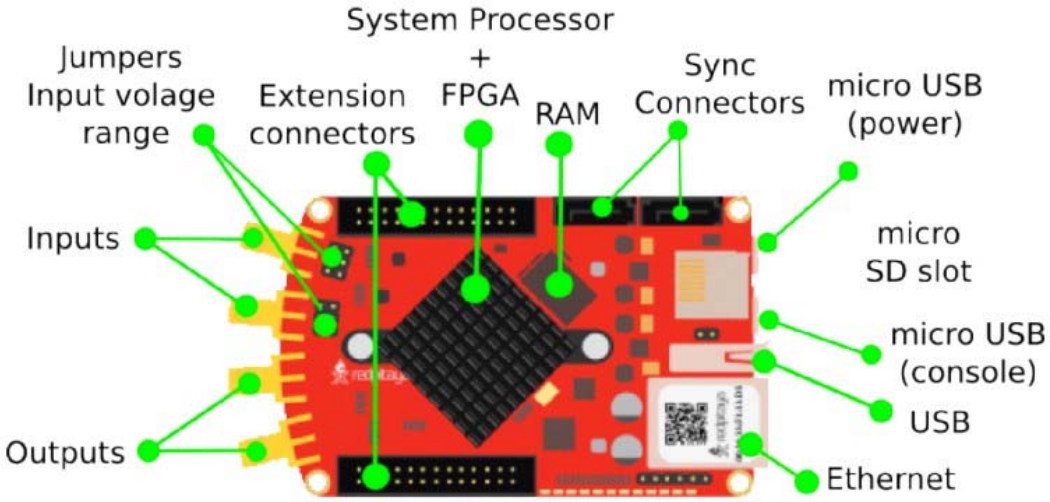
- 4 different applications (oscilloscope, signal generator, spectrum analyzer, Bode analyzer)
- Marketplace access
- MATLAB/LABVIEW remote control
- Possibility to create own app (open source code available)



STEMlab 125-10 STEMlab 125-14

STEMLab 125-14 (originally Red Pitaya v1.1) vs. STEMLab 125-10

STEMLab is available in two versions and both offer the same functions and features with the difference in technical specification of high-frequency inputs and outputs, RAM capacity some other differences (find more info in the comparison table bellow). They are addressed to target different groups and / or needs. Where STEMLab 14 has 14bit input / output channels for highly accurate measurement results in professional environment, STEMLab 10 has 10bit input / output channels and is perfect for universities,students and makers.



Basic		STEMLAB 125-10	STEMLAB 125-14
	Processor	Processor DUAL CORE ARM CORTEX A9 DUAL CORE ARM CORTEX A9	Processor DUAL CORE ARM CORTEX A9 DUAL CORE ARM CORTEX A9
	FPGA	FPGA Xilinx Zynq 7010 SOC Xilinx Zynq 7010 SOC	FPGA Xilinx Zynq 7010 SOC Xilinx Zynq 7010 SOC
	RAM	256MB (2Gb)	512MB (4Gb)
	System memory	Micro SD up to 32GB	Micro SD up to 32GB
	Console connection	USB to serial converter required	micro USB
	Power connector	Micro USB	Micro USB
	Power connector	Micro USB	Micro USB

	Power consumption	5V, 1,5A max	5V, 2A max

Connectivity		STEMLAB 125-10	STEMLAB 125-14
	Ethernet	1Gbit	1Gbit
	USB	USB 2.0	USB 2.0
	WIFI	requires WIFI dongle	requires WIFI dongle
	Synchronisation	-	Daisy chain connector (up to 500 Mbps)

RF inputs		STEMLAB 125-10	STEMLAB 125-14
	RF input channels	2	2
	Sample rate	125 MS/s	125 MS/s
	ADC resolution	10 bit	14 bit
	Input impedance	1MOhm/10pF	1MOhm/10pF
	Full scale voltage range	+-20 V	+-20 V
	Absolute max. Input voltage range	30V	30V
	Input ESD protection	Yes	Yes
	Overload protection	Protection diodes	Protection diodes

RF outputs		STEMLAB 125-10	STEMLAB 125-14
	RF output channels	2	2

	Sample rate	125 MS/s	125 MS/s
	DAC resolution	10 bit	14 bit
	Load impedance	50 Ohm	50 Ohm
	Voltage range	+-1V	+-1V
	Ouput slew rate	200V/us	200V/us
	Short circut protection	Yes	Yes
	Connector type	SMA	SMA

Extension connector		STEMLAB 125-10	STEMLAB 125-14
	Digital IOs	16	16
	Analog inputs	4	4
	Analog inputs voltage range	0-3,5V	0-3,5V
	Sample rate	100kS/s	100kS/s
	Resolution	12bit	12bit
	Analog outputs	4	4
	Analog outputs voltage range	0-1,8V	0-1,8V
	Communication interfaces	I2C, SPI, UART	I2C, SPI, UART
	Available voltages	+5V,+3,3V,-4V	+5V,+3,3V,-4V