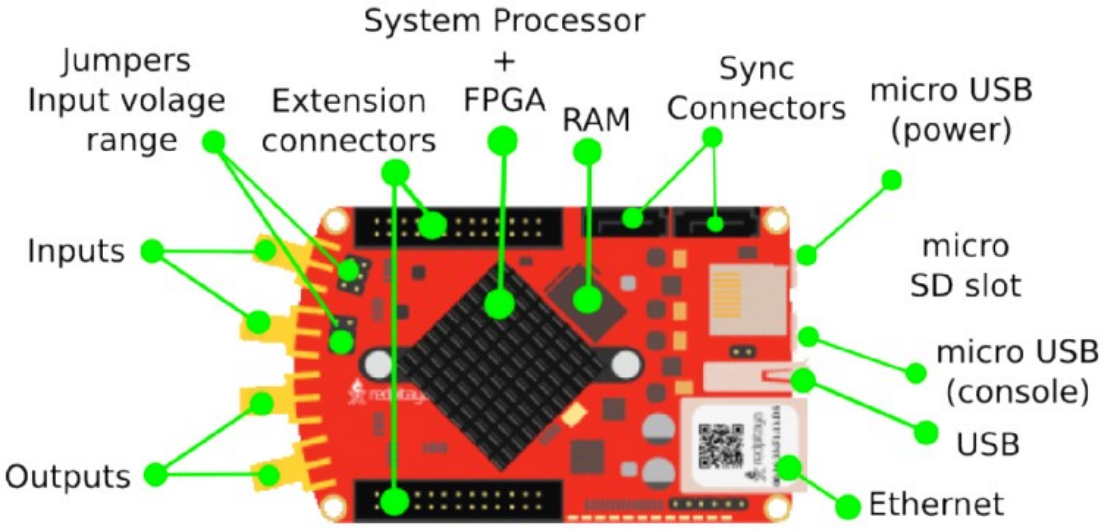
STEMlab Boards (Red Pitaya)

STEMlab 125-10

STEMlab 125-14

STEMlab 125-10 vs. STEMlab 125-14 (originally Red Pitaya V1.1)

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.
They are addressed to target different groups and/or needs. Where STEMlab 125-14 has 14 bit input/output channels for highly accurate measurement results in professional environment, STEMlab 125-10 has 10 bit input/output channels and is perfect for universities, students and makers.



		STEMlab 125-10	STEMlab 125-14
Basic	Processor	Dual Core ARM Cortex A9	Dual Core ARM Cortex A9
	FPGA	Xilinx Zynq 7010 SOC	Xilinx Zynq 7010 SOC
	RAM	256 MB (2 Gb)	512 MB (4 Gb)
	System memory	Micro SD up to 32 GB	Micro SD up to 32 GB
	Console connection	USB to serial converter required	micro USB
	Power connector	Micro USB	Micro USB
	Power connector	Micro USB	Micro USB
	Power consumption	5 V, 1,5 A max	5 V, 2 A max
Connectivity	Ethernet	1 Gbit	1 Gbit
	USB	USB 2.0	USB 2.0
	WiFi	requires WIFI dongle	requires WIFI dongle
	Synchronisation	-	Daisy chain connector (up to 500 Mbps)
RF inputs	RF input channels	2	2
	Sample rate	125 MS/s	125 MS/s
	ADC resolution	10 bit	14 bit
	Input impedance	1 MOhm / 10 pF	1 MOhm / 10 pF
	Full scale voltage range	+-20 V	+-20 V
	Absolute max. Input voltage range	30 V	30 V
	Input ESD protection	Yes	Yes
	Overload protection	Protection diodes	Protection diodes
RF outputs	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	+-1 V	+-1 V
	Ouput slew rate	200 V/us	200 V/us
	Short circut protection	Yes	Yes
	Connector type	SMA	SMA
Extension connector	Digital IOs	16	16
	Analog inputs	4	4
	Analog inputs voltage range	0-3,5 V	0-3,5 V
	Sample rate	100 kS/s	100 kS/s
	Resolution	12 bit	12 bit
	Analog outputs	4	4
	Analog outputs voltage range	0-1,8 V	0-1,8 V
	Communication interfaces	I²C, SPI, UART	I²C, SPI, UART
	Dimensions	107 x 60 x 21 mm	107 x 60 x 21 mm