

# R&S®FPC-Z10 Teaching Kit

## RF Teaching Solution



### The perfect choice for

University education

Demonstrations

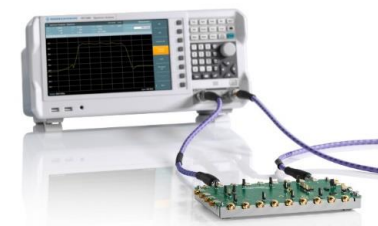
Your benefit	Features
Value of three	The R&S®FPC1500 combines a spectrum analyzer, vector network analyzer and signal generator
One-stop teaching solution	Course materials tailored to hardware for a holistic learning experience
Investment protection	All spectrum analyzer upgrades available via keycode; no additional calibration required

### Solution overview

Spectrum analyzer	R&S®FPC1500 spectrum analyzer with the value of three
Teaching hardware	R&S®FPC-Z10 teaching kit
Teaching software	R&S®InstrumentView
Hands-on learning	Lab sheets with step-by-step practical exercises and quizzes







### The R&S®FPC-Z10 teaching kit for the R&S®FPC1500 provides added value

- Teaching kit  
R&S®FPC1500 – an affordable spectrum analyzer with the value of three: spectrum analysis, one-port vector network analysis and signal generation  
RF teaching kit – a universal board with a transceiver, DC/DC converter circuitry for EMI troubleshooting and an onboard calibration kit for network analysis
- Lab sheets  
Step-by-step exercises for the teaching kit to equip students with practical skills in operating test and measurement instruments
- R&S®InstrumentView  
R&S®InstrumentView includes an educational feature called “Lab” that can help professors conveniently manage, monitor and assist students with their measurements from a central or remote location



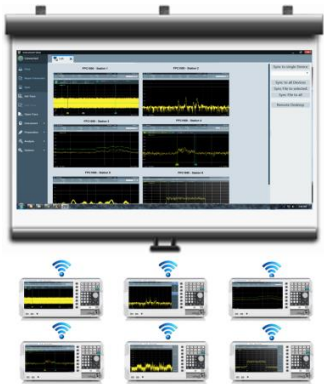
► For more information,  
see [www.rohde-schwarz.com/product/fpc](http://www.rohde-schwarz.com/product/fpc)

Highlights

-  Upconverter path
-  DC / DC converter
-  Down-converter path
-  I/Q modulator/demodulator\*
-  Calibration kit
-  Adjustable LO

Multifunctional kit for teaching and work  
\* Will be available via firmware update

R&S®InstrumentView

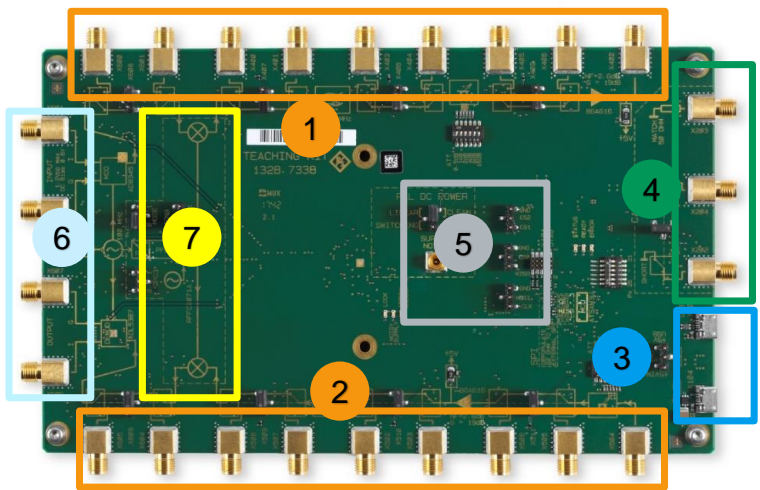


Virtual classroom – no need to wire devices, easy to remotely assist students anywhere

Ordering information

Model configuration information	
Base unit	Description
R&S®FPC1500	Spectrum analyzer, 5 kHz to 1 GHz
R&S®FPC-Z10	R&S®FPC teaching kit
Option	Description
R&S®FPC-B2	Spectrum analyzer frequency upgrade, 1 GHz to 2 GHz
R&S®FPC-B3	Spectrum analyzer frequency upgrade, 2 GHz to 3 GHz
R&S®FPC-B22	Spectrum analyzer preamplifier
R&S®FPC-K7	Modulation analysis
R&S®FPC-K42	One-port vector network analysis
R&S®FPC-K43	Receiver mode
R&S®FPC-K55	Advanced measurements
Accessories	Name
R&S®HZ-15	Near-field probe, 30 MHz to 3 GHz
R&S®HZ-16	Amplifier, 100 kHz to 3 GHz
R&S®HZ-17	Near-field probe, 30 MHz to 3 GHz
R&S®FSH-Z320	RF cable (1 m)

R&S®FPC-Z10 teaching kit overview



-  Upconverter
-  Downconverter
-  Power supply
-  Calibration Kit
-  DC/DC converter
-  IQ Modulator / Demodulator
-  Local Oscillator

# R&S®FPC-Z10

## Teaching Kit

## Specifications

### Features

Up/downconverter		
All stages can be measured separately by changing the position of a jumper.		
LO frequency mixer	selectable by jumper	nom. 636.5 MHz or nom. 233.5 MHz
IF frequency		nom. 200 MHz
Attenuator	selectable by DIP switch	nom. 0 dB to 31.5 dB
Amplifier	upconverter	
	gain	nom. 19 dB
	P1dB	nom. 10 dBm
	downconverter	
	gain	nom. 19 dB
Bandpass filter	P1dB	nom. -7 dBm
	center frequency	nom. 836.5 MHz
	bandwidth	nom. 20 MHz

I/Q baseband section		
I/Q output	I/Q demodulator	nom. 0 V DC, max. 1 V ( $V_{pp}$ )
I/Q input	I/Q modulator	max. $\pm 1$ V

Calibration kit		
Standards	selectable by jumper	open, short, match, through

RF input		
Impedance	RF connections	nom. 50 $\Omega$
Connector		SMA female
Maximum input level	RF inputs	nom. 0 dBm
	baseband inputs	nom. $\pm 1$ V

## General data

Power rating		
Power supply		5 V ± 10 %
Power consumption	baseband disabled	nom. 450 mA
	baseband enabled	nom. 750 mA
Power connector		USB mini/USB micro
Environmental conditions		
Temperature	operating temperature range	+20 °C to +30 °C
	storage temperature range	–20 °C to +70 °C
Electromagnetic compatibility (EMC)	EMC directive 2014/30/EU	in line with CISPR 11/EN 55011 group 1 class A (emission)
Dimensions (W × H × D)	without feet	207 mm × 131 mm × 31 mm (8.1 in × 5.1 in × 1.2 in)
Weight		0.26 kg (0.57 lb)

## Ordering information

Designation	Type	Order No.
Teaching kit	R&S®FPC-Z10	1328.7338.02
Accessories supplied: carrying case, USB cable for power supply		

Warranty		
Base unit		1 year

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