ROHDE&SCHWARZ
Make ideas real

R&S®FPL1-K70 VECTOR SIGNAL ANALYSIS
Flexible modulation analysis down to the bit level

The perfect choice for

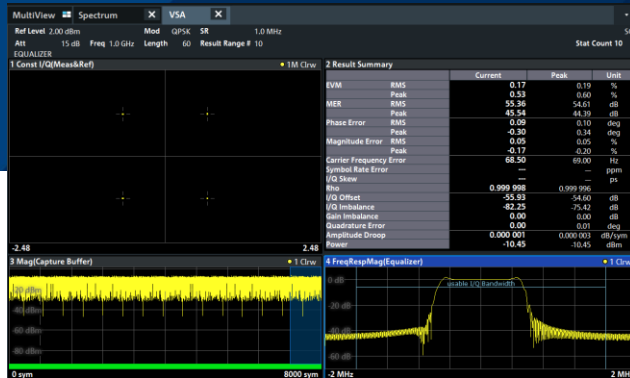|	
Troubleshooting digital transmitters and signal path components	Analysis of digital modulation signals
Finding signal errors such as incorrect filtering and spurious emissions	Equalizer for filter design optimization
Signal transmitter characterization	Bit error calculation on known data sequences

Key specifications

Modulation formats	► 2FSK, 4FSK ► MSK, GMSK, DMSK ► BPSK, QPSK, offset QPSK, DQPSK, 8PSK, D8PSK, π/4-DQPSK, 3π/8-8PSK, π/8-D8PSK ► 16QAM, 32QAM, 64QAM, 128QAM, 256QAM, 512QAM, 1024QAM, 2048QAM, 4096QAM ► 16APSK (DVB-S2), 32APSK (DVB-S2), 2ASK, 4ASK, π/4-16QAM (EDGE), −π/4-16QAM (EDGE), SOQPSK

Flexible modulation analysis down to the bit level

The R&S®FPL1-K70 option digitally analyzes modulated single-carrier signals down to the bit level. The clearly structured operating concept simplifies measurements despite the wide range of analysis tools.

► The R&S®FPL1-K70M multicarrier modulation analysis application allows DVB-S2X signals to be analyzed
► The R&S®FPL1-K70P allows measurement of raw bit error rate (BER) on PRBS data up to PRBS23

Numerous standard-specific default settings

► User-definable constellations and mappings
► GSM, GSM/EDGE
► 3GPP WCDMA, EUTRA/LTE, CDMA2000®
► TETRA, APCO25
► Bluetooth®, ZigBee
► DECT
► DVB-S2

Your benefit	Features
Results automatically adapted to selected standard	A lot of standards available
Easy signal analysis of DVB-S2X signals	Additive option available for multicarrier modulation measurements
High flexibility	User-definable constellations and mappings

Analysis of Bluetooth 3-DH1 signal

Analysis of a Bluetooth 3-DH1 signal. Constellation diagram, EVM, result summary, magnitude, spectrum and symbols with pattern detection all in one view.

Analysis of a multi-modulation signal
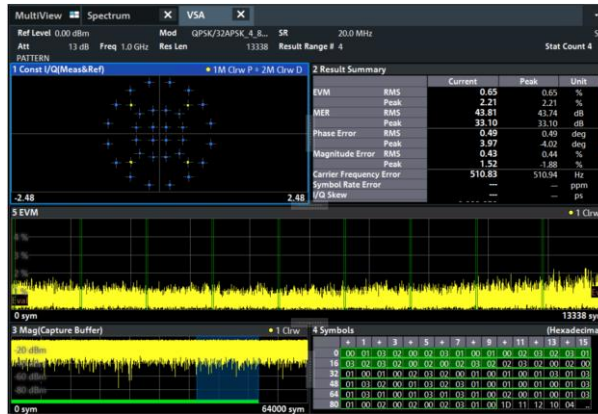
Demodulation of a DVB-SX2 multi-modulation signal with the R&S®FPL1-K70M option (R&S®FPL1-K70 option required).

Model configuration information

Description	Item
Signal and spectrum analyzer, 5 kHz to 3 GHz	R&S®FPL1003
Signal and spectrum analyzer, 5 kHz to 7.5 GHz	R&S®FPL1007
Vector network analyzer, two ports, 3 GHz	R&S®ZNL3 [1]
Options	
Vector signal analysis	R&S®FPL1-K70
Multi-modulation analysis	R&S®FPL1-K70M [2]
BER measurements with PRBS data	R&S®FPL1-K70P [2]

[1] requires option R&S®ZNL-B1
[2] requires option R&S®FPL1-K70

Analysis of a 64QAM signal

Analysis of a 64QAM signal with the R&S®FPL1-K70 vector signal analysis option