

WiMAX (IEEE 802.16)

| Frequency range | Modulation | Multiple access | Duplex | Channel bandwidth | Number of channels | Peak data rate |
|----------------------------------|------------------------------------|-----------------|---------|--|--|--|
| 2 GHz to 66 GHz in various bands | BPSK, QPSK, 16QAM, 64QAM, OFDM, SC | TDMA/OFDMA | TDD/FDD | In accordance with local radio regulations | In accordance with local radio regulations | 15 Mbit/s (5 MHz channel) to 134 Mbit/s (28 MHz channel) |

Selected products



R&S®SMU 200A

The R&S®SMU 200A, with its outstanding signal quality and versatility, offers the ideal basis for generating modern communications signals such as WiMAX (R&S®SMU-K49 software option).

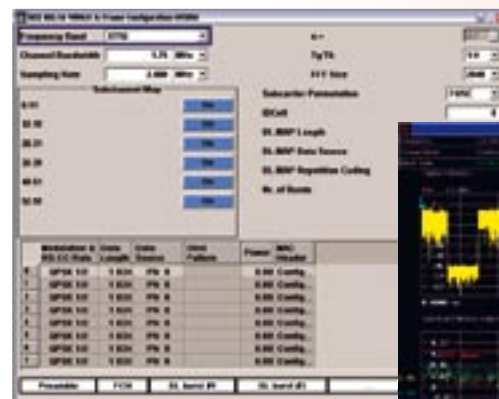


R&S®FSQ

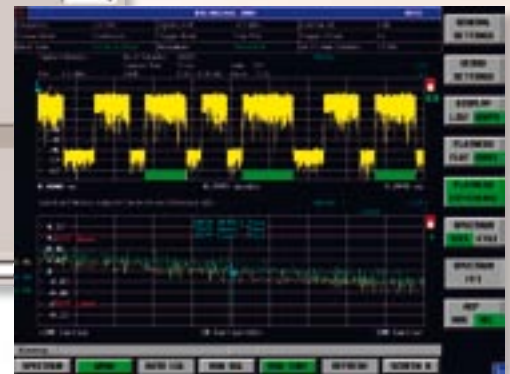
A one-box solution for transmitter measurements on WiMAX signals: Signal Analyzer R&S®FSQ

WiMAX measurement solutions

| | Recommended products | Features/measurements |
|--------------------------|--|---|
| Signal generation | <ul style="list-style-type: none"> • Signal Generator R&S®SMU 200A or • Signal Generator R&S®SMJ 100A or • Signal Generator R&S®SMATE 200A <p>+ R&S®SMx-K49 software option</p> | <ul style="list-style-type: none"> • Signal generation to IEEE 802.16 Rel. 2004 Rev. D • Physical layer (OFDM, OFDMA modes), MAC • Signals for packet error ratio (PER) measurements • Frequency range 100 kHz to 6 GHz • Internal I/Q modulation bandwidth 80 MHz (in RF) • Up to two signal generators in one box (e.g. useful signal + interferer, R&S®SMU 200A and R&S®SMATE 200A), both up to 6 GHz in the R&S®SMATE 200A • Fading simulator (option) with up to 40 fading paths (R&S®SMU 200A) • Extremely fast setting times and addressable list mode for production (R&S®SMATE 200A) |
| Signal analysis | <ul style="list-style-type: none"> • Signal Analyzer R&S®FSQ <p>+ R&S®FS-K92 software option</p> | <ul style="list-style-type: none"> • Graphical results of EVM measurement, frequency error vs. preamble, phase error vs. preamble • Display of spectrum flatness, group delay, constellation diagram, bit stream, spectrum emission mask • Adjacent channel power and CCDF measurements • I/Q constellation • Symbol clock error |



OFDMA submenu of the R&S®SMx-K49 WiMAX option for the R&S®SMU/SMJ/SMATE family of signal generators. Up to eight bursts and the subchannels to be used can be defined.



Group delay measurement of a WiMAX signal with the R&S®FS-K92 software option for the R&S®FSQ/FSP family of signal and spectrum analyzers.