



## Test & measurement solutions for WiMAX

- ◆ Choose from our complete T&M portfolio
- ◆ Benefit from our first-rate technological know-how
- ◆ Reduce your costs and shorten the time to market



**ROHDE & SCHWARZ**

# Test & measurement solutions for WiMAX



## Development of RF and baseband

### Verification and conformance tests

#### Manufacturing and service

#### Network deployment and optimization

Product family					Product
Signal generators	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	R&S®SMU200A vector signal generator
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	R&S®SMATE200A vector signal generator
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	R&S®SMJ100A vector signal generator
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R&S®SMA100A signal generator
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R&S®SMB100A signal generator
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R&S®SMV03 vector signal generator
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R&S®SMF microwave signal generator
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	R&S®AFQ100A I/Q modulation generator
Signal/spectrum analysis	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	R&S®AMU200A baseband signal generator and fading simulator
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	R&S®FSH handheld spectrum analyzer
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	R&S®FSL spectrum analyzer
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R&S®FSMR measuring receiver
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R&S®FSUP signal source analyzer
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	R&S®FSQ signal analyzer
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	R&S®FSG spectrum analyzer
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	R&S®FSU spectrum analyzer
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	R&S®FSP spectrum analyzer
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R&S®FMU36 baseband signal analyzer
Network analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R&S®ZVA vector network analyzer
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R&S®ZVB vector network analyzer
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R&S®ZVT vector network analyzer
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R&S®ZVL vector network analyzer
Radiocommunications test	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	R&S®CMW270 WiMAX communication tester	
Conformance test	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R&S®TS8970 WiMAX RCTT
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R&S®TS8991 OTA test system R&S®TS8996 RSE test system
Power supplies	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	R&S®NGMO power supply
Production test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	R&S®TS712x shielded RF test chambers R&S®CompactTSVP test platform
Audio test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R&S®UPV audio analyzer
Coverage measurement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	R&S®ROMES coverage measurement software
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	R&S®TSML radio network analyzer
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	R&S®TSMU radio network analyzer

= Specific use  
 = General use

## Technology overview

WiMAX, the Worldwide Interoperability for Microwave Access, is aimed at providing wireless data over long distances in various ways: from point-to-point links to full mobile cellular type access. It is based on the IEEE 802.16 standard. It uses cutting-edge technology such as OFDM(A), AAS (adaptive antenna system), MIMO, beamforming, HARQ at the PHY layer, fast feedback, QoS, and advanced scheduling algorithms at the MAC layer to achieve high data rates.

For fixed and portable applications with a cell radius from 3 km to 10 km, the WiMAX system provide a capacity of up to 40 Mbits/s per channel. For mobile applications with a typical cell radius of 3 km, WiMAX offers up to 15 Mbits/s of capacity in a 5 MHz channel.

## Application notes

Description	Number
WiMAX: IEEE 802.16e-2005 Introduction to OFDMA Measurements	1EF58
WiMAX: 802.16-2004, 802.16e, WiBro Introduction to WiMAX Measurements	1EF57
Power Measurement and Power Calculation of IEEE 802.16 WiMAX OFDMA Signals	1EF60
Introduction to MIMO Systems	1MA102
WiMAX – General information about the 802.16 standard	1MA96
WiMAX – Generating and analyzing 802.16-2004 and 802.16e-2005 signals	1MA97

### For further information please see:

- ◆ Product brochures
- ◆ Data sheets
- ◆ Posters
- ◆ Downloads

## About Rohde & Schwarz

Rohde & Schwarz is a leading supplier of solutions in the fields of test and measurement, broadcasting, radio-monitoring and radiolocation, as well as secure radio-communications. Established more than 70 years ago, Rohde & Schwarz has a global presence and a dedicated service network in over 70 countries. It has approx. 7200 employees and achieved a net revenue of € 1.4 billion in the past fiscal year. Company headquarters are in Munich, Germany.

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