

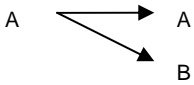
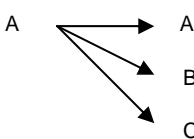
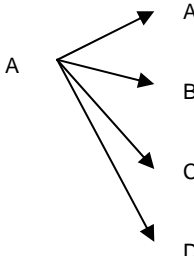
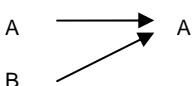
R&S[®] SMU-K74 MIMO Fading Option Specifications

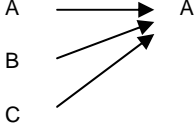
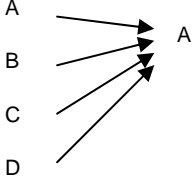
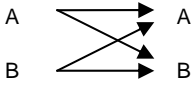
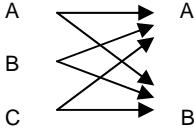
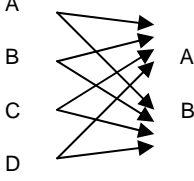


ROHDE & SCHWARZ

MIMO fading (R&S[®] SMU-K74 option)

The R&S[®] SMU-K74 option allows four fading channels to be simulated as is required for 1x2, 2x1 and 2x2 MIMO receiver tests. Both the R&S[®] SMU-B14 and the R&S[®] SMU-B15 options must be installed (signal paths A and B) and two baseband sources (R&S[®] SMU-B9, -B10, or -B11) must be present. By combining two instruments, it is possible to simulate receiver test scenarios for 1x3, 1x4, 2x3, 2x4, 3x1, 4x1, 3x2 and 4x2 MIMO.

Number of fading paths in each channel	standard, RF bandwidth 80 MHz, timing resolution 10 ns	10
	with R&S [®] SMU-K71 option, RF bandwidth 50 MHz, timing resolution 0.01 ns	6
	with R&S [®] SMU-K71 option, RF bandwidth 30 MHz, timing resolution 0.01 ns	4
Steering matrix	The steering matrix can be set by setting the diagonal elements of the correlation matrix.	
Correlation	The correlation between corresponding fading paths of the signal paths can be set in a correlation matrix. For each fading path index, an individual matrix can be set.	
	correlation coefficient	
	setting range	0 % to 100 %
	resolution	1 %
	correlation phase	
setting range	0° to 360°	
resolution	1°	
Correlation matrix setting	individually or with Kronecker assumption (RX and TX antenna correlation with automatic calculation of matrix)	
Matrix representation	(real, imaginary) or (magnitude, phase)	
Start seed	settable	
1x2 MIMO		
Number of signal paths	with R&S [®] SMU-B14 and R&S [®] SMU-B15	2
Signal routing	1x2 MIMO, simulating fading channels between one TX and two RX antennas	
1x3 MIMO		
Number of signal paths	with two R&S [®] SMU200A, both with R&S [®] SMU-B14 and R&S [®] SMU-B15	3
Signal routing	1x3 MIMO, simulating fading channels between one TX and three RX antennas	
1x4 MIMO		
Number of signal paths	with two R&S [®] SMU200A, both with R&S [®] SMU-B14 and R&S [®] SMU-B15	4
Signal routing	1x4 MIMO, simulating fading channels between one TX and four RX antennas	
2x1 MIMO		
Number of signal paths	with R&S [®] SMU-B14 and R&S [®] SMU-B15	2
Signal routing	2x1 MIMO, simulating fading channels between two TX and one RX antennas	

3x1 MIMO		
Number of signal paths	with two R&S [®] SMU200A, both with R&S [®] SMU-B14 and R&S [®] SMU-B15; external signal combiner required (either baseband or RF combiner)	3
Signal routing	3x1 MIMO, simulating fading channels between three TX and one RX antennas	
4x1 MIMO		
Number of signal paths	with two R&S [®] SMU200A, both with R&S [®] SMU-B14 and R&S [®] SMU-B15; external signal combiner required (either baseband or RF combiner)	4
Signal routing	4x1 MIMO, simulating fading channels between four TX and one RX antennas	
2x2 MIMO		
Number of signal paths	with R&S [®] SMU-B14 and R&S [®] SMU-B15	4
Signal routing	2x2 MIMO, simulating fading channels between two TX and two RX antennas	
3x2 MIMO		
Number of signal paths	with two R&S [®] SMU200A, both with R&S [®] SMU-B14 and R&S [®] SMU-B15; external signal combiner required (either baseband or RF combiner)	6
Signal routing	3x2 MIMO, simulating fading channels between three TX and two RX antennas	
4x2 MIMO		
Number of signal paths	with two R&S [®] SMU200A, both with R&S [®] SMU-B14 and R&S [®] SMU-B15; external signal combiner required (either baseband or RF combiner)	8
Signal routing	4x2 MIMO, simulating fading channels between four TX and two RX antennas	

2x3 MIMO		
Number of signal paths	with two R&S [®] SMU200A, both with R&S [®] SMU-B14 and R&S [®] SMU-B15	6
Signal routing	2x3 MIMO, simulating fading channels between two TX and three RX antennas	
2x4 MIMO		
Number of signal paths	with two R&S [®] SMU200A, both with R&S [®] SMU-B14 and R&S [®] SMU-B15	8
Signal routing	2x4 MIMO, simulating fading channels between two TX and four RX antennas	

Ordering information

Designation	Type	Order No.
MIMO Fading Option	R&S [®] SMU-K74	1408.7762.02

Service you can rely on

- | In 70 countries
- | Person-to-person
- | Customized and flexible
- | Quality with a warranty
- | No hidden terms

About Rohde & Schwarz

Rohde & Schwarz is an independent group of companies specializing in electronics. It is a leading supplier of solutions in the fields of test and measurement, broadcasting, radiomonitoring and radiolocation, as well as secure communications. Established 75 years ago, Rohde & Schwarz has a global presence and a dedicated service network in over 70 countries. Company headquarters are in Munich, Germany.

Regional contact

Europe, Africa, Middle East

+49 1805 12 42 42* or +49 89 4129 137 74

customersupport@rohde-schwarz.com

North America

1 888 TEST RSA (1 888 837 87 72)

customer.support@rsa.rohde-schwarz.com

Latin America

+1 410 910 79 88

customersupport.la@rohde-schwarz.com

Asia/Pacific

+65 65 13 04 88

customersupport.asia@rohde-schwarz.com

Certified Quality System
ISO 9001
DQS REG. NO 1954 QM

Certified Environmental System
ISO 14001
DQS REG. NO 1954 UM

For product brochure,
see PD 0758.0197.12
and www.rohde-schwarz.com

Rohde & Schwarz GmbH & Co. KG

Mühldorfstraße 15 | 81671 München

Phone +49 89 41 290 | Fax +49 89 41 29 121 64

www.rohde-schwarz.com

R&S® is a registered trademark of Rohde & Schwarz GmbH & Co. KG
Trade names are trademarks of the owners | Printed in Germany (sk)
PD 5213.9128.22 | Version 02.01 | October 2008 | R&S®SMU-K74
Subject to change

*0.14 €/min within German wireline network; rates may vary in other networks (wireline and mobile) and countries.