



# Digital Fading Simulator with AWGN



## Applications

UMTS/3GSM  
GSM450/480/900  
DCS/PCS  
WiMAX/WLAN  
DVB

## Environments

Rural Area  
Hilly Terrain  
Typical Urban  
Bad Urban  
Pedestrian  
Vehicular  
Indoor Office



No insertion loss -design

- High digital performance
- Wide input and output level range
- A proven cost effective solution
- Repeatable tests

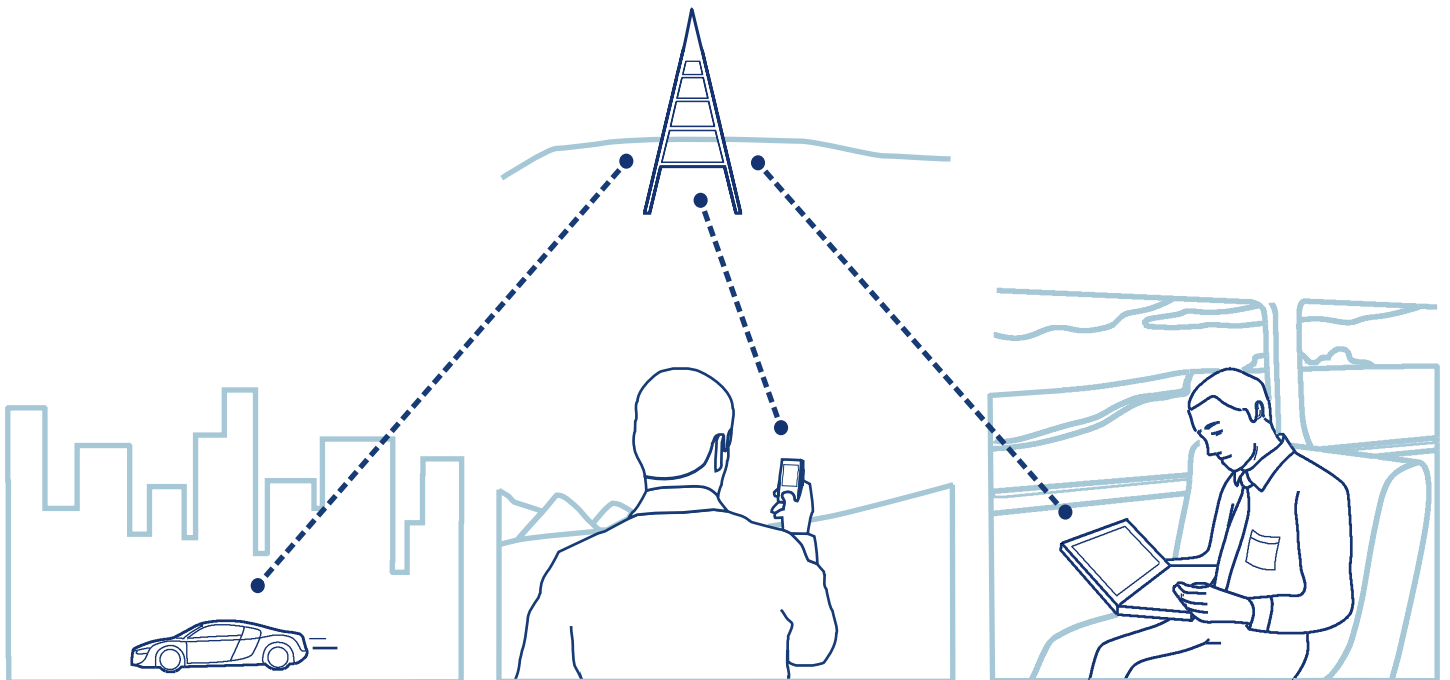
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# Radio Channel Simulator with AWGN

## SOFI FADING TESTS FOR WIRELESS COMMUNICATION

- Test radio performance under fading
- 3GPP conformity and deployment models
- Fading Environments for HSDPA
- SUI models for Wireless LAN / IEEE 802.11
- 24 paths
- RF bandwidth 26 MHz (up to 32 MHz)
- No insertion loss between input and output ports
- Widest input signal level range on the market
- Sample density for high data rates
- Fast, reliable and repeatable tests
- Timeslot fading resolution, timing advances
- SOFI 05 compatible version GSM450 - 3G

Multipath fading for 3G, GSM, WLAN, Wimax, DVB



SIMULATE ANY ENVIRONMENT INSIDE YOUR LAB

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# SOFI 06 standard specifications

Bandwidth	26 MHz (can be customised, available up to 32 MHz)
Frequency range	1600 - 6000 MHz model 6G, 160/380-2700 MHz model 3G
Insertion loss input - output	none, no fading margin reducing SNR loss even at low input level
Operating levels	RF-input -40 dBm to 0 dBm RF-output -40 dBm to 0 dBm -167 dBm to 0 dBm (with channel attenuator for 3G)  (Adjustable Gain Control or AGC as standard, can gain or attenuate both input and output levels)
AWGN	digital C/N, highest level 0-26 dB below signal peak, full bandwidth
Paths	24 (2x12) or 12 (2x6)
Delay / distance maximum	12.5 ms @ 1ns step / simulated distance 3747 km
Relative path loss	0-58 dB (additional 8 dB in reserve)
Doppler / speed max	4000 Hz / simulated speed max 744 km/h @ 5.8 GHz
RF-bands filtered (model 6G)	GSM450/480/850, RGSM, DCS, PCN, PCS, UTRA (no filters)
RF-connectors	50 ohm N-females for RF-in, RF-out and LO-in
RF-performance	(typical 2400 MHz, bandwidth 26 MHz)
signal / noise	60 dB
spurious signals in band	47 dBc
out of band spurious signals	59 dBc
LO leakage	50 dBc
IMD	45 dBc (3 path measurement)
Local Oscillator (option ILO)	Carrier + 140 MHz, +13dBm (automatic offset, no LO-input)
Remote control	IEEE-488.2, RS-232, SOFILINK, BNC triggers (with option IPC also VGA, LAN100 RJ-45, 2xUSB)
Documents	Operator's manual. Factory Acceptance Test report. Calibration Certificate.
Dimensions HxWxD, weight	308 mm (12.1") x 483 mm (19") x 513 mm (20.2"), 26 kg (57.3 lbs)

Specification is subject to change. Please contact [sales@sofimation.com](mailto:sales@sofimation.com) for latest information.



## Ordering Information

Application	Order code
WiMAX, WLAN, 802.11, 1.6-6 Ghz, 26 MHZ bandwidth	SOFI 06-6G
3GPP conformity and deployment tests, 2x12 GSM, 16 MHz bandwidth	SOFI 06-24-3G
GSM450-1900, 3G conformity tests, HSDPA, 2x6 paths, 16 MHz BW	SOFI 06-12-3G
Integrated PC with 10.4" TFT-display, LAN100, VGA, USB connectors	IPC
Integrated Local Oscillators, no LO input connectors, for 3G	ILO3G
Inbuilt Local Oscillators for 6G	ILO6G

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