

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N7624B

Keysight N7624B Signal Studio for LTE/LTE-Advanced FDD is a PC-based signal creation software application designed to generate standard-compliant LTE and LTE-Advanced FDD waveforms. It supports both uplink and downlink testing, offering waveform playback (ARB) and real-time generation modes. The software connects directly to Keysight vector signal generators and wireless test sets via LAN, GPIB, or USB interfaces to facilitate comprehensive receiver and component testing.

SPECIFICATIONS

General

Interfaces	LAN, USB, GPIB (for connection to target instruments)
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Software Overview

Software Type	Signal creation software
Standard Compliance	3GPP LTE and LTE-Advanced FDD
Waveform Creation Modes	Waveform playback (ARB) and Real-time signal generation
Channel Bandwidths Supported	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
Channel Coding	Turbo coding, Convolutional coding

LTE-Advanced Features

Maximum Component Carriers	5 carriers (for carrier aggregation)
Carrier Aggregation Configurations	Intra-band contiguous, Intra-band non-contiguous, Inter-band
Coordinated Multi-Point (CoMP)	Supported
Enhanced Interference Mitigation (eIMTA)	Not supported

LTE FDD Downlink

Downlink MIMO Support	Up to 8x8 MIMO
Downlink Transmission Modes	TM1 to TM10 (including Transmit Diversity, Spatial Multiplexing, and Beamforming)
Downlink Physical Channels	PDSCH, PMCH, PBCH, PCFICH, PHICH, PDCCH, EPDCCH
Downlink Physical Signals	PSS, SSS, CRS, MBSFN-RS, UE-RS (DM-RS), PRS, CSI-RS
Downlink Modulation Formats	QPSK, 16QAM, 64QAM, 256QAM
Test Models Supported	E-TM 1.1, E-TM 1.2, E-TM 2, E-TM 3.1, E-TM 3.2, E-TM 3.3, E-TM 2a, E-TM 3.1a

LTE FDD Uplink

Uplink MIMO Support	Up to 4x4
Uplink Physical Channels	PUSCH, PUCCH, PRACH
Uplink Physical Signals	DM-RS, SRS
Uplink Modulation Formats	QPSK, 16QAM, 64QAM, 256QAM
PUCCH Formats	1, 1a, 1b, 2, 2a, 2b, 3, 4, 5
PRACH Formats	0, 1, 2, 3

Supported Hardware Platforms

Supported Keysight Signal Generators	N5182A/B MXG, N5172B EXG, E4438C ESG, E8267D PSG, M9381A PXIe VSG
Supported Keysight Wireless Testers	E6640A EXM, E6607A/B/C EXT, E6630A, E6680A, M9420A/M9421A VXT

System Requirements & Compatibility

PC Operating System Compatibility	Windows 10 (32-bit and 64-bit), Windows 7 (32-bit and 64-bit)
Required PC Software	Keysight IO Libraries Suite
Application Interfaces	.NET API, SCPI command interface
User Interface	Interactive graphical user interface (GUI)

Licensing Options

License Types	Node-locked, Transportable, Floating, USB Portable
License Term	Perpetual or Time-based (Subscription)
Option 2FP	Connect to E8267D PSG Signal Generator
Option EFP	Real-time LTE FDD Uplink License

Software Options

Option 1FP	Connect to E4438C ESG Signal Generator
Option 3FP	Connect to N5182A MXG Signal Generator
Option 6FP	Connect to MXG/EXG/M9381A Signal Generators
Option 9FP	Connect to EXT Wireless Communications Test Set
Option QFP	LTE/LTE-A FDD Envelope Tracking
Option WFP	LTE-A FDD Receiver Test
Option YFP	LTE FDD Receiver Test

System Requirements

Minimum PC RAM	4 GB
Recommended PC RAM	8 GB or more
Minimum Available Disk Space	2 GB
Recommended Screen Resolution	1280 x 1024 or higher

TECHNOLOGY

3GPP LTE / LTE-Advanced FDD

APPLICATIONS

Signal creation and waveform generation for RF receiver and component testing

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