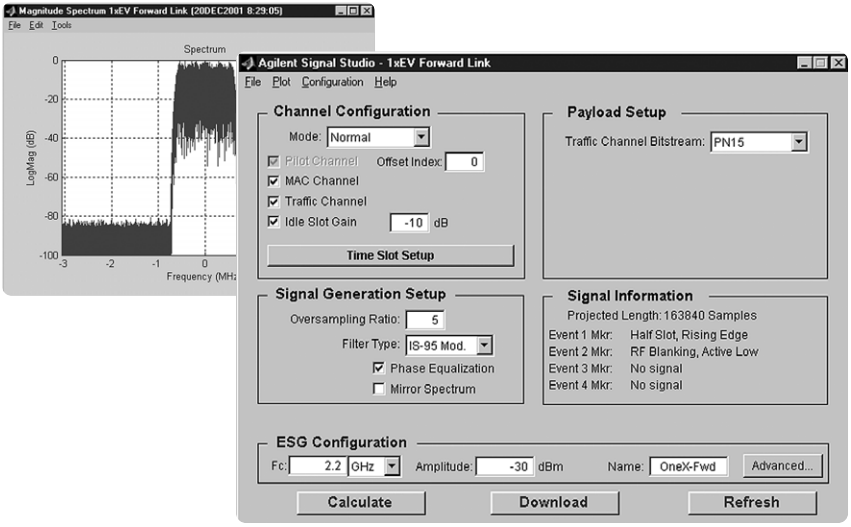
Agilent 1xEV-DO Signal Studio Software for the E4438C ESG Vector Signal Generator

Option 404
Product Overview



1xEV-DO test signals

1xEV-DO Signal Studio software is a powerful tool for creating 1xEV-DO baseband I/Q waveforms for use with the Agilent E4438C ESG vector signal generator.

Main features:

- Intuitive user interface
- Quickly create 1xEV-DO frames
- Forward link channels
  pilot, MAC, traffic, and control
- Reverse link channels
  pilot, MAC, ACK, and data
- Configure channels in each timeslot
- Selectable baseband filtering
- Plot I/Q signals, spectrum, and CCDF curve
- Configure ESG settings remotely
- 10B/T LAN or GPIB connectivity

Try before you buy!

Go to **www.agilent.com/find/signalstudio** and download 1xEV-DO Signal Studio software to your PC. The signal configuration and plotting capabilities of the software can be evaluated. A license key is required to load the waveforms created by the software into the ESG. The license key can be ordered through your sales engineer or the nearest sales office, which can be found at **www.agilent.com/find/assist.**

Benefits

Component test

- Determine performance characteristics of 1xEV-DO components
- Modify signal parameters to properly stress components
- Generate statistically correct signals

Receiver test

- Fully coded forward and reverse link signals for PER and BER testing
- Verify demodulation capability and sensitivity of access network and access terminal receivers
- Customize channel configurations in each timeslot
- Confirm basic link capability using continuous pilot mode

I/Q waveform generation

1xEV-DO Signal Studio software is a Windows® based utility that simplifies the creation of 1xEV-DO I/Q waveforms. It is intended for use with the E4438C ESG vector signal generator's baseband generator operating in arbitrary waveform mode.

Configuring and building 1xEV-DO I/Q waveforms is quickly achievable with Signal Studio's easy-to-use graphical interface. The configured I/Q waveform is downloaded to the ESG and the instrument automatically begins generating the modulated RF signal.

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Ordering information

1xEV-DO Signal Studio software is Option 404 for the Agilent E4438C ESG vector signal generator.

The Signal Studio software requires that the ESG is equipped with the optional baseband generator (Option 001 or 002).

Upgrade kits

If you currently own an E4438C ESG vector signal generator and are interested in obtaining an upgrade kit only (license key), order: E4438CK Option 404.

1xEV-DO Signal Studio Software features[1]

Forward link	
Pilot channel	PN offset index: 0 to 511
	Selectable mode: continuous or bursted
MAC channels	
Reverse activity	Data: 0 or 1
	Gain relative to pilot: -30 dB to +30 dB
Reverse power control	Data: 0 or 1
	Gain relative to pilot: -30 dB to +30 dB
Traffic channel	Data bitstream: 0s, 1s, 01s, 10s, PN9, PN15
	Modulation type: QPSK, 8-PSK, 16-QAM
Idle slot gain	Noise level relative to pilot: 0 dB to –80 dB
Filter types	Rectangular, IS-95 standard,
	IS-95 modified (improved ACP), phase equalization
Oversampling ratio	Valid range: 2 to 30
Forward link FTM (factory test mode)	
Pilot channel	PN offset index: 0 to 511
MAC channels	I/Q data: all zeroes
Traffic channel	Number of packets: 1 to 32
	Preamble MAC index: 5 to 63
	Packet payload: 0s, 1s, 01s, 10s, PN9, PN15
	Data rate: 38.4, 76.8, 153.6, 307.2, 614.4, 921.6,
	1228.8, 1843.2, 2457.6 kbps
	Encoding rate: 1/5 or 1/3 (automatically set)
	Modulation types: QPSK, 8-PSK, 16-QAM
Control channel	Data rate: 38.4 and 76.8 kbps
Filter types	Rectangular, IS-95 standard,
	IS-95 modified (improved ACP), phase equalization
Oversampling ratio	Valid range: 2 to 30
Reverse link	
Pilot channel	
Reverse rate indicator channel	Data: 0 to 7 Octal
Data rate control channel	Data: 0 to F Hexadecimal
	Walsh cover Index: 0 to 7
	Gain relative to pilot: -30 dB to +30 dB
Data channel	Data bitstream: 0s, 1s, 01s, 10s, PN9, PN15
	Data rate: 9.6, 19.2, 38.4, 76.8, 153.6 kbps
	Encoding rate: 1/4 rate @ 9.6, 19.2, 38.4, 76.8 kbps
	1/2 rate @ 153.6 kbps
	Modulation type: BPSK
I & Q Mask (42-bit)	Valid range: 00000000000 to 3FFFFFFFFF
Filter types	Rectangular, IS-95 standard,
	IS-95 modified (improved ACP)
Oversampling ratio	Valid range: 2 to 30

1. Features subject to change.

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(fax) (82 2) 2004 5115
Taiwan:
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(fax) (886 2) 2545 6723
Other Asia Pacific Countries:
(tel) (65) 375 8100
(fax) (65) 836 0252
Email: tm_asia@agilent.com

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