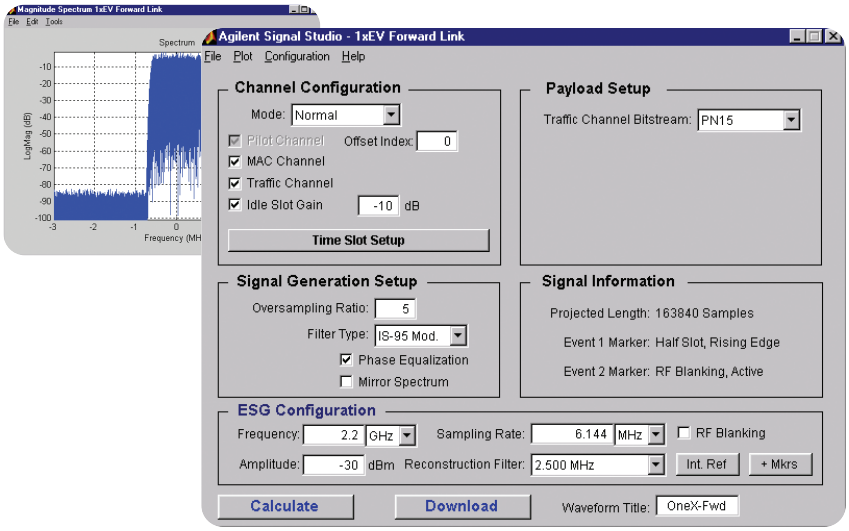
# Agilent
# Signal Studio 1xEV-DO
## Option 404

## For the ESG-D/DP Series Signal Generator

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 ESG-D/DP series Signal Generator.

### Main features:

- Intuitive user interface
- Quickly create 1xEV-DO frames
- Configure channels in each timeslot
- Forward Link Channels
  - Pilot, MAC, and Traffic
- Reverse Link Channels
  - Pilot, MAC, ACK, and DATA
- Selectable baseband filtering
- Plot I/Q signals, spectrum and CCDF curve
- Configure ESG settings remotely

### 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 digital series RF signal generator. 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 Reverse link signals enables FER and BER testing
- Verify demodulation capability of base station receivers
- Customize channel configurations
- Confirm basic link capability using Continuous Pilot mode

### I/Q waveform generation

1xEV-DO Signal Studio software is a Windows®-based software utility that simplifies the creation of 1xEV-DO I/Q waveforms. It is intended for use with the ESG-D/DP series optional dual arbitrary waveform generator (Option UND).

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

## Ordering information

1xEV-D0 Signal Studio software is available as Option 404 for the Agilent ESG-D/DP series signal generators.

The Signal Studio software requires that the ESG-D/DP is equipped with the optional dual arbitrary waveform generator (Option UND). Firmware Revision B.03.75 or greater is required to activate the License Key on the ESG-D/DP series signal generator.

## Upgrade kits

If you currently own an ESG-D/DP series signal generator and are interested in obtaining an upgrade kit (license key), order: E4430BK Option 404.

### 1xEV-DO Signal Studio software data sheet

| | |
|---|---|
| **Forward link** | |
| Pilot channel | PN Offset Index: 0 to 511<br>Selectable Mode: Continuous or Bursted |
| MAC channel | |
| Reverse Activity | Data: 0 or 1<br>Gain relative to Pilot: –30 dB to +30 dB |
| Reverse Power Control | Data: 0 or 1<br>Gain relative to Pilot: –30 dB to +30 dB |
| Traffic channel | Data Bitstream: 0s, 1s, 01s, 10s, PN9, PN15<br>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,<br>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<br>Walsh Cover Index: 0 to 7<br>Gain relative to Pilot: –30 dB to +30 dB |
| Traffic channel | Data Bitstream: 0s, 1s, 01s, 10s, PN9, PN15<br>Data Rate (kbps): 9.6, 19.2, 38.4, 76.8, 153.6<br>Encoding Rate: 1/4 Rate @ 9.6, 19.2, 38.4, 76.8 kbps<br>1/2 Rate @ 153.6 kbps<br>Modulation Type: BPSK |
| I & Q Mask (42-bit) | Valid Range: 00000000000 to 3FFFFFFFFFF |
| Filter types | Rectangular, IS-95 Standard,<br>IS-95 Modified (improved ACP) |
| Oversampling ratio | Valid Range: 2 to 30 |

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**Printed in USA January 31, 2002**
**5988-3634EN**

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