

Agilent TD-SCDMA (TSM) Signal Studio Software for the E4438C ESG Vector Signal Generator

Option 411 Product Overview

TD-SCDMA (TSM) test signals

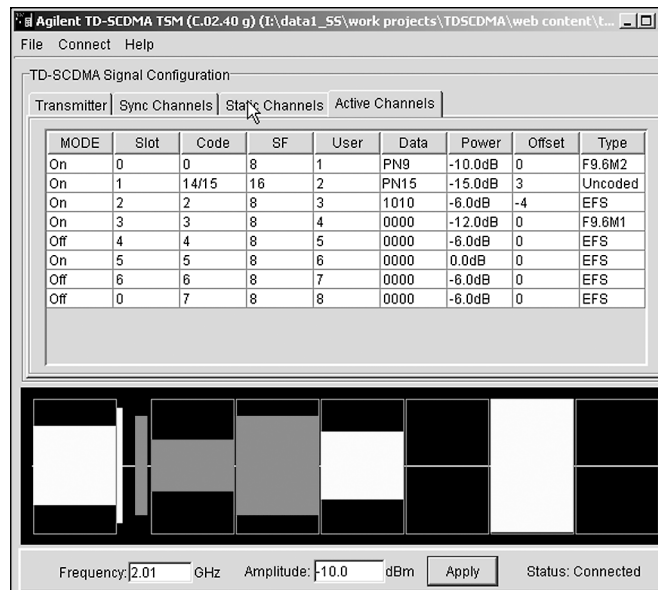
TD-SCDMA (TSM) Signal Studio software is a powerful tool for creating TD-SCDMA (TSM) I/Q waveforms for use with the Agilent E4438C ESG vector signal generator.

Main features

- Intuitive user interface
- Quickly create TD-SCDMA (TSM) frames
- Fully-coded transport channel types
 - TCH/T-EFS
 - TCH/T 9.6 burst format 1
 - TCH/T 9.6 burst format 2
- Configure channels in each timeslot
- Transmit uplink and downlink channels in the same subframe
- Configure DwPTS and UpPTS
- Selectable baseband filtering
- 10B/T LAN connectivity

Try before you buy!

Go to www.agilent.com/find/signalstudio and download TD-SCDMA (TSM) Signal Studio to your PC to evaluate the signal configuration capabilities of the software. A license key is required to generate the waveform. 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 TD-SCDMA (TSM) components
- Modify signal parameters to meet your customized test needs
- Generate statistically correct signals to properly stress components

Receiver test

- Fully-coded DPCH for BER/BLER testing
- Customize channel configurations in each timeslot to verify demodulation capability and sensitivity of mobile handsets and base transceiver stations

I/Q waveform generation

TD-SCDMA (TSM) Signal Studio software is an intuitive Windows®-based utility that simplifies the creation of TD-SCDMA (TSM) I/Q waveforms. It is intended for use with the E4438C ESG vector signal generator operating in the real-time mode and requires a PC equipped with a LAN card and a recent version of the Windows operating system. The configured signal parameters are downloaded to the ESG, which automatically begins generating the modulated RF signal. Setups may be stored on the PC.



Recommended configuration

E4438C ESG with the following options:

- *001 8 Msample baseband generator
- *411 TD-SCDMA (TSM) Signal Studio software
- 503 3-GHz frequency range
- 1E5 High stability timebase

* Required option. The baseband generator may be either option 001 or 002; option 002 contains 32 Msamples of memory.

Upgrade kits

If you currently own an E4438C ESG vector signal generator equipped with a baseband generator, and want an upgrade kit (license key), order E4438CK option 411.



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TD-SCDMA (TSM) Signal Studio software features¹

General configuration

Specification version	CWTS TSM 05.02 V2.1.0 (2001-12) CWTS TSM 05.03 V2.0.0 (2000-07) CWTS TSM 05.04 V2.0.0 (2000-07)
Scramble code	0 – 127
Midamble base	0 – 127
Max users	2, 4, 6, 8, 10, 12, 14, or 16
Baseband filtering	Root Nyquist and Nyquist with adjustable filter alpha, Gaussian, or rectangle
Filter optimization	ACP or EVM
IQ phase	Normal or inverted
Number of uplink slots (switch point)	1 – 6
Chip clock	Internal or external
Chip rate	320 kcps to 1.408 Mcps
Graphic displays	Subframe timeslot structure

Pilot signal configuration

DwPTS (downlink pilot timeslot physical channel)	
Downlink SYNC code	0 – 63
Power	0 to -40 dB
Phase pattern	S1, S2, or none
UpPTS (uplink pilot timeslot physical channel)	
Uplink SYNCH code	0 – 127
UpPTS power	0 to -40 dB
Time offset	-255 to 255 chips

Resource unit (RU) configuration (uplink and downlink)

Physical channel type	DPCH
Slot number	0 – 6
Spread factor	1, 2, 4, 8, or 16
Code	0 – 15
User number	1 – 16
Data type	Fixed 4-bit pattern, PN9, PN15
Time offset	-5 to +5 chips
Power level	0 to -60 dB

Transport layer coding (uplink and downlink)

Number of fully-coded transport channels	8 channels that can be independently allocated to any RU, i.e. any code and spread factor
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Transport channel types	Uncoded, TCH/T-EFS, TCH/T-F9.6 (burst mode 1), TCH/T-F9.6 (burst mode 2)
Data source for transport channel	Fixed 4-bit pattern, PN9, PN15
User number	1 - 16
Time offset	-5 to +5 chips
Power level	0 to -60 dB

1. Features subject to change.

By internet, phone, or fax, get assistance with all your test and measurement needs.

Online Assistance

www.agilent.com/find/assist

Phone or Fax

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