Agilent ESG Vector Signal Generator Feature Releases

If your ESG signal generator is older than the most current firmware release date, and it hasn't been upgraded, you are missing recently released features. Updating the firmware in your ESG lets you take advantage of these additions or improvements. Hardware is also enhanced periodically to add capability or improve performance, based on customer requests.

New features may be as simple as a free firmware download (www.agilent.com/find/upgradeassistant). They may also require upgrading the ESG hardware by installing a kit(s) or returning the signal generator to the factory (contact Agilent Technologies).

NOTE This is a reverse chronological sorting of firmware and hardware feature releases for the ESG. Use this list to determine the firmware revision and minimum hardware needed to support a specific feature.

Release Date	Feature	Minimum Hardware Required	Firmware Required
03/03	• **W-CDMA Real-time** (Opt. 400) Uplink: Added Multiple TGPS (Multiple Compressed Mode Gap Pattern) Downlink: Added fully coded compressed mode, SF/2 and Puncturing methods, Open loop Transmit Diversity, Out-of-Sync detection test, Rear panel data output of each physical channel. • **E-OTD** (Option 416) Enhanced Observed Time Difference is a SCPI only feature for mobile station location. • **1xEV-DV Signal Studio software personality** (Opt. 414) will work with the E4438 ESG to create real-time cdma2000 and 1xEV-DV signals. Provides continuous frame transmission of the cdma2000 and 1xEvolution-Data and Voice channels.	• Opt. 001 (E4400-63539 Fireblade board, 8 Msample memory)	≥C.03.20

Printed in USA March 2003

Release Date	Feature	Minimum Hardware Required	Firmware Required
12/02	• **802.11 WLAN Signal Studio** (Opt. 417) Added multiframe capability, user defined FIR filter, and multipoint fading. • **Platform Enhancements** Delay circuit added to I and Q paths to minimize group delay and improved EVM accuracy; added a quick (<2 secs) I/Q calibration to remove offset errors for a single frequency. • **W-CDMA Arb Downlink** (Opt. 400) Added Test Model 5 in compliance with 3GPP August 2002 specifications. • **ARB Waveform Enhancement** Added header file to save instrument states for Arb waveform files.	• Opt. 001 (E4400-63539 Fireblade board, 8 Msample memory)	≥C.03.10
09/02	• **W-CDMA** (Opt. 400) Compliance with 3GPP March 2002 specifications. • **W-CDMA ARB Downlink** (Opt. 400) Added multi-carrier clipping, scramble code, phase offset, and timing offset control to individual carriers. • **W-CDMA Real-time** (Opt. 400) Added Multiple PRACH generation with AWGN capability; Real-time power control of the DPCH using an external signal. • **W-CDMA Real-time** (Opt. 400) and **cdma2000 Real-time** (Opt. 401) Enhanced the AWGN displays. • **Platform Enhancement** Decreased frequency and amplitude switching times. • **TD SCDMA TSM Signal Studio** (Opt. 411) Added functionality to support user files and additional transport channel types.	• Opt. 001 (E4400-63539 Fireblade board, 8 Msample memory)	≥ C.02.50
08/02	• **Self Tests** revision.	• None	≥ C.02.42

Release Date	Feature	Minimum Hardware Required	Firmware Required
04/02	• **GSM/EDGE Loopback BTS BER Tester** (Opt. 300) with support for the following new channels: CS-1, CS-4, MCS-1, and E-TCH/F43.2. • **TD SCDMA TSM Signal Studio** (Opt. 411) functionality.	• Opt. 001 (E4400-63539 Fireblade board, 8 Msample memory) • Opt. UN7 (E4400-63519 BERT board) Factory installation Not compatible with Opt. UNJ or UNB (mechanical attenuator)	≥ C.02.40

04/02	• **GPS** (Opt. 409)
	• **External Baseband Generator Reference Capability** (BASEBAND GEN REF IN connector) for the following personalities:
	  • Real-time cdma2000 (Opt. 401) reverse link
	  • Real-time TDMA (Opt. 402)
	• **Real-Time cdma2000 FSCH0 Turbo Coding Ability at 153.6 kbps in RC3** (Opt. 401)
	• **Manual/Auto Setting for the I/Q Output Filter**
		• Opt. 001 (E4400-63539 Fireblade board, 8 Msample memory)	≥ C.02.40

02/02	• **Real-Time TDMA Formats** (Opt. 402) Formats: EDGE and GSM (ETIS TS 100908, 3GPP TS 05.02, Ver. 8.9.0, 2001-04 Release 1999), NADC, PDC, PHS, DECT, and TETRA	• Opt. 001 (E4400-63539 Fireblade board, 8 Msample memory)	≥ C.02.20
01/02	• **250 kHz to 6 GHz Frequency Range** with a mechanical attenuator (Opt. 506)	• Opt. UNJ (E4423-63500 reference board, E8251-63043 sampler board, and E8251-63044 Frac-N board) Factory installation when the signal generator is built	≥ C.02.03
12/01	• **Initial Signal Generator Release** This release includes the following options: 001, 002, 005, 400, 401, 403, 406, 501, 502, 503, 504, 1E5, 1EM, UN7, UNB, and UNJ.	E4438C	≥ C.02.02