



# Agilent ESA/EMC Spectrum Analyzer

## Configuration Guide



This configuration guide will help you select the right options to optimize the ESA or EMC analyzer for your application. In addition, it includes information for upgrading your existing ESA or EMC analyzer. For additional product and application information, please see the information listed at the end of this guide.

The ESA analyzer is available in three “express option” choices that each have a simplified set of the most frequently ordered options. Express options are favorably priced and provide faster delivery.

The EMC analyzer is available in two models, which include the most frequently ordered options.

For unique requirements, the ESA or EMC analyzer may be custom configured from the complete set of available options.

## Express Analyzers

### Basic Analyzer – ESA-L Series (Express Option BAS/BTG)

Available models		
E4411B (9 kHz to 1.5 GHz)		The BAS express option is only available on the ESA-L Series models. For a basic analyzer with tracking generator, order Option BTG instead of Option BAS.
E4403B (9 kHz to 3.0 GHz)		
E4408B (9 kHz to 26.5 GHz)		
Included options		Comments
IF sweep, and video output ports	A4J	
GPIB connection	A4H	
IntuiLink PC connectivity software	***	
Available options		Comments
Replace GPIB connection (A4H) with serial port	1AX	Not compatible with Option A4H
Narrow resolution bandwidths	1DR	100 Hz minimum on ESA-L Series
50 ohm tracking generator (9 kHz to 3.0 GHz)	BTG	TG operates to 1.5 GHz on E4411B; equivalent to Option BAS with 1DN
Accessories shown on page 6		
Future upgrades		
Only limited upgrades are available on ESA-L Series		See page 8

## Express Analyzers

### Standard Analyzer – ESA-E Series (Express Option STD/STG)

Available models		
E4402B (9 kHz to 3.0 GHz)		The STD express option is only available on the ESA-E Series models. For a standard analyzer with tracking generator, order Option STG instead of Option STD.
E4404B (9 kHz to 6.7 GHz)		
E4405B (9 kHz to 13.2 GHz)		
E4407B (9 kHz to 26.5 GHz)		
Included options		Comments
Fast time domain sweep, IF and video output ports	AYX	
FM demodulation / deviation	BAA	
GPIB Connection	A4H	
IntuiLink PC connectivity software	***	
Available options		Comments
Replace GPIB connection (A4H) with serial port	1AX	Not compatible with Option A4H
High stability frequency reference	1D5	
Time-gated spectrum analysis	1D6	
50 ohm tracking generator (9 kHz to 3.0 GHz)	STG	Equivalent to Option STD with 1DN
Narrow resolution bandwidths	1DR	10 Hz or 1 Hz minimum with Option 1D5
Preamplifier built-in for enhanced sensitivity	1DS	
Noise figure measurement application	219	
Cable fault location measurement application	225	Requires Option 1DN or STG; recommended Option B7K
Phase noise measurement application	226	
Cable TV service and installation application	227	
Benchlink Web remote control software	230	Requires Option A4H
HP 8566/68 programming code compatibility	266	Free download on Web
8590-Series programming code compatibility	290	Free download on Web
Accessories shown on page 6		
Future upgrades		
Available expansion slots in the “standard” analyzer for future upgrades: E4402B – 3 expansion slots E4402B with Option 219 – 2 expansion slots E4404/5/7B – 2 expansion slots E4404/5/7B with Option 219 – 1 expansion slot		Future upgrades on the “standard” analyzer are available, given the necessary configuration requirements are met. See page 7.

## Express Analyzers

### Communications Test Analyzer – ESA-E Series (Express Option COM)

Available models		
E4402B (9 kHz to 3.0 GHz) E4404B (9 kHz to 6.7 GHz) E4405B (9 kHz to 13.2 GHz) E4407B (9 kHz to 26.5 GHz)		The COM express option is only available on the ESA-E Series models.
Included options		Comments
High stability frequency reference	1D5	
Narrow resolution bandwidths	1DR	1 Hz minimum
ESA to 89601A vector signal analysis software link utility	231	
FM demodulation / deviation	BAA	
Digital demodulation hardware	B7D/B7E	
GPIB connection	A4H	
IntuiLink PC connectivity software	***	
Available options		Comments
Replace GPIB connection (A4H) with serial port	1AX	Not compatible with Option A4H
Time-gated spectrum analysis	1D6	Recommended selection
Preamplifier built-in for enhanced sensitivity	1DS	Recommended selection
Noise figure measurement personality	219 <sup>1</sup>	
Phase noise measurement personality	226 <sup>1</sup>	
Cable TV service and installation personality	227 <sup>1</sup>	
Modulation analysis personality	229 <sup>1</sup>	
Benchlink Web remote control software	230	Requires Option A4H
EDGE upgrade to GSM measurement personality	252 <sup>1</sup>	Requires Option BAH
cdmaOne measurement personality	BAC <sup>1</sup>	
GSM/GPRS measurement personality	BAH <sup>1</sup>	Requires Option 1D6
HP 8566/68 programming code compatibility	266 <sup>1</sup>	Free download on Web, no license required
8590-Series programming code compatibility	290 <sup>1</sup>	Free download on Web, no license required
Accessories shown on page 6		
Future upgrades		
Available expansion slots in “communications test” analyzer for future upgrades: E4402B – 2 expansion slots E4402B with Option 219 – 1 expansion cardslots E4404/5/7B – 1 expansion slot E4404/5/7B with Option 219 - no expansion slots		Future upgrades on the “comms test” analyzer are available given the necessary configuration requirements are met. See page 7.

1. If more than two or three measurement personalities are ordered, memory size limitations may limit the number that may be loaded into the ESA at any one time. For detailed information about memory size limits, please see the web site:  
<http://sa.tm.agilent.com/ESA/memory/>

## Custom Configurations ESA-L Series

Available models		
E4411B (9 kHz to 1.5 GHz)		Custom configuration not available for E4403B or E4408B
Included options		Comments
IF sweep, and video output ports	A4J	
GPIB connection	A4H	
IntuiLink PC connectivity software	***	
Available options		Comments
Replace GPIB connection (A4H) with serial port	1AX	Not compatible with Option A4H
Narrow resolution bandwidths	1DR	100 Hz minimum on ESA-L Series
75 ohm impedance	1DP	Not compatible with Option 1DN
75 ohm tracking generator (1 MHz to 1.5 GHz)	1DQ	Requires Option 1DP; not compatible with Option 1DN
Accessories shown on page 6		
Future Upgrades		
Only limited upgrades are available on ESA-L Series		See page 8

## Custom Configurations ESA-E Series

Available model		
E4402B (30 Hz to 3.0 GHz) E4404B (30 Hz to 6.7 GHz) E4405B (30 Hz to 13.2 GHz) E4407B (30 Hz to 26.5 GHz)		Frequency range shown is with Option UKB installed The E4402B has six available expansion slots The E4404/5/7B have five available expansion slots
Included options		Comments
High stability frequency reference	1D5	Standard for all custom configurations
Narrow resolution bandwidths	1DR	1 Hz minimum
GPIB connection	A4H	Standard on every instrument unless 1AX is ordered
IntuiLink PC connectivity software	***	
Available options		Comments
Low emissions shielding	060	Not compatible with Option B7B
Wide offset phase noise improvement and ACPR dynamic range extension	120	Requires one expansion slot
Replace GPIB connection (A4H) with serial port	1AX	Not compatible with Option A4H
Time-gated spectrum analysis	1D6	
50 ohm tracking generator (9 kHz to 3.0 GHz)	1DN	
Preamplifier built-in for enhanced sensitivity	1DS	
Noise figure measurement personality plus hardware	219	Requires one expansion slot
Cable fault location measurement personality	225	Requires Option 1DN; not compatible with Option BAH; recommended accessory Option B7K
Phase noise measurement personality	226	
Cable TV service and installation personality	227	
Modulation analysis personality	229	Requires Options B7D, B7E, A4H, 1D5; includes capability of Option 231
Benchlink Web remote control software	230	Requires Option A4H
ESA to 89601A vector signal analysis software link utility	231	Requires Options B7D, B7E, A4H, 1D5; Option 229 includes capability of Option 231
EDGE upgrade to GSM measurement personality	252	Requires Option BAH
HP 8566/68 programming code compatibility	266	Available as free download on Web
8590-Series programming code compatibility	290	Available as free download on Web
Bluetooth measurement analyzer FSK demodulator (Option 106) Bluetooth measurement personality (Option 228)	304	Includes Options 228, 106, B7D, B7E, 1DS, 1DR; requires three expansion slots
EMI detectors and FM demod	AYQ	Requires one expansion slot
Fast time domain sweep; IF, sweep, and video output ports	AYX	Not compatible with Options B7D and 304; requires one expansion slot
External mixing	AYZ	Available on E4407B only
TV trigger and picture on screen	B7B	Requires Option BAA; not compatible with Option 060
Digital demodulation hardware	B7D / B7E	Requires Option 1D5; not compatible with Opt AYX; requires two expansion slots
FM demodulation / deviation	BAA	Not compatible with Option 304, 106, or AYQ
APC 3.5 mm input connector	BAB	Available on the E4407B only
cdmaOne measurement personality	BAC	Requires Options B7D, B7E, 1D5
GSM/GPRS measurement personality	BAH	Requires Options B7D, B7E, 1D5, 1D6; includes capability of Option 225
26.5 GHz uncalibrated built in preamp	H26	Performance not specified; available on E4407B only
70 MHz IF output	H70	Recommended for use with 89611A VSA
100 Hz (30 Hz usable) frequency range extension	UKB	Requires Option 1DR
Accessories shown on page 6		

1. If more than two or three measurement personalities are ordered, memory size limitations may limit the number that may be loaded into the ESA at any one time. For detailed information about memory size limits, please see the web site: <http://sa.tm.agilent.com/ESA/memory/>

## Express Analyzers

### Equivalent Options and Bundles

Option	Equivalent Option(s)	Comments
<i>ESA-L Series</i>		
BAS - Basic analyzer	A4J	Order BAS or BTG to get best delivery and price
BTG - Basic analyzer with TG	A4J, 1DN	
<i>ESA-E Series</i>		
STD - Standard analyzer	AYX, BAA	Order STD, STG, or COM to get best delivery and price
STG - Standard analyzer with TG	AYX, BAA, 1DN	
COM - Communication test analyzer	B7D, B7E, 1D5, 1DR, BAA, 231	
B74 - RF and digital comms hardware bundle	B7D, B7E, 1D6, 1D5, 1DR, 1DS or COM, 1D6, 1DS, 1DR	Option B74 to be discontinued November 1, 2004
B75 - Performance bundle	1DR, 1DS, 1D5	Option B75 to be discontinued November 1, 2004
304 - Bluetooth premium bundle	228, 106, B7D, B7E, 1DS, 1D5	Option 106 is no longer available outside of the Option 304 bundle

## Express Analyzers

### EMC Standard Analyzer - E7400A Series EMC Analyzer

Available models		Comments
E7402A (30 Hz to 3.0 GHz)		The STD express option is available on the EMC analyzers For standard analyzer with tracking generator, order Option STG instead of STD
E7405A (30 Hz to 26.5 GHz)		
Included options		Comments
PIB connection	A4H	
EMI detectors and FM demod	AYQ	
Fast time domain sweep, IF and video output ports	AYX	
100 Hz (30 Hz usable) frequency range extension	UKB	
Low emissions shielding	060	
Narrow resolution bandwidths	1DR	1 Hz resolution
Preamplifier built-in for enhanced sensitivity	1DS	Operates to 3 GHz
High stability frequency reference	1D5	
EMC measurement firmware	***	Automated EMC measurements
IntuiLink PC connectivity software	***	
Available options		Comments
50 ohm tracking generator (9 kHz to 3.0 GHz)	STG	Equivalent to Option 1DN
Replace GPIB connection (A4H) with serial port	1AX	Not compatible with Option A4H or E7415A EMI measurement software
Time-gated spectrum analysis	1D6	
Accessories shown on page 6		
Future upgrades		
Available expansion slots in the standard analyzer for future upgrades:		
E7402A - 3 expansion slots		
E7405A - 2 expansion slots		

## Accessories

### ESA Accessories

Options	Description	Comment
<b>ESA specific accessories</b>		
A5D	12 VDC power cable	DC power connection available on every ESA
AXT	Hard transit case	
AYT	Gray soft carrying/operation case	
AYU	Yellow soft carrying/operation case	
B7K	Cable fault measurement kit (50 ohm)	Requires Option 1DN or STG, and Option 225 or BAH
042	Gray backpack carrying case	
044	Yellow backpack carrying case	
1CP	Rack mount kit with handles	
1D7	50 to 75 ohm minimum loss pad	
E1779A	Rechargeable snap-on battery and charger	Order as separate model number, not option number
UK9	Front panel cover	
<b>Software / Firmware</b>		
B70	Benchlink spectrum analyzer, PC software	Also orderable as E4444A; requires A4H or 1AX
230	Benchlink Web remote control software	Requires A4H
***	IntuiLink software (shipped with every instrument)	Available on Web site for download
UE2	Firmware upgrade	Firmware updates also available on Web site for free download <a href="http://www.agilent.com/find/esa_firmware">http://www.agilent.com/find/esa_firmware</a>
<b>Documentation</b>		
OB1	Add extra manual set	Available for Web download
UK6	Commercial calibration certificate with test data	
OBO	Delete manual set (retains CD-ROM version)	
OBV	Service documentation, component level CLIP	Component level information package
OBW	Service documentation, assembly level	Performance verification and adjustment software included
ABO	Taiwan-Chinese user's guide	Available for Web download
AB1	Korea-Korean user's guide	Available for Web download
AB2	China-Chinese user's guide	Available for Web download
ABD	Germany-German user's guide	Available for Web download
ABE	Spain-Spanish user's guide	Available for Web download
ABF	France-French user's guide	Available for Web download
ABJ	Japan-Japanese user's guide	Available for Web download
ABZ	Italy-Italian user's guide	Available for Web download
AKT	Russia-Russian user's guide	Available for Web download
<b>Warranty, service, and calibration</b>		
	1 year return-to-Agilent warranty and service	Standard
	3 year return-to-Agilent warranty and service	Default
	5 year return-to-Agilent warranty and service calibration upfront plan	3 or 5 year
	Agilent calibration plus upfront plan	3 or 5 year
	Z540 calibration upfront plan	3 or 5 year
<b>General spectrum analyzer accessories</b>		
11970	Harmonic mixer series (26.5, 40, 50, 60, 75, 110 GHz)	For use in E4407B Option AYZ
11974	Preselected millimeter mixer series (40, 50, 60, 75 GHz)	For use in E4407B Option AYZ
11909A	Low noise amplifier to 1 GHz	
8447A/D	Amplifiers to 400 MHz and 1.3 GHz	
8449B	Preamplifier to 26.5 GHz	

# Upgrades ESA-E Series

Available models:			Customer upgradeable	Customer upgradeable w/ test	Cust upgradeable w/ Opt. 0BW	Return to service center	Return to factory
E4401BU (9 kHz to 1.5 GHz) E4402BU (30 Hz to 3.0 GHz) E4404BU (30 Hz to 6.7 GHz) E4405BU (30 Hz to 13.2 GHz) E4407BU (30 Hz to 26.5 GHz)							
Ordering instructions							
To upgrade an existing ESA-E Series spectrum analyzer, order the corresponding model number followed by a 'U' and the desired option number. (ie. E440xBU-xxx)			For more information see: <a href="http://www.agilent.com/find/saupgrades">http://www.agilent.com/find/saupgrades</a>				
Hardware capabilities and performance							
Replace GPIB connection (A4H) with serial port	1AX	Not compatible with Option A4H		X		X	
GPIB and parallel printer interface	A4H	Not compatible with Option 1AX		X		X	
Wide offset phase noise improvement and ACPR dynamic range extension	120	Requires one free expansion slot		X		X	
Time-gated spectrum analysis	1D6			X		X	
50 ohm tracking generator (9 kHz to 3.0 GHz)	1DN	Operates to 1.5 GHz on E4401B		X		X	
Narrow resolution BW	1DR			X		X	
TV trigger and picture on screen	B7B	Requires BAA; not compatible with Option 060		X		X	
Cable fault location accessory kit (50 ohm)	B7K	Requires Option 1DN and Option 225 or BAH	X				
FM demodulation/deviation	BAA	Not compatible with Options 304, 106 or AYQ; requires one expansion slot, includes capability of Option A4J		X		X	
Fast time domain sweep; IF, sweep, and video output ports	AYX	Not compatible with Options B7D, 304; requires one expansion slot		X		X	
Low emissions shielding	060	Not compatible with B7B		X		X	
Preamplifier built-in for enhanced sensitivity	1DS	Operates to 3 GHz			X	X	
100 Hz (30 Hz usable) frequency range extension	UKB	Requires Option 1DR			X	X	
Digital demodulation hardware	B7D/B7E	Requires Option 1D5; not compatible with Option AYX; requires two expansion slots			X	X	
APC 3.5 mm input connector	BAB	Available on the E4407B only			X	X	
Bluetooth FSK demodulator	106	Requires Options B7D, 228		X		X	
External mixing	AYZ	Available on E4407B only				X	
EMI detectors and FM demod	AYQ	Requires one expansion slot		X		X	
70 MHz IF out	H70	Requires one expansion slot		X		X	X
26.5 GHz uncalibrated built in preamp	H26	Requires one expansion slot					X
Memory extension to 10 MB	B72	Standard on all new instruments starting with SN US4144 or MY4144; required for firmware version A.08.00 or higher	X			X	
High stability frequency reference	1D5	E4401B E4402B/04B/05B/07B			X	X	
IF sweep, video output ports	A4J	Not compatible with AYX		X		X	
Applications and firmware							
Noise figure measurement personality	219	Requires one expansion slot; requires license key		X		X	
Cable fault location measurement personality	225	Requires Option 1DN; recommended accessory Option B7K; firmware available on Web, requires license key	X				
Phase noise measurement personality	226	Firmware available on Web, requires license key	X				
Cable TV service and installation personality	227	Firmware available on Web, requires license key	X				
Bluetooth measurement personality	228	Requires Option B7D; requires Option 106 for full functionality	X				
Modulation analysis personality	229	Requires Options B7D/B7E, A4H,1D5; includes capability of Option 231; firmware available on Web, requires license key	X				
ESA to 89601A vector signal analysis software link utility	231	Requires Options B7D/B7E, A4H,1D5; Option 229 included capability of Option 231; free download from Web	X				
EDGE upgrade on GSM	252	Requires Options BAH, B7D/B7E, A4H, 1D5; requires Option 1DN for cable fault test	X				
HP 8566/68 programming code compatibility	266	Free download from Web	X				
8590-Series programming code compatibility	290	Free download from Web	X				
GSM/GPRS measurement personality	BAH	Requires Options B7D/B7E, A4H,1D5; 1D6 firmware available on Web, requires license key	X				
cdmaOne measurement personality	BAC	Requires Options B7D/B7E, A4H,1D5; firmware available on Web, requires license key	X				

1. If more than two or three measurement personalities are ordered, memory size limitations may limit the number that may be loaded into the ESA at any one time. For detailed information about memory size limits, please see the web site:  
<http://sa.tm.agilent.com/ESA/memory/>

## Upgrades ESA-L Series

### Available models:

E4411BU (9 kHz to 1.5 GHz) E4403BU (9 kHz to 3.0 GHz) E4408BU (9 kHz to 26.5 GHz)	Options not listed are not available for upgrade on the ESA-L Series Analyzer			Customer upgradeable	Customer upgradeable w/test	Cust upgradeable w/ Opt OBW	Return to service center	Return to factory
<b>Ordering instructions</b> To upgrade an existing ESA-L Series spectrum analyzer, order the corresponding model number followed by a 'U' and the desired option number. Ex. E44xxBU-xxx		For more information see: <a href="http://www.agilent.com/find/saupgrades">http://www.agilent.com/find/saupgrades</a>						
<b>HW capabilities and performance</b>								
Color display upgrade	049	Requires B72 plus firmware version A11.00 or higher	X					
Replace GPIB connection (A4H) with serial port	1AX	Not compatible with A4H		X			X	
GPIB and parallel printer interface	A4H	Not compatible with 1AX		X			X	
50 ohm tracking generator ( 9 kHz to 3.0 GHz)	1DN	Incompatible with 1DP; Operates to 1.5 GHz on E4411B; included in Option BTG		X			X	
75 ohm tracking generator (1 MHz to 1.5 GHz)	1DQ	E4411B only, requires Option 1DP		X			X	
Narrow resolution bandwidths	1DR	Requires B72 plus firmware version A11.00 or higher; 100 Hz minimum on ESA-L Series		X			X	
Memory extension to 10 MB	B72	Included on instrument prefixes $\geq$ US4144 or MY4144 Required for firmware version A.08.00 or higher	X				X	
IF sweep, video output ports	A4J	Standard in all ESA-L analyzers with Option BAS or BTG		X			X	
APC 3.5 mm input connector	BAB	E4408B only				X	X	
<b>Applications and firmware</b>								
HP 8566/68 programming code compatibility	266	Available for Web download	X					
8590-series programming code compatibility	290	Available for Web download	X					

## Upgrades E7400A series EMC analyzer

### Available models:

E7401AU (9 kHz to 1.5 GHz) E7402AU (30 Hz to 3.0 GHz) E7403AU (30 Hz to 6.7 GHz) E7404AU (30 Hz to 13.2 GHz) E7405AU (30 Hz to 26.5 GHz)	Options not listed are not available for upgrade on the EMC analyzers			Customer upgradeable	Customer upgradeable w/test	Cust upgradeable w/ Opt OBW	Return to service center	Return to factory
<b>Ordering instructions</b> To upgrade an existing EMC Series spectrum analyzer, order the corresponding model number followed by a 'U' and the desired option number. Ex. E740AU-xxx		For more information see: <a href="http://www.agilent.com/find/saupgrades">http://www.agilent.com/find/saupgrades</a>						
<b>HW capabilities and performance</b>								
Replace GPIB connection (A4H) with serial port	1AX	Not compatible with A4H or E7415A		X			X	
GPIB and parallel printer interface	A4H	Not compatible with 1AX		X			X	
Time-gated spectrum analysis	1D6			X			X	
IF sweep, video output ports	A4J			X			X	
50 ohm tracking generator ( 9 kHz to 3.0 GHz)	1DN	Operates to 1.5 GHz on E7401A;		X			X	
Fast time domain sweep; IF, sweep, and video output ports	AYX	Requires one expansion slot, standard in all E7400 analyzers with Option STD or STG		X			X	
100 Hz (30 Hz usable) frequency range extension	UKB	Standard in all E7400 analyzers with Option STD or STG				X	X	
APC 3.5 mm input connector	BAB	Available on the E7405A only				X	X	
High stability frequency reference	1D5	Included in all E7400 analyzers with Option STD or STG					X	



# Agilent ESA Product and Application Information

## Product literature

*Modulation Analysis Measurement Personality,*  
Product Overview

literature number 5988-2116EN

*Bluetooth RF Measurement Solution,* Product Overview

literature number 5980-2786EN

*Cable Fault Location Measurement Personality,*  
Product Overview

literature number 5980-1915E

*Cable TV Service and Installation Analyzer,*  
Product Overview

literature number 5980-0845E

*cdmaOne Measurement Solutions for ESA-E Series*

*Spectrum Analyzers,* Product Overview

literature number 5968-6869E

*8590-E Series,* Brochure

literature number 5963-6908E

*8590-E Series,* Technical Specifications

literature number 5963-6909E

*8560-EC Series,* Brochure

literature number 5968-9571E

*8560-EL Series,* Technical Specifications

literature number 5966-1496E

*8560-EC Series,* Technical Specifications

literature number 5968-8156E

*11970 Series Harmonic Mixers,* Technical Specifications

literature number 5968-1445E

*EMC Precompliance Solutions,* Brochure,

literature number 5968-2516E

*EMC Precompliance Systems,* Ordering Information,

literature number 5968-5157E

*E7400A-Series EMC Analyzers,* Technical Specifications

literature number 5968-3662E

*ESA BenchLink Spectrum Analyzer Software,*  
Product Overview

literature number 5966-0676E

*BenchLink Web Remote Control Software*

Product Overview

literature number 5988-2610EN

*ESA Snap-On Battery Pack,* Product Overview  
literature number 5966-1851E

*ESA-E Series Spectrum Analyzer,* Brochure  
literature number 5968-3278E

*ESA-E Series,* Technical Specifications  
literature number 5968-3386E

*ESA-E Series Self-Guided Demo,* Product Note  
literature number 5968-3658E

*ESA-E Series TV Transmission Quality Measurements,*  
Product Overview

literature number 5968-6874E

*ESA-E Series Measuring Signals Above 26.5 GHz,*

Product Overview

literature number 5968-6873E

*Select the Right Spectrum Analyzer for Your Needs,*  
Selection Guide

literature number 5968-3413E

*GSM Measurement Solutions for ESA-E Series*

*Spectrum Analyzers,* Product Overview

literature number 5968-6871E

*Performance Verification and Adjustment Software,*  
(See Option OBW)

*Phase Noise Measurement Personality Product,*  
Product Overview

literature number 5988-4348E

*R/Q/U/V281A, B mm-Wave-to-Coax-Adapters,*

Product Overview

literature number 5965-1225E

*IntuiLink Software,* Data Sheet

literature number 5980-3115EN

## Application notes

*8 Hints for Making Better Spectrum Analyzer Measurements,*  
literature number 5965-7009E

*Cookbook for EMC Precompliance Measurements,*  
literature number 5968-3661E

*Optimizing Spectrum Analyzer Amplitude Accuracy,*  
literature number 5968-3659E

*Optimizing Spectrum Analyzer Dynamic Range,*  
literature number 5968-4545E

*Optimizing Spectrum Analyzer Measurement Speed,*  
literature number 5968-3411E

*Spectrum Analysis Basics-150,*  
literature number 5952-0292

### **See the Agilent ESA and EMC internet pages for the latest information.**

Get the latest news, product, and support information, application literature and more. The internet address for the Agilent ESA family is

**[www.agilent.com/find/esa](http://www.agilent.com/find/esa).**

For the latest EMC products and information visit

**[www.agilent.com/find/emc](http://www.agilent.com/find/emc)**



### Agilent Technologies' Test and Measurement Support, Services, and Assistance

Agilent Technologies aims to maximize the value you receive, while minimizing your risk and problems. We strive to ensure that you get the test and measurement capabilities you paid for and obtain the support you need. Our extensive support resources and services can help you choose the right Agilent products for your applications and apply them successfully. Every instrument and system we sell has a global warranty. Support is available for at least five years beyond the production life of the product. Two concepts underlie Agilent's overall support policy: "Our Promise" and "Your Advantage."

#### Our Promise

Our Promise means your Agilent test and measurement equipment will meet its advertised performance and functionality. When you are choosing new equipment, we will help you with product information, including realistic performance specifications and practical recommendations from experienced test engineers. When you use Agilent equipment, we can verify that it works properly, help with product operation, and provide basic measurement assistance for the use of specified capabilities, at no extra cost upon request. Many self-help tools are available.

#### Your Advantage

Your Advantage means that Agilent offers a wide range of additional expert test and measurement services, which you can purchase according to your unique technical and business needs. Solve problems efficiently and gain a competitive edge by contracting with us for calibration, extra-cost upgrades, out-of-warranty repairs, and on-site education and training, as well as design, system integration, project management, and other professional engineering services. Experienced Agilent engineers and technicians worldwide can help you maximize your productivity, optimize the return on investment of your Agilent instruments and systems, and obtain dependable measurement accuracy for the life of those products.

#### Agilent T&M Software and Connectivity

Agilent's Test and Measurement software and connectivity products, solutions and developer network allows you to take time out of connecting your instruments to your computer with tools based on PC standards, so you can focus on your tasks, not on your connections. Visit

[www.agilent.com/find/connectivity](http://www.agilent.com/find/connectivity)

for more information.



### Agilent Email Updates

[www.agilent.com/find/emailupdates](http://www.agilent.com/find/emailupdates)

Get the latest information on the products and applications you select.

## More Information

For the latest information on Agilent spectrum analyzers, please visit our product Web pages at:

[www.agilent.com/find/spectrumanalyzers](http://www.agilent.com/find/spectrumanalyzers)

[www.agilent.com/find/esa](http://www.agilent.com/find/esa)

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

### Online assistance:

[www.agilent.com/find/assist](http://www.agilent.com/find/assist)

#### Phone or Fax

##### United States:

(tel) 800 829 4444

##### Canada:

(tel) 877 894 4414

(fax) 905 282 6495

##### China:

(tel) 800 810 0189

(fax) 800 820 2816

##### Europe:

(tel) (31 20) 547 2323

(fax) (31 20) 547 2390

##### Japan:

(tel) (81) 426 56 7832

(fax) (81) 426 56 7840

##### Korea:

(tel) (82 2) 2004 5004

(fax) (82 2) 2004 5115

##### Latin America:

(tel) (305) 269 7500

(fax) (305) 269 7599

##### Taiwan:

(tel) 0800 047 866

(fax) 0800 286 331

##### Other Asia Pacific Countries:

(tel) (65) 6375 8100

(fax) (65) 6836 0252

Email: [tm\\_asia@agilent.com](mailto:tm_asia@agilent.com)

Product specifications and descriptions in this document subject to change without notice.

© Agilent Technologies, Inc. 2003, 2002, 2004  
Printed in USA, May 5, 2004  
5968-3412E

