



Agilent E7400A Series EMC Spectrum Analyzer

Configuration Guide



This EMC configuration guide will help you determine which performance options, accessories, and services to include in your new EMC analyzer or to add as upgrades to an existing instrument.

The E7400A EMC spectrum analyzer, also called an EMI receiver, reduces the cost of achieving EMC compliance by providing the capability of detecting unwanted radiated and conducted emissions during the design stage.

Flexibility at your fingertips



Agilent Technologies

Agilent EMC Spectrum Analyzer

This step-by-step process will help you configure your EMC spectrum analyzer. Capabilities that are listed as standard come with the instrument at no additional charge. Tailor the performance, exterior, and service packages to meet your requirements.

The EMC spectrum analyzer is available in one of two express configurations: standard analyzer STD or STG. The express analyzers offer configurations that are typically ordered together to help speed instrument delivery.

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EMC Standard Express Spectrum Analyzer (STD/STG)

Step 1. Select your frequency range

Description	EMC model number ¹
Frequency range, 9 kHz to 3.6 GHz	E7402A⁴ E7402A-STD or E7402A-STG (STD plus 3 GHz tracking generator)
Frequency range, 9 kHz to 26.5 GHz	E7405A⁴ E7405A-STD or E7405A-STG (STD plus 3 GHz tracking generator)

Step 1a. Included options at no additional charge

Description	Option number
GPIB Connection	Option A4H ²
Fast time domain sweep; IF, sweep, and video output ports	Option AYW ²
Low frequency extension to 100 Hz	Option UKB
Low emissions shielding	Option 060
Narrow resolution bandwidths	Option 1DR
Preamplifier	Option 1DS 10 MHz to 3 GHz
High-stability frequency reference (reduces frequency drift, resulting in more accurate measurements)	Option 1D5 Aging rate: $\pm 1 \times 10^{-7}$ / year
EMC measurement firmware	Standard, automated EMC measurements
IntuiLink PC connectivity software	Connects to Microsoft® Word and Excel

Express option or bundle	Equivalent option(s)	Additional information
STD- Standard analyzer		
STG- Standard analyzer with tracking generator	1DN	

Step 2. Add extra options

Description	Option number
Time-gated spectrum analysis	Options 1D6
Replace GPIB with serial port	Option 1AX ^{2,3}
50 ohm tracking generator	Option STG 9 kHz to 3 GHz

1. The E7402A has three additional expansion slots for extra options; the E7405A has two additional expansion slots for extra options.
2. Requires one expansion slot.
3. Not compatible with Option A4H.
4. EMI detectors and FM demodulation included.

EMC Accessory, Calibration, and Warranty Options

Step 3. Select accessories, software/firmware, and documentation

Description	Option	Notes	Part number
Accessories			
12 VDC power cable	A5D	DC power connection available on every ESA	E4401-60066
Hard transit case	AXT		E4401-60101
Gray soft carrying/operation case	AYT		E4401-60117
Yellow soft carrying/operation case	AYU		E4401-60118
Gray backpack carrying case	042		9300-2465
Yellow backpack carrying case	044		9300-2470
Rack mount kit with handles	1CP	This kit is designed to fit into Agilent racks only; for non-Agilent racks, additional end brackets are required and are available by ordering part number 1494-0061	E4401-60057
50 to 75 ohm minimum loss pad	1D7		0955-1020
Rechargeable snap-on battery and charger	E1779A E1779B	Order as separate model number, not option number. Customers in European Union must order E1779B	
Low noise amplifier to 1 GHz	11909A		
Front panel cover	UK9		E4401-60193
Software/firmware			
Benchlink spectrum analyzer, PC software	B70	Also orderable as E4444A; requires Option A4H or 1AX	
Benchlink Web remote control software	230	Requires Option A4H	
IntuiLink software (shipped with every instrument)	***	Available on Web site for download www.agilent.com/find/intuilink	
Documentation			
Add extra manual set	OB1	Available for Web download at www.agilent.com/find/emc	
Commercial calibration certificate with test data	UK6		
Delete manual set (retains CD-ROM version)	OBO		
Service documentation, assembly level	OBW	Performance verification and adjustment software included	

For more information visit www.agilent.com/find/accessories.

Step 4. Choose warranty length

Description	EMC spectrum analyzer
1-year return-to-Agilent warranty and service	Standard (R-51B-001-C)
3-year return-to-Agilent warranty and service	R-51B-001-3C, Default configuration option

EMC Upgrade Options

Add additional options or upgrade your existing EMC spectrum analyzer

Available models:

E7402AU (30 Hz to 3.0 GHz) E7405AU (30 Hz to 26.5 GHz)	Options not listed are not available for upgrade on the EMC analyzers	Customer upgradable	Customer upgradable w/test	Self-maintainers with Option 0BW & N7811A software ¹	Return to service center	Return to factory
Ordering instructions						
To upgrade an existing EMC Series spectrum analyzer, order the corresponding model number followed by a 'U' and the desired option number (E7402AU-xxx)	For more information see: http://www.agilent.com/find/emc_upgrades					

Hardware capabilities and performance

Replace GPIB connection (A4H) with serial port	1AX	Not compatible with A4H or E7415A; occupies one expansion slot		X		X
GPIB connection	A4H	Not compatible with 1AX; occupies one expansion slot		X		X
Time-gated spectrum analysis	1D6			X		X
IF sweep, video output ports	A4J	Occupies one expansion slot		X		X
50 ohm tracking generator (9 kHz to 3.0 GHz)	1DN					
Fast time domain sweep; IF, sweep, and video output ports	AYX	Occupies one expansion slot, standard in all E7400 analyzers with Option STD or STG			X	X
100 Hz (30 Hz usable) frequency range extension	UKB	Included 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 reference	1D5	Included in all E7400 analyzers with Option STD or STG			X	X

1. Self-maintainers are customers who service and calibrate their own instruments. Information about the N7811A software can be found at: <http://calsw.tm.agilent.com/>.

Related Literature

Agilent EMC Series Spectrum Analyzer, Configuration Guide, literature number 5989-9954EN
 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
 Select the Right Spectrum Analyzer for Your Needs, Selection Guide, literature number 5968-3413E
 Performance Verification and Adjustment Software, (See Option OBW)



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