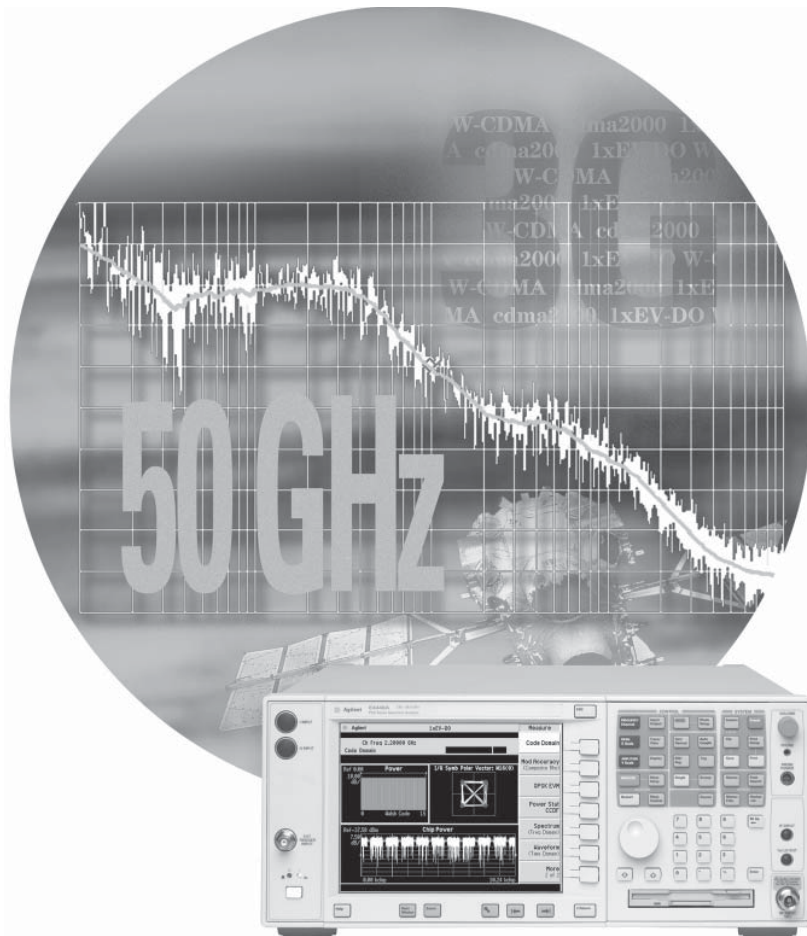# PSA Series High-Performance Spectrum Analyzers

Configuration Guide and PXA Cross Reference

This PSA configuration guide with PXA cross reference will help you determine the right signal analysis tool to meet your needs whether you are

- Selecting options to optimize your Agilent PSA Series high-performance spectrum analyzer
- Upgrading your high-performance spectrum analyzer
- Contemplating replacing your PSA with Agilent's next-generation high-performance signal analyzer, the N9030A PXA, which covers up to 50 GHz and beyond, and provides users with better performance, wider analysis bandwidth, faster measurements, and more powerful connectivity

In this document, options for the new PXA are listed alongside the PSA options as a reference for customers who wish to consider upgrading to the latest technologies found in the PXA.

Agilent Technologies

Option Availability and Compatibility

PSA Series available models and frequency ranges					Matching PXA options
E4443A (3 Hz to 6.7 GHz) E4445A (3 Hz to 13.2 GHz) E4440A (3 Hz to 26.5 GHz) E4447A (3 Hz to 42.98 GHz) E4446A (3 Hz to 44 GHz) E4448A (3 Hz to 50 GHz)					N9030A-503 (3 Hz to 3.6 GHz) N9030A-508 (3 Hz to 8.4 GHz) N9030A-518 (3 Hz to 13.6 GHz) N9030A-526 (3 Hz to 26.5 GHz) N9030A-543 (3 Hz to 43 GHz) N9030A-544 (3 Hz to 44 GHz) N9030A-550 (3 Hz to 50 GHz)
Option description	**Option available for:**				**Matching PXA options**
	E4443A/45A	E4440A	E4447A	E4446A/48A	
Analysis bandwidths					
40 MHz bandwidth digitizer (includes Basic Mode) (Option 140)	●	●		●	Excludes Options 122, 107, H70, H20, H25, HN9, HB2, H7L, HY7, and HBA; For E4440A/43A/45A, Option 123 required for full analysis bandwidth above 3 GHz; Option HYX excluded if Option 110 installed. For E4446A/48A, Option 123 is always required and Option HYX excluded.	N9030A-B40 (Analysis bandwidth, 40 MHz)
80 MHz bandwidth digitizer (includes Basic Mode) (Option 122)	●	●		●	Excludes Options 140, 107, H70, H20, H25, HN9, HB2, H7L, HY7, and HBA; For E4440A/43A/45A, Option 123 required for full analysis bandwidth above 3 GHz; Option HYX excluded if Option 110 installed. For E4446A/48A, Option 123 is always required and Option HYX excluded.	N9030A-B1X (Analysis bandwidth, 140 MHz)
Switchable microwave (µW) preselector bypass (Option 123)	●	●	●	●	Excludes Options AYZ* and HN8	N9030A-MPB (Microwave preselector bypass)
Wide bandwidth (BW) digitizer external calibration wizard for Option 122/140 (Option 235)	●	●		●	PC software for use with Option 122/140	N/A. Calibration process for the WBIF included.
Measurement personalities digital wireless communication					
Flexible digital modulation analysis measurement personality (Option 241)	●	●	●	●	Can work with Options 122 or 140 with Option 123 for wide bandwidth analysis (up to 80 MHz or 40 MHz)	N9064A (VXA signal analyzer measurement application)
WLAN measurement personality (Option 217)	●	●		●	Requires Options 122 or 140; For E4440A/43A/45A, Option 123 recommended for measurements above 3 GHz. For E4446A/48A, Option 123 is always required	N9064A (VXA signal analyzer measurement application) Option 3FP (WLAN modulation analysis); Requires Option B25, B40, or B1X
GSM w/ EDGE measurement personality (Option 202)	●	●	●	●	Requires Option B7J	N9071A GSM/EDGE and EGDE-Evo measurement application
W-CDMA measurement (Option BAF)	●	●	●	●	Requires Option B7J; Option 1DS recommended; Option 110 compatible	N9073A-1FP W-CDMA measurement application
HSDPA/HSUPA measurement personality (Option 210)	●	●	●	●	Requires Option B7J and BAF; Option 1DS recommended; Option 110 compatible	N9073A-2FP HSDPA/HSUPA measurement application
cdmaOne measurement personality (Option BAC)	●	●	●	●	Requires Option B7J	N9072A cdma2000®/cdmaOne measurement application

Option Availability and Compatibility (continued)

Option description	Option available for:				Compatibility/comments	Matching PXA options
	E4443A/45A	E4440A	E4447A	E4446A/48A		
Measurement personalities digital wireless communication - continued						
cdma2000 measurement personality (Option B78)	●	●	●	●	Requires Option B7J; Option 1DS recommended; Option 110 compatible	N9072A cdma2000/cdmaOne measurement application
1xEV-DO measurement personality (Option 204)	●	●	●	●	Requires Option B7J; Option 1DS recommended; Option 110 compatible	N9076A 1xDV-DO measurement application
1xEV-DV measurement personality (Option 214)	●	●	●	●	Requires Options B7J and B78; Option 1DS recommended; Option 110 compatible	Contact Agilent
NADC, PDC measurement personality (Option BAE)	●	●	●	●	Requires Option B7J	Contact Agilent
TD-SCDMA power measurement personality (Option 211)	●	●	●	●		N9079A TD-SCDMA (HSPA/8PSK) measurement application
TD-SCDMA modulation analysis measurement personality (Option 212)	●	●	●	●	Requires Option B7J	N9079A TD-SCDMA (HSPA/8PSK) measurement application
HSPA/8PSK for TD-SCDMA modulation analysis measurement personality (Option 213)	●	●	●	●	Requires Options B7J and 212	N9079A TD-SCDMA (HSPA/8PSK) measurement application

* Note: For E4446A/48A only, a special Option HY3 allows Options 123 and AYZ to co-exist in the same instrument but not operate simultaneously.

Measurement personalities – general purpose applications						
External source control measurement personality (Option 215)	●	●	●	●	Supported sources are ESG-C, PSG and MXG	Contact Agilent
Noise figure measurement personality (Option 219)	●	●	●	●	Specifications available up to 3 GHz. Option 1DS or Option 110 needed for specified performance	N9069A Noise Figure measurement application
Phase noise measurement personality (Option 226)	●	●	●	●		N9068A Phase Noise measurement application
Built-in measuring receiver personality and PC software (Option 233)	●	●	●	●	Option 123 required for measurements above 3 GHz; Option IDS or 110 may be required for certain specifications. AM/FM/PM triggering and CCITT filter are included as standard features (Firmware rev. >A.11.08)	Contact Agilent
Programming code compatibility suite measurement personality (Option 266)	●	●	●	●	Supports HP/Agilent 8566A/B, 8568A/B, 856xE/EC, and 859xE	N9061A Remote language compatibility application. Supports 8566A/B, 8568A/B and 856xE/EC. Included with PXA at no charge.
EMC measurement personality (Option 239)	●	●	●	●	Allows the N9039A RF filter to be used with the PSA to make fully-compliant EMC measurements. Excludes Option 117.	N6141A EMC measurement application

Option Availability and Compatibility (continued)

Option description	E4443A/45A	E4440A	E4447A	E4446A/48A	Compatibility/comments	Matching PXA options
Hardware and miscellaneous						
Audio input 100 kOhm (Option 107)	●	●	●	●	Requires Option 233 to operate; excludes Options 122 and 140	Contact Agilent
RF internal preamplifier 100 kHz to 3 GHz (Option 1DS)	●	●	●	●	Excludes Option 110	N9030A-P03 (Preamp, 100 kHz to 3.6 GHz)
RF/µW internal preamplifier 10 MHz to the maximum frequency of PSA (Option 110)	●	●	●	●	Excludes Option 1DS	N9030A-P08 (Preamp, 100 kHz to 8.4 GHz) N9030A-P13 (Preamp, 100 kHz to 13.6 GHz) N9030A-P26 (Preamp, 100 kHz to 26.5 GHz) N9030A-P43 (Preamp, 100 kHz to 43 GHz) N9030A-P44 (Preamp, 100 kHz to 44 GHz) N9030A-P50 (Preamp, 100 kHz to 50 GHz)
USB device side I/O interface (Option 111)	●	●	●	●	USB 2.0 1 type-B, slave (device side) only. Shipped standard for all PSA models starting September 2007	N9030A PXA ships standard with USB 2.0 ports: 1 type-B slave port and 6 type-A master ports
512 MB user memory (Option 115)	●	●	●	●	Shipped standard in all PSA instruments with SN prefix ≥ US/MY 4618 unless Option 117 license is activated	N9030A PXA ships standard with 80 GB removable solid state drive
Secure memory erase (Option 117)	●	●	●	●	Activating Option 117 license disables Option 115 Excludes Option 239	N9030A ships standard with a removable solid state drive for instrument sanitization
Y-axis video output (Option 124)	●	●	●	●	Excludes Option H7L	N9030A-YAV (Y-Axis video out)
BenchLink Web remote control software (Option 230)	●	●	●	●	PC software enabling remote control of the PSA through the Web	N9030 PXA's Windows-based OS offers the web server enabling remote control to the PSA through the web.
External mixing (Option AYZ)		●	●	●	Excludes Options 123* and HN8	N9030A-EXM (External mixing)
Digital demodulation hardware (includes Basic Mode) (Option B7J)	●	●	●	●		Standard for all N9030A PXA models (IQ analyzer)
Replace type-N input connector with APC 3.5 connector (Option BAB)		●			Excludes Option HBA; required by Option E4440A-233	N9030A-C35 (APC 3.5 mm connector)
Commercial calibration certificate with test data (Option UK6)	●	●	●	●		N9030A-UK6 (Commercial calibration with test data)
Special handling options [1]						
25 MHz IF output (Option H25)		●			Excludes Options 122, 140, H70, HY7, HB2, H20, and HYX	N9030A-CRP (Programmable IF output, 10 to 75 MHz, in 0.5 MHz increments)
21.4 MHz narrow bandwidth IF output (Option HYX)	●	●	●	●	Nominal 10 MHz bandwidth; excludes HBA, HB2, H20, H25, 122, and 140	N9030A-CRP (Programmable IF output 10 to 75 MHz, in 0.5 MHz increments)
70 MHz IF output (Option H70)	●	●		●	Excludes Options 122, 140, HB2, H20, HY7, and H25	N9030A-CRP (Programmable IF output 10 to 75 MHz, in 0.5 MHz increments)
Improved gain 70 MHz IF output (Option HY7)	●	●		●	Excludes Options 122, 140, HB2, H20, H70, and H25	N9030A-CRP (Programmable IR output, 10 to 75 MHz, in 0.5 MHz increments). Refer to the PXA specification guide for more information.
Switched LO for Options 123 and AYZ (Option HY3)				●	Allows Options 123 and AYZ to co-exist in the same mmWave PSA instrument. Note that Option HY3 does not give the capability to operate Options 123 and AYZ simultaneously.	PXA Option EXM can coexist with Option MPB
Rear panel RF input (Option HBA)	●	●			Excludes Options 122, 140, BAB, H26, HYX, HB2, and H25	Contact Agilent

Option Availability and Compatibility (continued)

Option description	Option available for:			Compatibility/comments	Matching PXA options
Auxiliary log video out (Option H7L)	•	•	•	While H7L can co-exist with H70/HY7, HNQ and 321.4 MHz IF output in the same instrument, they cannot function at the same time.	N9030A-ALV (Log video output)

Note: "•" indicates "available for the model;" blank indicates "not available"

1. Item descriptions for those special handling options that are not listed in this book but in the "Compatibility/comments" column are as follows:
   - H20: 20 MHz IF output on the rear panel (available for E4440A/43A only)
   - HN9: 80 MHz IF output at 321.4 MHz for RF input frequency less than 3.05 GHz
   - HN8: Wide band preselector bypass (discontinued)
   - HA5: Modified performance, only available for E4445A (discontinued)

* *Note: For E4446A/48A only, a special Option HY3 allows Options 123 and AYZ to co-exist in the same instrument but not operate simultaneously.*

PSA Accessories

Options	Description	Comment
PSA specific accessories		
015	6 GHz return loss measurement accessory kit	Recommended for Option 215 (external source control) users for return loss measurements
045	Millimeter wave accessory kit	Available for E4447A/46A/48A
1CM	Rack mount kit	
1CN	Front handle kit	
1CP	Rack mount kit with handles	
1CR	Rack slide kit	
Software		
230	BenchLink Web remote control software IntuiLink connectivity software (PC software that enables easy transfer of screen and data from analyzer to the Microsoft® Office applications)	
N6171A-M01	MATLAB basic signal analysis package	Adds MATLAB software environment and the Instrument Control Toolbox—use this configuration to configure, control, and acquire data from the PSA for basic signal analysis; not upgradable after the instrument is shipped.
N6171A-M02	MATLAB standard signal analysis package	Adds MATLAB basic signal package plus the Communications and Signal Processing toolboxes—use this configuration to filter or demodulate signals, automate measurements, analyze or visualize data, or build test systems; not upgradable after the instrument is shipped.
N6171A-M03	MATLAB advanced signal analysis packag	Adds MATLAB standard signal package plus the Filter Design Toolbox, RF Toolbox, and System Test—use System Test software to develop, manage, and execute test routines developed in MATLAB; not upgradable after the instrument is shipped.
N9051A	Pulse measurement software	External PC operation.
Documentation		
0B1	Extra manual set including CD ROM	
0B0	Manual not included (retains CD-ROM version)	
0BW	Service manual, assembly level	For PSA Series calibration application software, select R-52A, or order N7810A standalone
ABA	Manual set: US- English localization	
AB1	Manual set: Korea-Korean localization	
AB2	Manual set: China-Chinese localization	
ABD	Manual set: Germany-German localization	
ABF	Manual set: France-French localization	
ABJ	Manual set: Japan-Japanese localization	

PSA Accessories (continued)

Options	Description	Comment
Warranty and calibration		
R-50C-001	Standard calibration	
R-50C-002	Standards compliant calibration	
R-51B-001-C	1-year return-to-Agilent warranty	Standard
R-51B-001-3C	1-year return-to-Agilent warranty extended to 3 years	
R-51B-001-5C	1-year return-to-Agilent warranty extended to 5 years	
UK6	PSA Series commercial calibration certificate with data	To be ordered with PSA
A6J	PSA Series ANSI Z540 compliant calibration	To be ordered with PSA, Agilent factory provides the calibration services
1A7	PSA Series ISO 17025 compliant calibration	To be ordered with PSA, Agilent factory provides the calibration services
General spectrum analyzer accessories		
11970K	Waveguide harmonic mixer, 18 to 26.5 GHz	Non-preselected
11970A	Waveguide harmonic mixer, 26.5 to 40 GHz	Non-preselected
11970Q	Waveguide harmonic mixer, 33 to 50 GHz	Non-preselected
11970U	Waveguide harmonic mixer, 40 to 60 GHz	Non-preselected
11970V	Waveguide harmonic mixer, 50 to 75 GHz	Non-preselected
11970W	Waveguide harmonic mixer, 75 to 110 GHz	Non-preselected
11974A	Preselected millimeter mixer, 26.5 to 40 GHz	
11974Q	Preselected millimeter mixer, 33 to 50 GHz	
11974U	Preselected millimeter mixer, 40 to 60 GHz	
11974V	Preselected millimeter mixer, 50 to 75 GHz	
87405B	Preamplifier, 10 MHz to 4 GHz	
87405C	Preamplifier, 100 MHz to 18 GHz	
82357B	USB/GPIB interface	
E5810A	LAN/GPIB gateway	
85024A	High frequency active probe (single-ended input), 300 kHz to 3 GHz	
U1818A	High frequency active differential probe, 100 kHz to 7 GHz	
U1818B	High frequency active differential probe, 100 kHz to 12 GHz	
11867A	RF limiter, dc to 1.8 GHz	
N9355/6B	Power limiter, 0.01 to 18 GHz	
N9355/6C	Power limiter, 0.01 to 26 GHz	
N9355F	Power limiter, 0.01 to 50 GHz	
11945A	Close field probe set, 9 kHz to 1 GHz	Used for: EMC measurements
11947A	Transient limiter, 9 kHz to 200 MHz	Used for: EMC measurements
N9039A	RF filter section, 9 kHz to 1 GHz	For EMI measurement receiver

PSA Series – Upgrades

Ordering instructions

To upgrade an existing PSA Series spectrum analyzer, order the corresponding
model number followed by a 'U' and the desired option number.
For example: E444xAU-YYY (where x = 3, 5, 0, 7, 6, 8 and YYY = the option number)

For further information, such as number of slots required and time required by
the service center, visit: **http://www.agilent.com/find/psa_upgrades**

Option description	Comments	Incompatible options	Customer upgradeable	Self maintainers with Options OBW and N7810A	Return to Agilent Service Center
Hardware capabilities and performance					
80 MHz bandwidth digitizer (Option 122)	Available for E4443A/45A/40A/46A/48A with SN prefix between US/MY4430 and 4530; Option 123 required for full analysis bandwidth above 3 GHz (for E4443A/45A/40A) and always required for E4446A/48A	107, H70, HY7, H20, HBA, HB2, H7L, H25, HNQ, HN9, HA5, and HYX		•	•
40 MHz bandwidth digitizer (Option 140)	Available for E4443A/45A/40A/46A/48A with SN prefix between US/MY4430 and 4530; Option 123 required for full analysis bandwidth above 3 GHz (for E4443A/45A/40A) and always required for E4446A/48A	107, H70, HY7, H20, HBA, HB2, H7L, H25, HNQ, HN9, HA5, and HYX		•	•
80 MB bandwidth digitizer upgrade kit (Option 322)	Available for E4443A/45A/40A/46A/48A with SN prefix ≥ US/MY4611, Option 123 required for full analysis bandwidth above 3 GHz (for E4443A/45A/40A), and always required for E4446A/48A)	107, H70, HY7, H20, HBA, HB2, H7L, H25, HNQ, HN9, HA5, and HYX		•	•
40 MHz bandwidth digitizer upgrade kit (Option 340)	Available for E4443A/45A/40A/46A/48A with SN prefix ≥ US/MY4611, Option 123 required for full analysis bandwidth above 3 GHz (for E4443A/45A/40A), and always required for E4446A/48A)	107, H70, HY7, H20, HBA, HB2, H7L, H25, HNQ, HN9, HA5, and HYX		•	•
Y-axis video output (Option 124)	Available for all PSA models with SN prefix ≥ US/MY4430	HA5, H7L		•	•
Switchable microwave preselector bypass (Option 123)	Available for E4443A/45A/40A with SN prefix ≥ US/MY4430 and E4447A/46A/48A; for earlier models, see Option 423	AYZ, HA5, HN8, HNQ, and H26		•	•
Switchable microwave preselector bypass (Option 423)	Available for earlier E4443A/45A/40A models with SN prefix ≤ US/MY4402	H26, HA5, AYZ, HNQ, and HN8		•	•
Gated sweep hardware (Option 426)	Available for all PSA models with SN prefix < US/MY4336, shipped standard for later PSA models (SN prefix ≥ US/MY4336)				•
Digital demodulation hardware (Option B7J)	Available for all PSA models with SN prefix ≥ US4142/MY4100			•	•
Digital demodulation hardware (for earlier PSA models) (Option 071)	Available for all earlier PSA models with SN prefix ≤ US4142/MY4100			•	•
RF internal preamplifier (Option 1DS)	Frequency coverage: 100 KHz to 3 GHz; available for all PSA models	HA5 and 110		•	•
64 MB flash memory (Option ANE)	Shipped standard in all PSA models with SN prefix ≥ US/MY4222; shipped standard in all E4447A/46A/48A			•	•

PSA Series – Upgrades (continued)

Option description	Comments	Incompatible options	Customer upgradeable	Self maintainers with Options OBW and N7810A	Return to Agilent Service Center
Hardware capabilities and performance, continued					
Noise figure hardware kit for early PSA instruments (Option 119)	Required by Option 219 for all PSA models with SN prefix ≤ US4222/MY4100; standard for all PSA models with SN prefix ≥ US/MY4336	HA5		●	●
APC 3.5 mm connector (Option BAB)	Available for E4440A only	HBA		●	●
External mixing (Option AYZ)	Available for E4440A/47A/46A/48A	123 and HN8		●	●
Audio input 100 kΩ (Option 107)	Requires Option 233 to operate; available for PSA models with SN prefix ≥ US/MY4430	122, 140, and HA5		●	●
RF/µW internal preamplifier (Option 110)	Frequency coverage: 10 MHz to the maximum frequency of a PSA; available for all PSA models; for PSA models with Option 1DS installed, Option 1DS must be removed before installing Option 110	1DS, H26, HT1, and HA5		●	●
USB device side I/O interface (Option 111)	USB 2.0 standard device side only; available for PSA models with SN prefix ≥ US/MY4430. Shipped standard for all PSA models as of September 2007	HA5		●	●
512 MB user memory (Option 115)	Available for all PSA models and serial numbers. Shipped standard for all PSA models with SN prefix > US/MY4618 unless Option 117 license is activated	117, HT1, HA5, H26, HN8, HS1, HS7		●	●
Secure memory erase (Option 117)	Available for all PSA models and serial numbers. Activating Option 117 license disables Option 115	115, HT1, HA5, H26, HN8, HS1, HS7, 239		●	●

PSA Series – Upgrades (continued)

Option description	Comments	Incompatible options	Customer upgradeable	Self maintainers with Options OBW and N7810A	Return to Agilent Service Center
Measurement personalities					
Flexible digital modulation analysis (Option 241)	Available for all PSA models; works with Option 122 or 140 with Option 123 for wide bandwidth analysis (up to 80 MHz or 40 MHz)	HA5	●		
WLAN measurement personality (Option 217)	Requires Option 122 or 140; available for E4443A/45A/40A/46A/48A; requires Option 123 for measurements above 3 GHz	HA5	●		
GSM w/ EDGE measurement personality (Option 202)	Requires Option B7J; available for all PSA models		●		
W-CDMA measurement personality (Option BAF)	Requires Option B7J; available for all PSA models; Option 1DS recommended		●		
HSDPA/HSUPA measurement personality (Option 210)	Requires Options B7J and BAF; available for all SA models; Option 1DS recommended		●		
cdmaOne measurement personality (Option BAC)	Requires Option B7J; available for all PSA models		●		
cdma2000 measurement personality (Option B78)	Requires Option B7J; available for all PSA models; Option 1DS recommended		●		
1xEV-DO measurement personality (Option 204)	Requires Option B7J; available for all PSA models; Option 1DS recommended		●		
1xEV-DV measurement personality (Option 214)	Requires Options B7J and B78; available for all PSA models; Option 1DS recommended		●		
TD-SCDMA power measurement personality (Option 211)	Available for all PSA models; for PSA models with SN prefix < US/MY4336, Option 426 is required		●		
TD-SCDMA modulation analysis measurement personality (Option 212)	Requires Option B7J; available for all PSA models		●		
HSPA/8PSK for TD-SCDMA modulation analysis measurement personality (Option 213)	Requires Options B7J and 212; available for all PSA models		●		

PSA Series – Upgrades (continued)

Option description	Comments	Incompatible options	Customer upgradeable	Self maintainers with Options OBW and N7810A	Return to Agilent Service Center
Measurement personalities, continued					
NADC, PDC measurement personality (Option BAE)	Requires Option B7J; available for all PSA models		●		
External source control measurement personality (Option 215)	Available for all PSA models; for PSA models with SN prefix < US/MY4336, the gated sweep Option 426 is required	HA5	●		
Noise figure measurement personality (Option 219)	Available for all PSA models; for PSA models with SN prefix ≤ US4222/MY4100, Option 119 is required; Option 1DS or 110 is required to meet specifications	HA5	●		
Phase noise measurement personality (Option 226)	Available for all PSA models	HA5	●		
BenchLink web remote control software (Option 230)	PC software to run Web server		●		
Built-in measuring receiver personality and PC software (Option 233)	Available for all PSA models; Option 123 required for measurements above 3 GHz, Option 1DS or 110 may be required for certain specifications. AM/FM/PM triggering and CCITT filter are included as standard features for firmware rev. >A.11.08.	HA5	●		
Wide BW digitizer external calibration wizard (Option 235)	PC software for use with Option 122 or 140; available for E4443A/45A/40A/46A/48A only		●		
Programming code compatibility suite (Option 266)	Available for all PSA models		●		
EMC measurement personality (Option 239)	Available for all PSA models with SN prefix ≥ MY/SG/US4430	117	●		
Firmware upgrade (Option UE2)	Includes install note and PSA firmware CD-ROM; available for all PSA models		●		
Special options					
70 MHz IF output (Option H70)	Available for all PSA models except E4447A	122, 140, HB2, H20, H25, and HY7			●
Auxiliary log video output (Option H7L)	Available for all PSA models except E4447A	122, 140, and 124			●

With restriction of the PSA's internal memory space, not all of the measurement personalities will fit into the instrument simultaneously. Visit the "Memory Calculator" at **http://sa.tm.agilent.com/PSA/memory/** to ensure your PSA has sufficient memory space to accommodate the measurement personalities you want to install.

PSA Series Ordering Information

PSA Series spectrum analyzer

E4443A	3 Hz to 6.7 GHz
E4445A	3 Hz to 13.2 GHz
E4440A	3 Hz to 26.5 GHz
E4447A	3 Hz to 42.98 GHz
E4446A	3 Hz to 44 GHz
E4448A	3 Hz to 50 GHz

Options

To add options to a product, use the following ordering scheme:
Model E444xA (x = 0, 3, 5, 6, 7 or 8)
Example options   E4440A-B7J,
E4448A-1DS

Warranty & service

Standard warranty is one year.

R-51B-001-3C	1-year return-to-Agilent warranty extended to 3 years

Calibration [1]

Recommended calibration cycle is two years

R-50C-011-3	Inclusive calibration plan, 3 year coverage
R-50C-013-3	Inclusive calibration plan and cal data, 3 year coverage
E444xA-0BW	Service manual
E444xA-UK6	Commercial calibration certificate with test data
E444xA-A6J	Factory ANSI Z540 standard-compliant calibration
E444xA-1A7	Factory ISO 17025 standard-compliant calibration

1. Options not available in all countries

Measurement personalities

E444xA-226	Phase noise	
E444xA-219	Noise figure	Requires Option 1DS or 110 to meet specifications
E444xA-241	Flexible digital modulation analysis	
E444xA-BAF	W-CDMA	Requires B7J
E444xA-210	HSDPA/HSUPA (for W-CDMA)	Requires B7J and BAF
E444xA-202	GSM w/ EDGE	Requires B7J
E444xA-B78	cdma2000	Requires B7J
E444xA-214	1xEV-DV	Requires B7J and B78
E444xA-204	1xEV-DO	Requires B7J
E444xA-BAC	cdmaOne	Requires B7J
E444xA-BAE	NADC, PCD	Requires B7J
E444xA-217	WLAN	Requires 122 or 140
E444xA-211	TD-SCDMA power measurement	
E444xA-212	TD-SCDMA modulation	Requires B7J
E444xA-213	HSPA for TD-SCDMA	Requires Options B7J and 212
E444xA-215	External source control	
E444xA-266	Programming code compatibility suite	
E444xA-233	Built-in measuring receiver personality	Includes AM/FM/PM triggering CCITT filter as standard features (Firmware rev. >A.11.08)
E444xA-239	N9039A RF preselector control	Excludes 117

PSA Series Ordering Information (continued)

Hardware

E444xA-1DS	RF internal preamplifier (100 kHz to 3 GHz)	Excludes 110
E444xA-110	RF/µW internal preamplifier (10 MHz to upper frequency limit of the PSA)	Excludes 1DS
E444xA-B7J	Digital demodulation hardware	
E444xA-122	80 MHz bandwidth digitizer	E4440A/43A/45A/46A/48A, excludes 140, 107, H70
E444xA-140	40 MHz bandwidth digitizer	E4440A/43A/45A/46A/48A, excludes 122, 107, H70
E444xA-123	Switchable MW preselector bypass	Excludes AYZ (For E4446A/48A, Option HY3 allows coexistance of 123 and AYZ)
E444xA-124	Y-axis video output	
E444xA-AYZ	External mixing	E4440A/47A/46A/48A only, excludes 123 (For E4446A/48A, Option HY3 allows coexistance of 123 and AYZ)
E444xA-107	Audio input 100 kΩ	Requires 233 to operate; excludes 122, 140
E444xA-111	USB device side I/O interface	Shipped standard since September 2007
E444xA-115	512 MB user memory	Shipped standard in all PSA instruments with serial number prefix ≥ MY4615 unless 117 license is activated
E444xA-117	Secure memory erase	Excludes 115 and 239
E4440A-BAB	Replaces type-N input connector with APC 3.5 connector	
E444xA-H70	70 MHz IF output	Excludes 122, 140. Not available for E4447A
E444xA-HYX	21.4 MHz IF output	Available for all PSA models
E444xA-HY3	Switched LO for Options AYZ and 123	For E4446A/48A only

PC software

E444xA-230	BenchLink Web Remote Control Software	
E444xA-235	Wide BW digitizer external calibration wizard	Requires 122 or 140 E4443A/45A/40A/46A/48A

Accessories

E444xA-1CM	Rack mount kit
E444xA-1CN	Front handle kit
E444xA-1CP	Rack mount with handles
E444xA-1CR	Rack slide kit
E444xA-015	6 GHz return loss measurement accessory kit
E444xA-045	Millimeter wave accessory kit
E444xA-0B1	Extra manual set including CD ROM

Related Literature

Publication title	Publication type	Publication number
PSA/PXA in general		
Selecting the Right Signal Analyzer for Your Needs	Selection Guide	5968-3413E
PSA Series	Brochure	5980-1283E
PSA Series	Data Sheet	5980-1284E
PSA Series	Configuration Guide	5989-2773EN
Self-Guided Demonstration for Spectrum Analysis	Product Note	5988-0735EN
N9030A PXA Series	Brochure	5990-3951EN
N9030A PXA Series	Data Sheet	5990-3952EN
N9030A PXA Series	Configuration Guide	5990-3953EN
Wide bandwidth and vector signal analysis		
40/80 MHz Bandwidth Digitizer	Technical Overview	5989-1115EN
Measurement personalities and applications		
Phase Noise Measurement Personality	Technical Overview	5988-3698EN
Noise Figure Measurement Personality	Technical Overview	5988-7884EN
External Source Measurement Personality	Technical Overview	5989-2240EN
Flexible Digital Modulation Analysis Measurement Personality	Technical Overview	5989-1119EN
W-CDMA and HSDPA/HSUPA Measurement Personalities	Technical Overview	5988-2388EN
GSM with EDGE Measurement Personality	Technical Overview	5988-2389EN
cdma2000® and 1xEV-DV Measurement Personalities	Technical Overview	5988-3694EN
1xEV-DO Measurement Personality	Technical Overview	5988-4828EN
cdmaOne Measurement Personality	Technical Overview	5988-3695EN
WLAN Measurement Personality	Technical Overview	5989-2781EN
TD-SCDMA Measurement Personality	Technical Overview	5989-0056EN
Built-in Measuring Receiver Personality/Agilent N5531S Measuring Receiver	Technical Overview	5989-4795EN
BenchLink Web Remote Control Software	Product Overview	5988-2610EN
Programming Code Compatibility Suite	Technical Overview	5989-1111EN
Hardware options		
PSA Series Spectrum Analyzers Video Output (Option 124)	Technical Overview	5989-1118EN
PSA Series Spectrum Analyzers, Option H70,70 MHz IF Output	Product Overview	5988-5261EN
Spectrum analyzer fundamentals		
Optimizing Dynamic Range for Distortion Measurements	Product Note	5980-3079EN
PSA Series Amplitude Accuracy	Product Note	5980-3080EN
PSA Series Swept and FFT Analysis	Product Note	5980-3081EN
PSA Series Measurement Innovations and Benefits	Product Note	5980-3082EN
Spectrum Analysis Basics	Application Note 150	5952-0292
Vector Signal Analysis Basics	Application Note 150-15	5989-1121EN
8 Hints for Millimeter Wave Spectrum Measurements	Application Note	5988-5680EN
Spectrum Analyzer Measurements to 325 GHz with the Use of External Mixers	Application Note 1453	5988-9414EN
Making Precompliance EMI Measurements	Application Note 150-10	5989-1550EN