



## X-Series Signal Analysis

- Future-ready instruments
- Consistent measurement framework
- Broadest set of applications and software



**Agilent Technologies**

# Arrive Ahead with X-Series

We can't predict the future, but Agilent can help you shape it with future-ready test assets. The Agilent X-Series is an evolutionary approach to signal analysis that spans instrumentation, measurements and software. This approach gives you the flexibility to satisfy your business and technical requirements across multiple products and programs — now and in the future. The X-Series also creates a consistent framework that enables your teams to move at a faster pace. Stay ready, stay in sync and **arrive ahead**—with the Agilent X-Series.

[www.agilent.com/find/X-Series](http://www.agilent.com/find/X-Series)

## Future-ready instruments so you can evolve as technology changes

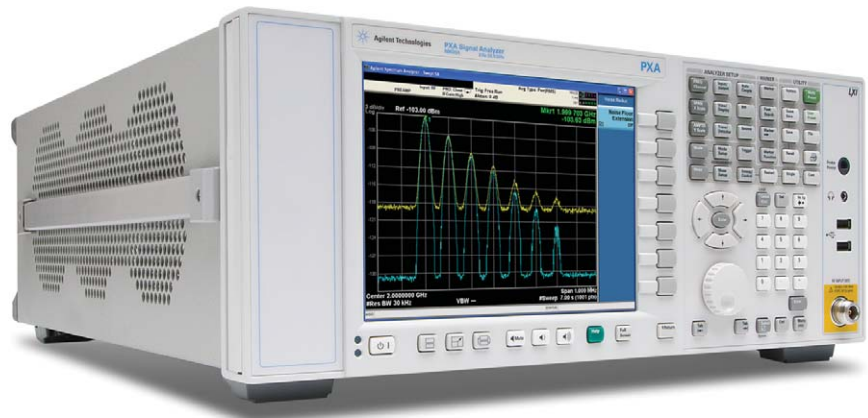
More than upgradeability of features and functions, you can optimize your investment and extend instrument longevity with upgradeable processor, memory, connectivity and more. You'll keep your test assets current today and tomorrow.

## Consistent measurement framework enables teams to move at a faster pace

Built on a proven foundation for signal analysis, the operation of each X-Series instrument is identical—user interface, programming code, test results. You'll achieve measurement integrity across your organization and drive more productivity in less time.

## Broadest set of applications and software to address all your test needs

With a library of over 25 measurement applications, the ability to run software inside the open Windows® operating system, and a first-to-market track record in emerging standards, you'll be prepared to address the changing demands of technology in each new project.



*The flagship PXA enables you to measure the most demanding devices and push your designs to unprecedented performance levels. For example Noise Floor Extension (shown here) expands the PXA's dynamic range so you can measure low-level signals approaching the theoretical kTB noise floor.*

# Stay Current with a Future-Ready Instrument

X-Series signal analyzers are ready to evolve as technology changes. The PXA, MXA, EXA, and CXA allow you to move along the performance curve, today and tomorrow, without rewriting your test code. You can also optimize price and performance for whichever technologies you're pursuing and whichever X-Series analyzer you choose to use. With upgradeable hardware and license-key upgrades for adding functionality or applications, and you can keep your test assets current and extend instrument longevity. You'll also enhance asset uptime through the robust hardware architecture and proven reliability.

## PXA: Drive your evolution

The evolutionary replacement for your current high-performance signal analyzer. PXA helps you sustain your past achievements, enhance your current designs and accelerate your future innovations.

## MXA: Accelerate in wireless

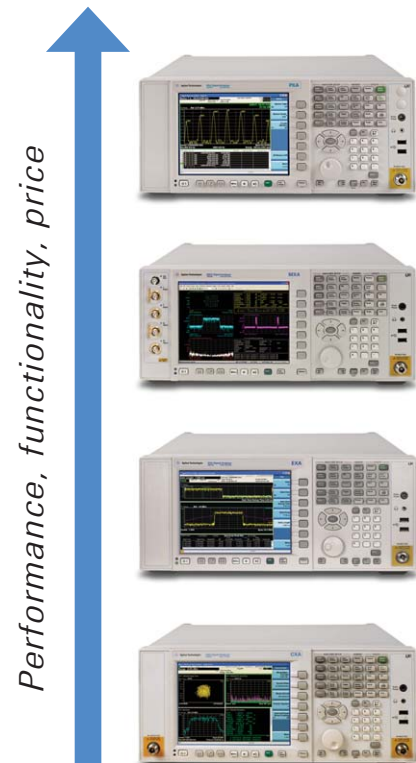
The accelerator as you develop new wireless devices and deliver them to manufacturing and the marketplace. The MXA has the flexibility to quickly adapt to your evolving test requirements.

## EXA: Balance the challenges

A fast, flexible way to cover diverse needs with a single tool. The EXA provides a solid mix of speed and performance, plus the versatility of X-Series measurement applications.

## CXA: Master the essentials

The low-cost tool for essential signal characterization. The CXA helps you build a solid foundation for cost-effective testing. It's also an excellent teaching tool for RF technology and signal analysis.



## Leverage a full range of price and performance

Optimize your investment and test margins at each lab bench or test station by choosing the X-Series analyzer that provides the best balance of cost and performance for your application, from cutting-edge aerospace/defense technology to teaching students in educational labs — and everything in between. Each model has a standard feature set and you can tailor functionality to meet your requirements by choosing from a variety of optional features.

## Evolve as technology changes

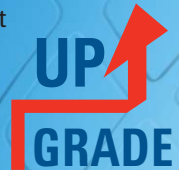
X-Series signal analyzers provide more than just upgradeability; they offer an architecture that enables you to evolve at the pace of commercial PC technology. With upgradeable CPU, memory, disk drives, and I/O ports, you can keep your test assets current and extend instrument longevity. Adding functionality or applications is a simple license-key upgrade.



*An upgradeable CPU module (left) lets you easily achieve faster processing and interface speeds and a removable hard disk drive (right) simplifies instrument sharing and ensures data security.*

## You Can Upgrade!

Most instrument options and all applications can be added after your initial purchase.



With few exceptions, you can upgrade an X-Series analyzer with no downtime, via license key.

# X-Series

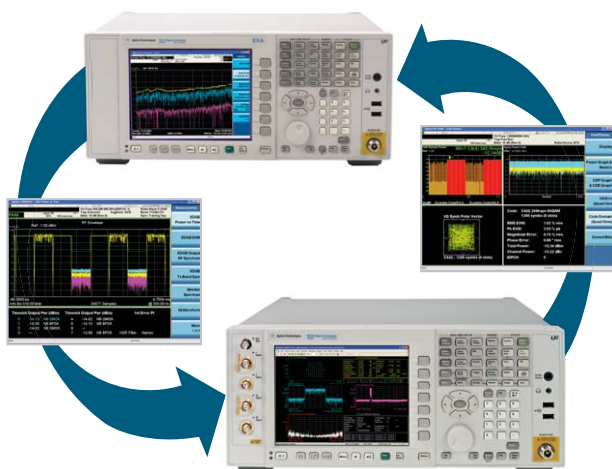
Performance, functionality, price

Key specifications <sup>1</sup>	PXA	MXA	EXA	CXA
Frequency and amplitude accuracy				
Frequency, minimum	3 Hz	20 Hz	9 kHz	9 kHz
Frequency, maximum	50 GHz	26.5 GHz	26.5 GHz	7.5 GHz
Absolute amplitude accuracy (95% confidence)	±0.19 dB	±0.23 dB	±0.27 dB	±0.5 dB
Displayed average noise level (DANL)				
1 GHz, preamp on	-172 dBm	-166 dBm	-163 dBm	-163 dBm
4 GHz, preamp on	-172 dBm	-166 dBm	-162 dBm	-159 dBm
Phase noise at 1 GHz				
10 kHz offset	-132 dBc/Hz	-106 dBc/Hz	-102 dBc/Hz	-102 dBc/Hz
1 MHz offset	-146 dBc/Hz	-137 dBc/Hz	-135 dBc/Hz	-121 dBc/Hz
Third order intercept (TOI)				
1 GHz	+22 dBm	+20 dBm	+15 dBm	+17 dBm
4 GHz	+22 dBm	+18 dBm	+17 dBm	+15 dBm
Standard features				
Noise floor extension (NFE)	●			
Precision frequency reference	●			
High-performance CPU	●	●		
2-GB capture memory	●			
25-MHz analysis bandwidth		●	●	
Mechanical attenuator	● Fine step	● Fine step	●	
Electronic attenuator				●
Optional features				
Refer to Configuration Guide	5990-3953EN	5989-4943EN	5989-6531EN	5990-4341EN

# Move Faster with a Consistent Measurement Framework

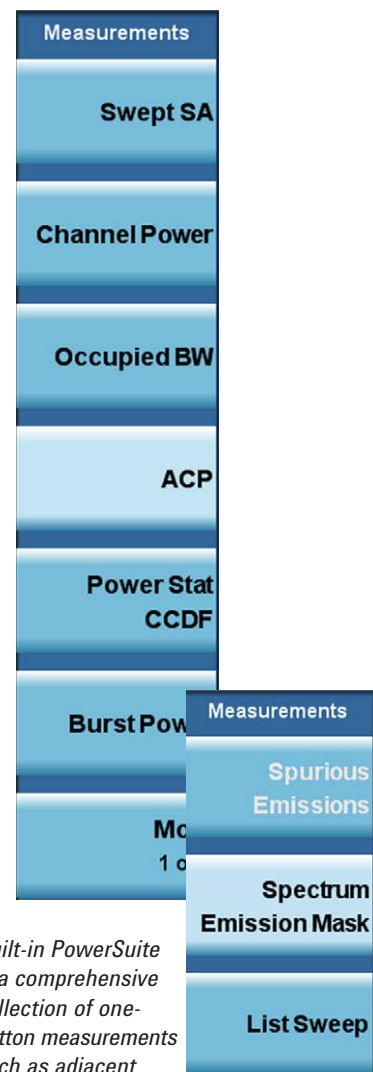
All X-Series analyzers are built on the same proven test methods, algorithms and applications, which means they are inherently 100-percent code-compatible. This creates a consistent measurement framework for signal analysis that ensures repeatable results and measurement integrity through all phases of product development. And with a common user interface, you can learn one X-Series analyzer and know them all. You'll boost efficiency and productivity so your teams can move at a faster pace.

- Ensure confidence via measurement integrity across the organization with consistent X-Series operation
- Leverage test system software from R&D to design verification to manufacturing with identical programming codes from PXA to CXA
- Transport applications across multiple X-Series analyzers, across the lab or around the globe



## Benefits of transportable licenses

- Maximize the flexibility of your test equipment by sharing measurement applications between PXA, MXA or EXA
- Save money and increase your return on test asset investments by purchasing fewer applications per analyzer
- Save time by transporting applications to the test bench nearest you, instead of physically moving the test equipment or DUT
- Use the same application at different X-Series performance levels in different time zones, departments, and test benches



*Built-in PowerSuite is a comprehensive collection of one-button measurements such as adjacent channel power, harmonics and occupied bandwidth. It provides consistent results across the X-Series and with legacy PSA and ESA signal analyzers.*



# Consider Other X-Series Products

Get the same great CXA and EXA—faster

Ready for off-the-shelf delivery and preloaded with popular features, the express configurations deliver the same specifications and functionality as Agilent's build-to-order instruments. They also provide the same level of upgradeability, ensuring that they—and you—can evolve as your test needs change. Best of all, the included features are value priced.

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

## MXE EMI receiver



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

The MXE is a CISPR 16-1-1 2010 compliant receiver that offers the flexibility, accuracy and repeatability to test products up to 26.5 GHz. Use it to verify EMC performance and diagnose the cause of non-compliant emissions with extensive built-in diagnostic tools.

## Learn More

View product-specific brochures, technical overviews, data sheets, configuration guides, application notes, videos and more:

X-Series signal analyzers:

[www.agilent.com/find/X-Series](http://www.agilent.com/find/X-Series)

X-Series measurement applications:

[www.agilent.com/find/X-Series\\_apps](http://www.agilent.com/find/X-Series_apps)



Agilent Advantage Services is committed to your success throughout your equipment's lifetime. We share measurement and service expertise to help you create the products that change our world. To keep you competitive, we continually invest in tools and processes that speed up calibration and repair, reduce your cost of ownership, and move us ahead of your development curve.

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

[www.agilent.com/quality](http://www.agilent.com/quality)



Microsoft and Windows are U.S. registered trademarks of Microsoft Corporation.

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

### Americas

Canada	(877) 894 4414
Brazil	(11) 4197 3500
Mexico	01800 5064 800
United States	(800) 829 4444

### Asia Pacific

Australia	1 800 629 485
China	800 810 0189
Hong Kong	800 938 693
India	1 800 112 929
Japan	0120 (421) 345
Korea	080 769 0800
Malaysia	1 800 888 848
Singapore	1 800 375 8100
Taiwan	0800 047 866
Other AP Countries	(65) 375 8100

### Europe & Middle East

Belgium	32 (0) 2 404 93 40
Denmark	45 70 13 15 15
Finland	358 (0) 10 855 2100
France	0825 010 700*
	*0.125 €/minute
Germany	49 (0) 7031 464 6333
Ireland	1890 924 204
Israel	972-3-9288-504/544
Italy	39 02 92 60 8484
Netherlands	31 (0) 20 547 2111
Spain	34 (91) 631 3300
Sweden	0200-88 22 55
United Kingdom	44 (0) 118 9276201

For other unlisted Countries:

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

Revised: October 14, 2010

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

© Agilent Technologies, Inc. 2011  
Printed in USA, May 10, 2011  
5990-7998EN

Stay ready, stay in sync  
and arrive ahead—  
with the Agilent X-Series



**Agilent Technologies**