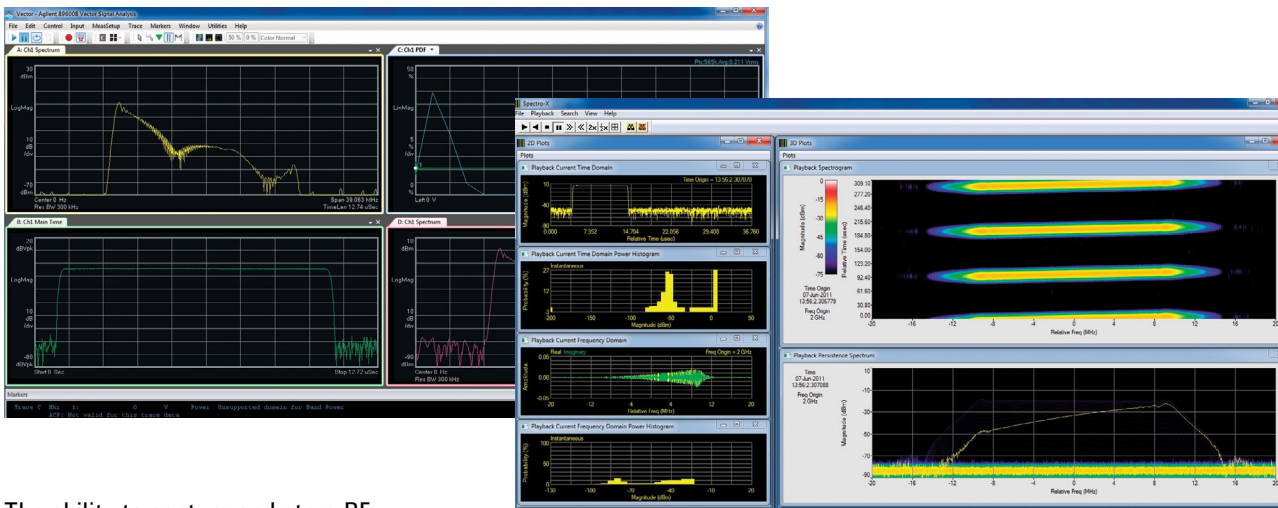


# RF Spectrum Recording and Analysis

Agilent Technologies and  
X-COM Systems

Troubleshoot elusive or intermittent events with advanced RF spectrum recording and analysis.



The ability to capture and store RF signals and then perform detailed spectrum analysis is critical for RF and microwave engineers who design electronic warfare, surveillance, radar or other wireless equipment and systems. Now, by combining RF recording solutions with advanced spectrum analysis software you can troubleshoot your RF signals in detail over an extended period of time.

Current generation signal analyzers create a high fidelity window through which the RF spectrum is viewed. They can digitize, in real time, input signals into digital I & Q samples and, through mathematical transforms, present spectrum views that capture a detailed time slice across a full 40 MHz of bandwidth.

However, due to processing loads and available memory, the time slice is relatively short, on the order of a few seconds or less. In addition, once the spectrum analyzer begins the transform and display processing, it cannot capture another time slice until it has completed the task. This means that long duration RF signal streams cannot be fully recorded and as a result critical but elusive or intermittent events may be missed.

The X-COM Systems IQC-2110 RF Capture & Storage system allows RF signals to be recorded over an extended period of time. Depending on the capture bandwidth, the recording can be many hours in length. The system is plug compat-

ible with the Agilent PXA, MXA or EXA signal analyzers that utilize the digital bus output option. Together they offer a high fidelity system to

- *RF capture of long duration signals, up to many hours*
- *Advanced spectrum analysis software*
- *Interfaces to Agilent PXA, EXA and MXA signal analyzers*
- *Interfaces to Agilent 89600B signal analysis software*
- *Troubleshoot elusive or intermittent spectrum events*



**Agilent Technologies**

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continuously record RF spectrum centered at any frequency tuneable by the signal analyzer with 40 MHz of bandwidth.

The time period over which the RF capture bandwidth is stored is only dependent on the size of the disk array connected to the IQC-2110. Using a 12 TB disk array, 60 hours of capture time is possible at a 10 MHz bandwidth and over 15 hours at the full 40 MHz capture bandwidth.

Once the RF signals are captured they can be investigated with X-COM's spectrum analysis software, Spectro-X. Spectro-X provides multi-domain visualization of the recorded spectrum, which can be played, re-played, paused or stopped. The software can present multiple views of the spectrum including two dimensional displays of amplitude vs. time and frequency vs. time; three dimensional displays of power frequency and time or magnitude, frequency and persistence; phase, real & imaginary and histograms.

With Spectro-X you can search for, clip and store the occurrences of modulated carriers, standardized wireless waveforms or user-defined, arbitrary waveforms of interest. Once found, the specific spectrum

occurrences can be exported to the Agilent 89600B vector signal analysis software for further quantification, up to the level of digital demodulation and error vector measurements.

When used with the X-COM Systems IQC-2110 RF Capture and Storage system and the Spectro-X spectrum analysis software, Agilent signal analyzers give you all the tools you need to troubleshoot elusive or intermittent events in devices and systems that operate in complex, and sometimes hostile communications environments.

## System Components

### Agilent Technologies

<b>N9030A</b>	PXA signal analyzer or
<b>N9020A</b>	MXA signal analyzer, or
<b>N9010A</b>	EXA signal analyzer

### X-COM Systems

<b>IQC-2110</b>	RF capture and storage
<b>Spectro-X</b>	Signal analysis toolkit
<b>DP-HDD-2TB</b>	2TB data pack (4, 8, 12, 16 TBytes also available)

To learn how this solution can address your specific needs please contact Agilent's solutions partner, X-COM

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



### Agilent Solutions Partner Program

Agilent and its Solutions Partners work together to help customers meet their unique challenges, in design, manufacturing, installation or support. To learn more about the program, our partners and solutions go to [www.agilent.com/find/solutionspartner](http://www.agilent.com/find/solutionspartner)

**X-COM Systems** designs RF signal recording, analysis and playback solutions for system design, signal simulation and test applications. [www.xcomsystems.com](http://www.xcomsystems.com)

For information on Agilent Technologies' products, applications and services, go to [www.agilent.com](http://www.agilent.com)

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