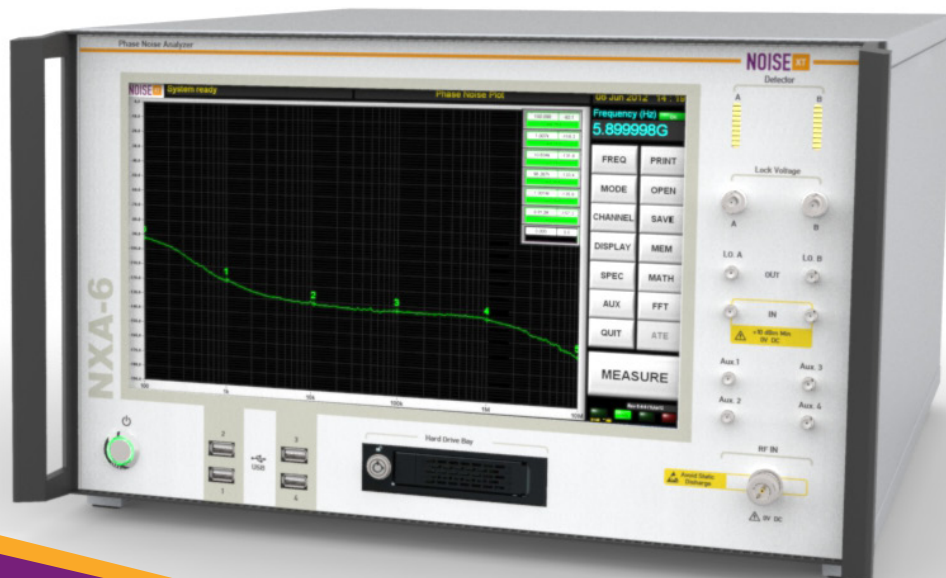
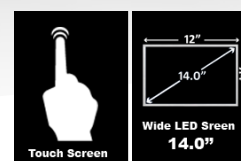


# NOISE XT



## NXA-6

### 6 GHz Phase Noise Analyzer



The NXA is a fully automated phase noise analyzer. Its dual channel architecture allows the system to use a cross-correlation process to cancel its internal noise floor. This reliable technique provides access to the unique noise floor performance of the DCNTS.

A completely new user interface based on a large 14 inch touchscreen simplifies the operation, focusing the user on the measurement result itself and not on the measurement technique. Experts can always access advanced settings if needed.

Quick and easy phase noise plots can be obtained without any training so the NXA-6 can be operated by any manufacturing technician. This is the only instrument that combines great ease of use and state of the art performance.

With its internal frequency references, measurements are made extremely easy without the hassle of connecting cables and tweaking settings. However, when ultimate performance is required, the capability to use external reference sources like crystal oscillators, saws or slcos pushes the instrument noise floor down to the thermal noise.

The NXA-6 can measure absolute phase noise, residual phase noise and offers options for amplitude noise as well as measuring phase and amplitude noise on pulsed signals. These unique features combined with extremely close to the carrier analysis makes it the most complete analyzer of the market.

## Functional Specifications

<b>Input Frequency:</b>	2 MHz to 6 GHz using external References 5 MHz to 6 GHz using internal References 2 channels baseband inputs DC to 40 MHz
<b>Offset analysis:</b>	0.01 Hz to 40 MHz
<b>Accuracy:</b>	+/- 2dB 1 kHz to 1 MHz offset, +/- 3 dB above
<b>Operating mode:</b>	Manual or Remote scripting control (ATE over Ethernet)
<b>Input RF Connector:</b>	Precision N-Type
<b>Tuning Voltage Connectors:</b>	2 BNC-F for external references DC-FM control
<b>External Ref. Sources:</b>	SMA-F

PRELIMINARY SHORTFORM

# NXA-6 Phase Noise Analyzer

## Typical Phase Noise Floor

Low Frequency Band:

Input Frequency: 2 MHz to 1.6 GHz

LO Input Level:

+5 to +17 dBm

Nominal Conditions:

Kphi=0.600 V/rd or +20dBm Input Power at 100 MHz

Typ. dBc/Hz vs Offset (Hz)	1	10	100	1k	10k	100k	1M	10M
External Source Noise Floor	-150	-160	-170	-178	-187	-188	-193	-195
10 MHz Internal Noise Floor		-125	-158	-168	-180	-185	-190	-
100 MHz Internal Noise Floor		-105	-138	-153	-166	-172	-185	-187
1 GHz Internal Noise Floor		-85	-118	-135	-149	-155	-168	-170

Improved noise floor can be obtained by increasing the number of cross-correlations

High Frequency Band:

Input Frequency: 1.6 GHz to 6 GHz

LO Input Level:

+7 to +15 dBm

RF Input Power: 0 to +15 dBm

Nominal Conditions:

Kphi=0.300 V/rd or +15dBm Input Power at 2 GHz

Typ. dBc/Hz vs Offset (Hz)	1	10	100	1K	10K	100K	1M	10M
External Source Noise Floor	-125	-135	-150	-160	-175	-183	-188	-188
2 GHz Internal Noise Floor		-79	-112	-129	-143	-149	-162	-164
6 GHz Internal Noise Floor		-69	-102	-119	-133	-139	-152	-154

Improved noise floor can be obtained by increasing the number of cross-correlations

Averaging configuration used in specifications:

Offset (Hz)	1	10	100	1K	10K	100K	1M	10M
# of cross correlations	10	10	100	100	1k	1k	10k	10k

Please add +5dB for specifications

## Signal Processing

<b>Measurement Units:</b>	Noise in dBc/Hz, Spurs in dBc.
<b>Cross-correlation:</b>	1 to 100,000 depending on offsets
<b>Display functions:</b>	Smooth, spec-line, frequency & level markers, spurs list
<b>Data Computation:</b>	A - B, N * A, A : N, A + N*B, A + NdB
<b>Integrated power:</b>	in dBc, rad rms, rad <sup>2</sup> , deg rms, deg <sup>2</sup> , Hz rms, Hz <sup>2</sup>
<b>Jitter:</b>	Secrms ,Secpp ,Ulpp
<b>Spectrum:</b>	Variable FFT windows, spurious detection algorithms
<b>Real RBW:</b>	3mHz to 146kHz for spurious detection and speed tuning

## General Specifications

<b>Weight:</b>	35 Kgs
<b>Size:</b>	6U, 19" rack mountable (260 x 570 x 445mm)
<b>Operating Voltage:</b>	100-240 VAC 50/60Hz 4A max

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