narda®
Test Solutions
an L3 Communications Company

Dive deep into interference analysis

IDA 2

Interference Direction Analyzer

IDA 2: Counteracting interference couldn't be simpler

IDA 2, the new Interference and Direction Analyzer from Narda, has everything that you would expect from the ultimate hand held direction finder. True receiver qualities coupled with direct, on site signal analysis make it the universal instrument for reliable and fast signal detection, analysis, characterization and localization.

Efficient: I/Q Analyzer with a large bandwidth

Evaluation of recorded I/Q data provides facilities unavailable with conventional spectrum analysis. The IDA 2 can display various views of the measured signal, on the spot. You can switch at will between the time domain and the frequency domain. The trigger functions and digital persistence display make it possible to reliably detect and analyze sporadic interferers, too.

Portable: Precision at its most compact

IDA 2 brings a new degree of ease to interference analysis, with its weight of less than three kilograms, simple and intuitive operation and robust, compact design. It is packed full of technical advances: extremely fast sweep rate of 12 GHz/s, high resolution spectrogram with close to real time resolution of 1 µs, and a powerful persistence display.

Clever: The smartDF® concept

Developed by Narda, SmartDF® is a special method for systematically localizing suspect signals, interferers and RF leaks. GPS and an active directional antenna with built in electronic compass enable fast, effective location and display on a map view, even under difficult conditions or with complex signals such as broadband communications or pulsed and sporadic signals.

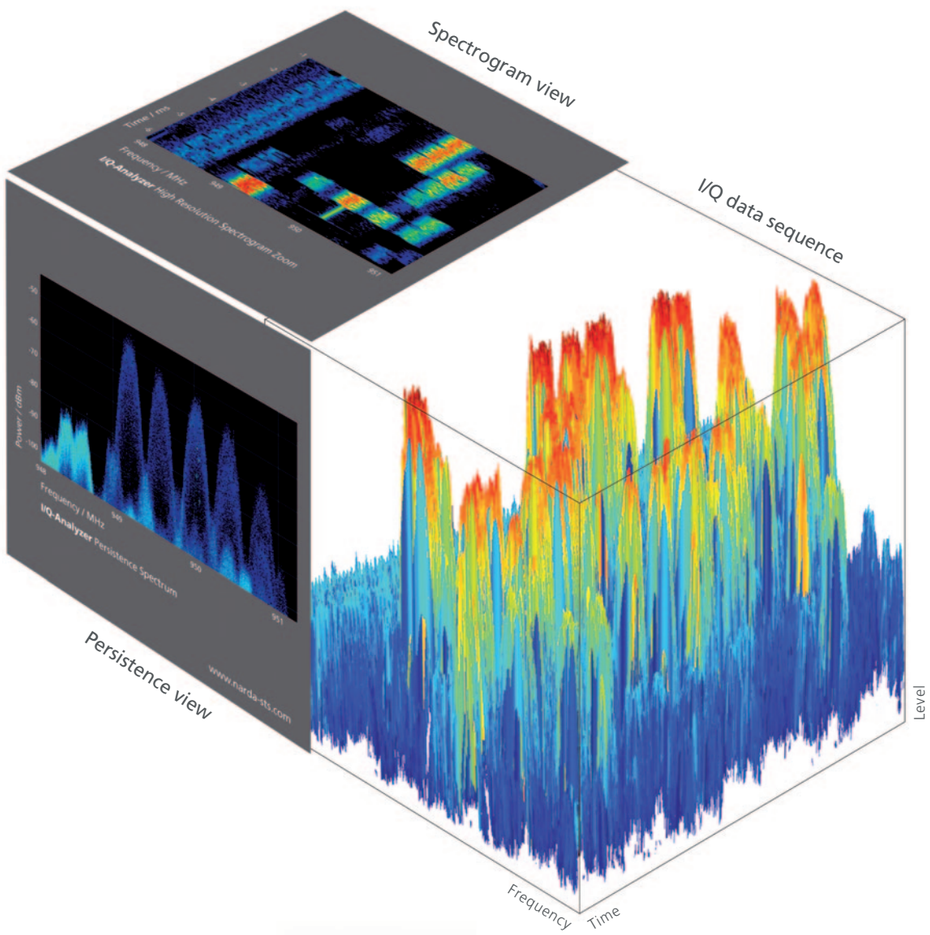
Advantageous: The main plus factors

- First persistence monitor in the hand held class
- Super light: < 3 kg
- Impressively sensitive: NF 7 dB
- I/Q Analyzer: Real time on site analysis
  - 1 µs spectrogram resolution
  - Persistence display
- Extremely fast: 12 GHz/s
- 20/32 MHz bandwidth
- True receiver qualities
- Time resolution 32 ns, recording time up to 24 hours
- Reliable tracing of underlying interferers and frequency hopping signals
- Robust, compact, high irradiation immunity

Convincing: New standards in handling and precision

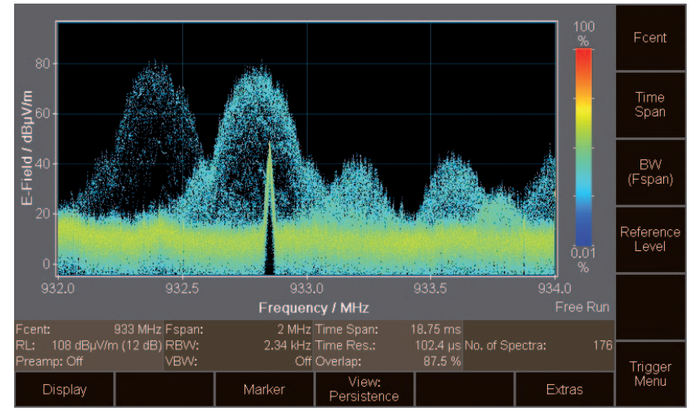
RF impairments or interference is often difficult to detect, particularly if it is sporadic or hidden beneath the regular signals. The IDA 2 now has I/Q analysis functions to allow you to reliably locate such signals too. The instrument records in real time and saves up to 250,000 I/Q data pairs without compression, i.e. without loss of data. Based on this data, the IDA 2 generates high resolution spectrograms, persistence spectrums, and time domain displays without the need for external computation. RF impairments and interference can thus be detected and analyzed on the spot.

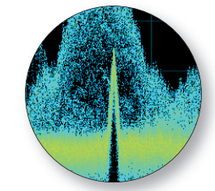
Obvious: Register interference at a glance
The recorded I/Q data sequence can be examined and analyzed using different views with the I/Q Analyzer. The frequency and time resolution can both be altered subsequently.



The color values used in the spectrogram mirror the signal level.

Persistence Spectrum

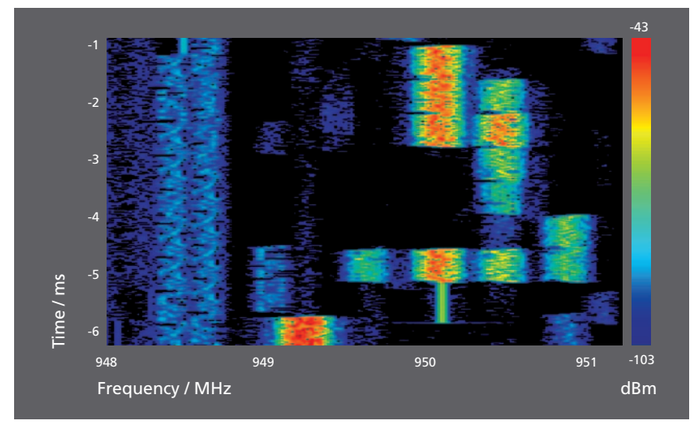


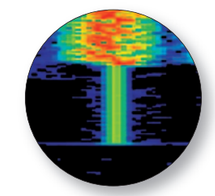


Interference signal

The Persistence view uses different colors to represent the number of times an amplitude value occurs at a given frequency. Sporadic interferers can be clearly seen in this way, and interference that is hidden by the useful signal in other views can also be clearly distinguished in the color display.

High Resolution Spectrogram Zoom

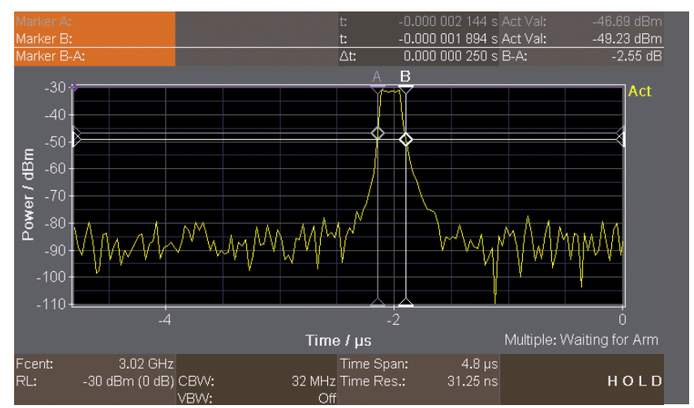




Interference signal

The spectrogram gives you an overview of the entire captured signal sequence. The color values mirror the signal levels. Up to 8000 spectrums are compressed into one image for this. Even the shortest impulses in the microsecond range are reliably and gaplessly recorded and displayed, and each individual spectrum can be examined in detail and evaluated using the marker functions.

Magnitude



The Magnitude view shows the measured channel power versus time response. Signals can be analyzed and classified from the pulse and interval times thanks to the high resolution in the time domain.

The combination of spectrograms, persistence spectrums (with afterglow effect) and time responses allows you to detect, identify and locate signals that would remain undetected in a conventional spectrum display.

Complete: Always just the way you want

IDA 2 is always supplied as a set, complete and ready to use, customizable for the applications you want. It's good to know that all the components come from the same source, so they recognize each other and interact optimally. They are quickly and easily combined for use right on site. The Scope and I/Q Recorder modes as well as the mapping function are optional.

Exemplary: IDA 2 with Ethernet connection sets new standards
Based on I/Q data, the IDA 2 provides a depth of analysis that has hitherto only been available from very large laboratory instruments – and all this in a battery operated hand held device weighing less than 3 kilograms. The IDA 2 makes it possible to visualize, on the spot, weak or sporadic impairments and interferers that may be hidden under strong or variable frequency useful signals.

Active antenna handle

Ergonomic: More than just a handle
Complementing the low weight of the IDA 2: the extremely light, ergonomically shaped handle. It contains a switchable preamplifier, the electronic compass, and position sensors. It is designed to hold the desired antenna and automatically recognizes the antenna and its polarization. To further save weight, the power supply is drawn from the basic instrument via the control cable.

Pin point acurate: Antennas for every frequency range
IDA 2 covers a wide frequency range. Four interchangeable antennas, with sensitivities and directional characteristics optimized for their particular frequency ranges, provide excellent direction finding accuracy. All Narda antennas are characterized by their low weight and robust construction. You can also use antennas from other manufacturers by connecting the universal antenna adapter.

The IDA 2 Set:
- IDA 2 basic unit with carry strap
- Directional antenna 1, 20 MHz - 250 MHz
- Directional antenna 2, 200 MHz - 500 MHz
- Directional antenna 3, 400 MHz - 6 GHz
- Active antenna handle
- Headphones, 3.5 mm jack
- Arm support
- USB 2.0 cable, A/B mini, 1.8 m
- AC power supply 12 VDC, 100 V-240 VAC
- MicroSD card reader, configuration software, operating manual
- All safely and securely packed ready to hand in a hard shell case

Directional antenna 1, 20 MHz - 250 MHz

Directional antenna 2, 200 MHz - 500 MHz

Directional antenna 3, 400 MHz - 6 GHz

Optional:
H field frame antenna
9 kHz - 30 MHz

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