



Rev 1.5  
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# HighEnd Outdoor Spectrum Analyzer SPECTRAN® HF-XFR

Worldwide first "military-standard" Spectrum Analyzer!

## Highlights

- ◆ Highest performing fully rugged laptop and world's most sensitive Handheld Analyzer in one device
- ◆ Ready to go, LCS-Analyzer-Software already installed
- ◆ Ballistic Armor™ Protection System to meet or exceed real world and military standards (MIL-STD-810F)
- ◆ Built tough for tough environments



Made in Germany

# Technical details

## Notebook (based on Dell Latitude E6400XFR)

- ◆ Processor: Intel Core 2 Duo P9600(2,66GHz,1.066MHz,6MB)  
nVidia Quadro NVS 160M, 256MB with express-card and  
Fingerprint Reader
- ◆ 14.1" WXGA (1280 x 800) wide-aspect transmissive display with  
DirectVue™ technology for outdoor readability
- ◆ Memory: 4096MB (2x2048) 800MHz DDR2 Dual Channel
- ◆ Primary Storage: 64GB Solid State Drive
- ◆ Battery: 6-cell primary battery
- ◆ Wireless: Intel WiFi Link 5100 (802.11 a/b/g/n 1X2) 1/2 MiniCard  
with Centrino label
- ◆ 10/100/1000 Gigabit Ethernet-network card
- ◆ Keypad: Internal English Qwertz with background light
- ◆ Operating System: Windows XP Pro SP3 with Windows Vista  
Business SP1 Medias
- ◆ Ports: IEEE - 1394, docking connector, USB 2.0 (x4), VGA,  
Display Port, RJ-11 (optional), RJ-45, eSATA, USB PowerShare,  
headphone/speaker out, mic (all protected behind sealed doors)
- ◆ Multi Media: 2 speakers
- ◆ Independently Tested to MIL-STD-810F for:  
4ft Transit Drop, Aggravated Rain, Blowing Dust, Vibration,  
Functional Shock, Humidity, Salt Fog, Altitude, Explosive  
Atmosphere, Temperature Shock, and Temperature Extremes  
(Operating: -20°F to 145°F (-29°C to 63°C); Non-Operating: -58°F  
to 160°F (-50°C to 71°C))
- ◆ IP-65 Certified Protection – Dust-Tight and Protected against  
Pressurized Water Ingress
- ◆ UL1604 Certified for Hazardous Locations (Class 1, Division 2,  
Zones A, B, C, D)
- ◆ Weight: 8.5 lbs/3.9 kg
- ◆ Width: 13.9"/353.06 mm
- ◆ Depth: 10.1-11.5"/257.6-293.1 mm
- ◆ Height: 2.2"/55.88 mm

## Spectrum Analyzer (based on Spectran HF-60100 V4)

- ◆ Frequency range: 1MHz - 9,4GHz\*
- ◆ 14Bit Dual-ADC
- ◆ DDC Hardware-Filter
- ◆ 150 MIPS DSP (CPU)
- ◆ AVG Noise Level (DANL): -170dBm(1Hz)\*
- ◆ AbsMax Level: +20dBm
- ◆ AbsMax Level: +40dBm (Option)
- ◆ Filter bandwidth (RBW) Min: 200Hz
- ◆ Filter bandwidth (RBW) Max: 50MHz
- ◆ EMC-Filter (RBW): 9kHz, 120kHz, 5MHz; 20MHz; 40MHz
- ◆ Lowest possible SampleTime : 1mS
- ◆ Accuracy (typical) : +/- 1dB
- ◆ Vector power measurement (I/Q) and True RMS
- ◆ AM/FM/PM Demodulation
- ◆ Extended full ICNIRP range
- ◆ Standards-conformant exposure limits (ICNIRP, BGV B11,  
BlmSchV etc.)
- ◆ Fast ZERO-SPAN sweep
- ◆ HOLD Mode
- ◆ Time-Slot-Analyzer

## Application examples SPECTRAN® HF-XFR Spectrum Analyzer

### Analysis and measurement of:

- ◆ GSM900
- ◆ DECT
- ◆ GSM1800
- ◆ UMTS
- ◆ WLAN
- ◆ Microwave ovens
- ◆ WiFi
- ◆ WiMax
- ◆ Radar
- ◆ 5GHz WLan
- ◆ PAR-Radar
- ◆ UWB (FB1-FB12)

# Description



## Real World Rugged

Built for tough environments, the SPECTRAN HF-XFR rises to the challenges you face every workday. The HF-XFR is built to be ready out of the box to withstand pounding rain, blowing dust and dirt, extreme temperatures, accidental drops and more.

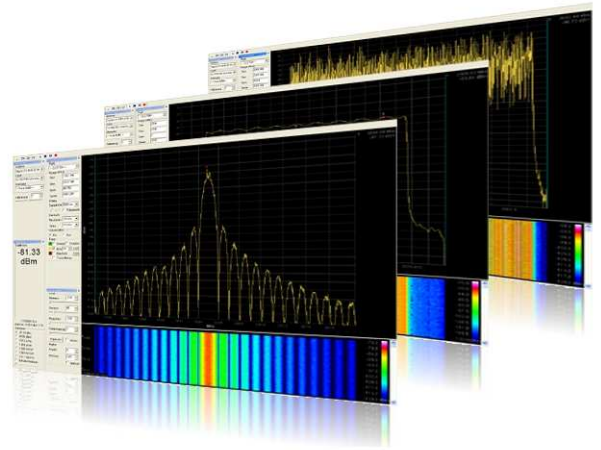
Key rugged features include:

- ◆ The exclusive Ballistic Armor Protection System featuring PR481™ chassis material provides twice the impact strength versus traditional magnesium alloy.
- ◆ The SPECTRAN HF-XFR with Ballistic Armor Protection enables excellent protection and is the first in its class to meet a 4ft drop specification.
- ◆ With PrimoSeal™ technology we provide the highest combined Ingress protection rating (IP65), for enhanced protection against blowing dust and liquid.

## Integrated Spectrum Analyzer (based on the Spectran HF-60100 V4)

The PROFESSIONAL PC analysis software demonstrates SPECTRAN's vast capabilities.

- ◆ HIGH-RESOLUTION!, freely scalable, coloured spectrum display with falloff function.
- ◆ Display of CHANNEL IDENTIFIERS! for exact identification of providers. Channel numbers etc. freely programmable and extensible.
- ◆ Up to 10 markers with frequency and level display.
- ◆ Intuitive zoom control with very comfortable frequency adjustment.
- ◆ High quality "waterfall"-display with timecode. Colour scale freely configurable. Size freely scalable. Optional display of data directly on top of the graph by pointing with your mouse and CTRL-clicking!
- ◆ High-resolution Slot Analyser with 3D display!
- ◆ SUPER-LOGGER: all data can be written to disk continuously. File format is readable by spreadsheet applications, for creating custom reports, etc.
- ◆ Freely positionable windows for comfortable entry of frequency, RBW, sweep time etc. etc.
- ◆ Various pre-defined profiles for DECT, UMTS, GSM, WLAN etc. etc. for instant recall. Incl. optimal parameters and extensive channel information! Freely programmable and extensible!
- ◆ Independant main display with SIMULTANEOUS display of dBm, dBμV, V/m, W/m<sup>2</sup> and A/m, each with AUTORANGE. Freely transposable and scalable.
- ◆ Exposure limit display with various profiles (ICNIRP, Salzburg precautionary values, ECOLOG, etc. etc.). Freely programmable with a virtually infinite amount of display options.
- ◆ Functionality to update firmwares.
- ◆ etc. etc. etc.



Screenshots from the SPECTRAN HF-XFR

## Inspired Design

SPECTRAN HF-XFR features securely sealed port covers and a wide range of key peripherals to work wherever you need it to.

- ◆ Work in direct sunlight with the large 14.1" wide-aspect LCD featuring DirectVue™ Technology LCD.
- ◆ Vehicle docking allows flexibility for police and field technicians to mount systems directly in their vehicles where they work.
- ◆ Secure, simple, locking doors with PrimoSeal™ for exceptional protection while working in wet or dusty conditions.



## Uncompromising Performance

The high performing, fully rugged laptop is the first in its class to ship with both Intel® Core™2 Duo Processor with vPro™ technology. The SPECTRAN HF-XFR has brains as well as brawn.

- ◆ QuadCool™ Thermal Management System enables the XFR to meet the MIL-STD for temperature extremes and supports world-class performance, while running the latest Intel® Core™2 Duo Processors.
- ◆ Extended field use batteries equipped with ExpressCharge enables primary battery re-charge times up to 2 times faster than Panasonic CF-30.

## Included in delivery

- ◆ SPECTRAN HF-XFR Outdoor Spectrum Analyzer
- ◆ HyperLOG 60100 EMC LogPer Antenna (black) with Pistolgrip
- ◆ OmniLOG 90200 miniature Broadbandantenna
- ◆ 1m SMA-cable
- ◆ SMA-Tool
- ◆ Battery
- ◆ Battery charger
- ◆ Detailed english manual



The SPECTRAN HF-XFR was built for tough environments