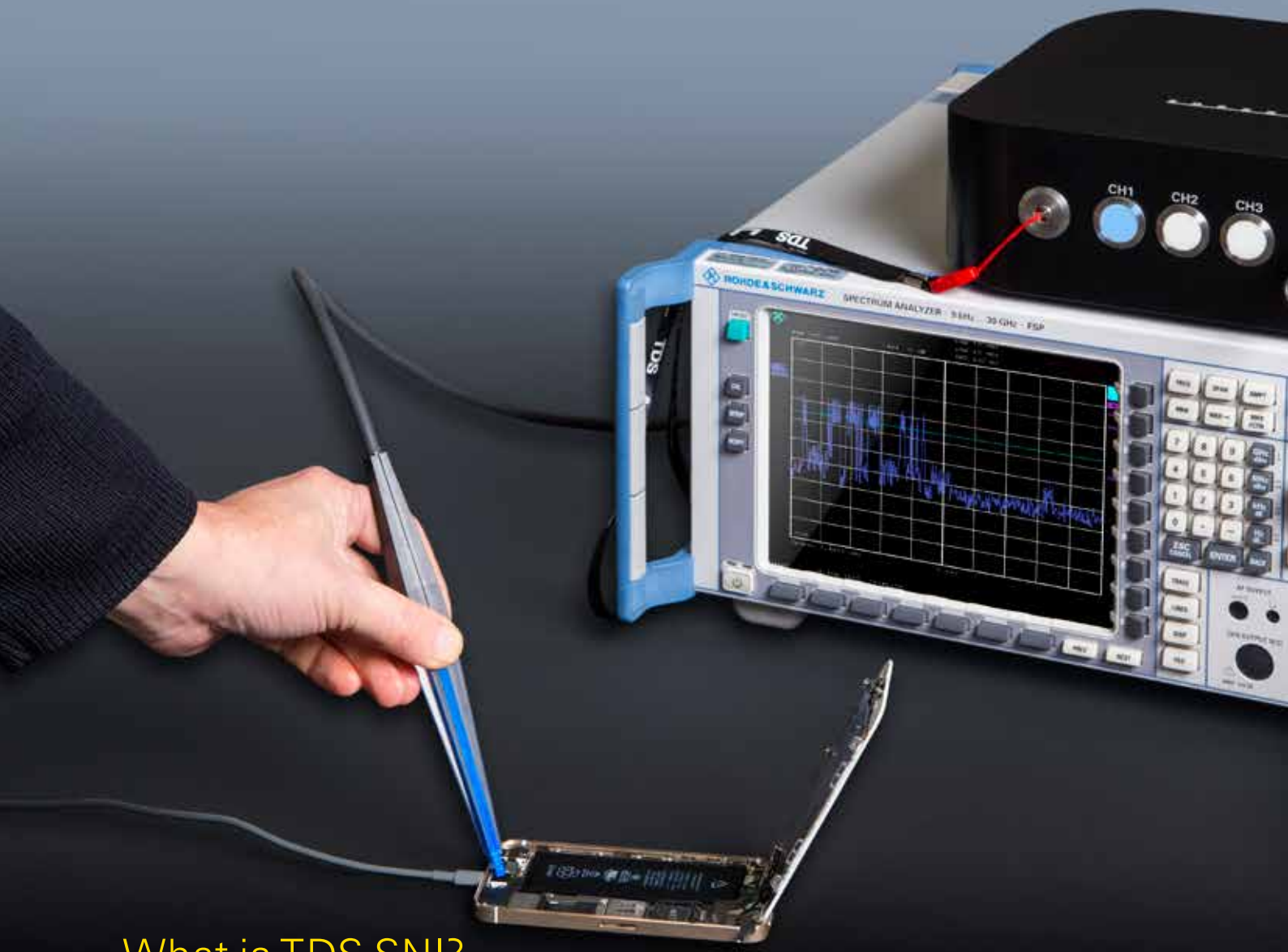
TDS SNI

EMC and Signal Integrity Test without Field Disturbance



What is TDS SNI?

The Time Domain Sensor SNIffer (TDS SNI) probes are miniaturized, active, fully isolated magnetic and electric near-field probes that perform over a very broad frequency range, from 10 MHz – 10 GHz. SPEAG's TDS technology operates in both the frequency and time domains, where it delivers unparalleled sensitivity and spatial resolution for precise amplitude and phase measurements. TDS provides tremendous advantages over traditional conductive EMC probes in all near-field applications where EM transparency and noise and interference immunity are essential. All TDS systems are calibrated in SPEAG's ISO17025-certified calibration laboratory.

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TDS SNI Next generation EMC near field sensors in your hand

Applications

AVIONICS

High sensitivity EM probes for commercial avionics testing. EMC/EMI/ESD evaluation tool for the RTCA/DO-160, 59-411, MIL-STD 461 or other international regulations covering electrical or electronic equipment installed on aircraft and in other EM-sensitive applications.

SPACE

High reliability, high performance, low power electronic devices for space applications, according to, e.g., the ECSS-E-ST-20C, Chapter 6 – Electromagnetic Compatibility (EMC) directive, can be effectively tested with TDS SNI.

MEDICAL

Wide bandwidth, high sensitivity EMC/EMI/ESD testing of electronic devices for use in hospital environments or in medical applications, according to, e.g., IEC 60601 or EN 55011.

AUTOMOTIVE

High sensitivity, wide bandwidth EMC/EMI/ESD measurements of electronic automotive components to fulfill, e.g., the CISPR 25 or ISO 11452 EMC standards.

UWB

High sensitivity EMC/EMI/ESD measurement of ultra wide band (UWB) data transmission signals with very low power spectrum density – including ground- and wall-probing radar signals, sensors, precision location within buildings – to be harmonized according to the R&TTE Directive of ETSI.

TELECOMMUNICATIONS

Signal integrity testing and validation of telecommunications equipment, including WLAN (802.11a/b/g/n), Bluetooth (802.15.1), ZigBee (802.15.4), UWB (802.15.3), WiMAX (802.16), SRD, DECT, RFID, GSM, WCDMA (HSDPA/HSUPA), WHDI analog or digital equipment, and line interfaces such as PSTN, xDSL, or xRI.

HARSH AND SENSITIVE EM ENVIRONMENTS

The TDS SNI can be provided with long probe connections for long-haul links for field measurements or, e.g., in harsh environments, when the instrument cannot be positioned near the probe. With the innovative TDS SNI technology, long-haul measurements have the same sensitivity and bandwidth as short-haul measurements.

Features	Benefits
Full complex signal information	Frequency, amplitude, phase, time-domain waveform
Fully isolated sensor-head	Signal measurement without probe interference
Miniature size	Fine spatial resolution allows precise measurement in high-field gradients for both electric and magnetic fields
High sensitivity	Detection of very small interference signals, e.g., on GPS receiver channels
Large dynamic range	Measures weak EMC/EMI to strong MRI signals
Ultra Wide Bandwidth	10 MHz –10 GHz
Standard 50 Ohm RF interface	Spectrum analyzers, network analyzers, or digital oscilloscopes
Active sensor design	Unparalleled sensitivity: 60 dB better than existing passive optical sensors
Fully characterized/ calibrated sensor head and remote unit	Precise measurements in demanding environments
Certification	ISO17025
LASER classification	Class 1 (IEC60825-1 2007, US FDA CDRH registration)

System Specifications

E1TDS SNI	
Dynamic range	120 dB (at 1 Hz RBW), 0.15 mV/m – 150 V/m
Frequency range (ISO17025 calibrated range)	10 MHz –10 GHz (50 MHz – 6 GHz)
H/E suppression	–20 dB
Remote unit	Stand-alone SPEAG or PXI module

H1TDS SNI	
Dynamic range	130 dB (at 1 Hz RBW), 0.3 µA/m – 1 A/m at 2 GHz
Frequency range (ISO17025 calibrated range)	10 MHz – 10 GHz (50 MHz – 6 GHz)
E/H suppression at 2 GHz	–20 dB plane wave equivalent
Remote unit	Stand-alone SPEAG or PXI module

For further information and technical specifications, visit **www.speag.swiss/products/tds/**

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