

Spirent DLS 5204 xDSL Four Output Custom Noise Generator

DLS 5204

Part Number DLS 5204

Real world noise such as cross-talk, RFI, impulse and white noise has a dramatic impact on the performance of modems and DSLAMs. Standards bodies such as DSL Forum, ANSI, ETSI and ITU-T have captured many of the worst case scenarios and specified testing requirements for noise impairments. In response to Service Provider demands for these requirements, Spirent has developed the DLS 5204 xDSL four output custom noise generator. The DLS 5204 provides all the impairments specified by the leading specifications and is able to apply them via Spirent noise injection systems in either differential or common modes.

Features

Designed for precision testing with the ability to generate impairments with a crest factor of 5 or greater

Simple to use Windows™-based GUI

Ethernet remote control

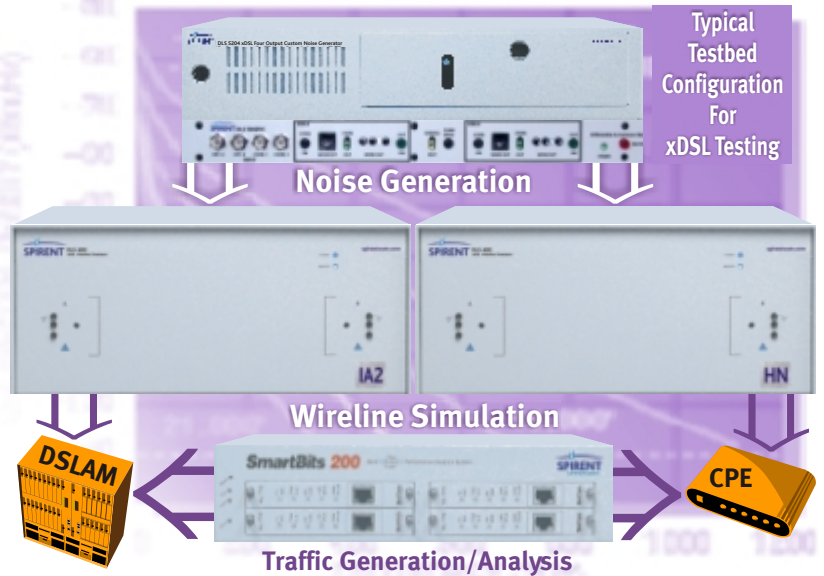
4 Outputs

Uses the DLS 5402DC Differential & Common Mode Noise Injection System

Uses DLS 5Bxx pre-packaged noise files

Flexibility

DLS products are the worldwide standard for physical layer equipment used in conformance, performance and interoperability testing



Benefits

As stated in ANSI, ETSI & ITU-T xDSL specifications, testing with a noise crest factor of less than 5 does not represent real world conditions hence, your modem & DSLAM test results may be inaccurate. Using the DLS 5204 as part of Spirent's test solution ensures that tested modems and DSLAMs work where it counts in the field.

Allows for full control of the DLS 5204 noise generation environment including access to user developed or DLS 5Bxx noise files.

Can easily be integrated into an automated test environment allowing for control of the DLS 5204 in a customer's own scripting environment or by using Spirent Communications' ScriptCenter™, and DLS 1200 ScriptCentre Library.

Provides the efficiency of having four independent xDSL noise generators in a single system. This means that noise impairments, whether crosstalk, white noise, RFI, tones or impulse noise can be generated as required by the test specification.

Provides the perfect interface for the application of xDSL noise impairments from the DLS 5204, whether in differential or common mode to two points on a real or simulated wireline. Other injection systems are also available from Spirent for specific applications. (e.g. VDSL)

Provides pre-packaged individual or combination impairments.

The DLS 5204 can easily be configured for laboratory and production testing of ISDN, HDSL, SHDSL, SDSL, ADSL, ADSL2, ADSL+, VDSL as well as DSL Forum's TR-048 interoperability specification.

With an overwhelming market presence, leveraged off of Spirent DLS' active participation at world standard's meetings including ETSI, ANSI, ITU-T, Home Networking and DSL Forum, Spirent DLS equipment provides both accurate and repeatable results within and between companies both locally and worldwide.

Sales Information Call

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Spirent AE/DLS Products

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DLS 5204 Specification

- The DLS 5204 is a PC based 4 channel Arbitrary Waveform Generator with deep (32 MB per channel) memory. Each generator uses a 14-bit DAC for excellent dynamic range. Designed for the testing of xDSL modems and DSLAMs, the DLS 5204 generates impairments such as Crosstalk Noise, White Noise, up to 30 AM RFI tones and Crosstalk Noise (PSD and time domain). In addition, the DLS 5204 has hardware capability to generate many impulses including C1 and C2 impulses from ANSI T1.413 and the Cook Pulse. These impairments may be applied to simulated wireline via the DLS 5402DC Differential and Common Mode xDSL Noise Injector. Other Noise injection systems are also available for specific applications. (e.g. VDSL and Home Networking)
- Crest Factor: ■ Greater than 5 in ETSI compliant mode using memory of 0.5 MegaWords or less. By using a longer memory, truly Gaussian distribution and crest factor greater than 5 can also be generated.
- Execution Memory: ■ 32 MB (16 Mega Samples) for each channel
- Maximum Output: ■ +/- 6.5 V (12.8 V p-p) unloaded, +/- 5V (10 V p-p) into 50 ohms
- Maximum RMS Output: ■ + 13 dBm into 50 ohms with a crest factor of 5

DLS 5204 & DLS 5402DC Combined Specification*

- Output Impedance: ■ 4 Kohm (balanced) for differential mode noise and 1 Kohm (balanced) for common mode noise as determined by the DLS 5402DC
- Channel Noise Floor: ■ Less than 140 dBm/Hz, when used with Spirent noise injection systems, (DLS 54XX Series) and Spirent wireline simulators.
- Spurious Response: ■ Any spurious noise spike is less than -143.5 dBm/Hz, in a 4 KHz channel
- Frequency Range: ■ 4 KHz to 2.208 MHz for differential mode noise and 100 KHz to 1.9 MHz for common mode noise (as limited by the DLS 5402DC, refer to DLS 5204 specification)
- Channel Dynamic Range: ■ 136 dB (one single sine wave)
- Effective Dynamic Range: ■ Greater than 50 dB from peak to lowest power in the impairment profile within the dynamic range of the instrument for any impairment with crest factor of 5
- Accuracy of PSD Profile: ■ Less than 0.5 dB mean absolute error (MAE) for all profiles
- Accuracy of PSD Level: ■ The DLS 5204 is calibrated to be within 0.5 dB mean error (ME) for all profiles, as measured using an HP 4395A Spectrum Analyzer.

Mechanical

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- DLS 5204 (Rack mountable): ■ 3.50" (89mm) x 19.00" (482mm) x 17.7" (450mm) [H x W x D] - 26 lbs (12 kg)
- DLS 5402DC (Rack mountable): ■ 1.75" (44mm) x 19.00" (482mm) x 14.75" (375mm) [H x W x D] - 5 lbs (2.3 kg)

* The DLS 5204 is also suitable for use in VDSL testing applications. For VDSL testing information and combined noise and wireline specifications, refer to the DLS 8000 series product information.

Sales Information Call

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Environmental

- Operating Temperature: 10°C to 40°C (50°F to 104°F)
- Relative Humidity: 10 to 95% RH non- condensing
- Electrical Power: 90 to 260 VAC, 50 or 60 Hz

Spirent Companion Products

- DLS 400, DLS 410 and DLS 8000 series wireline simulators
- SMB 200/2000 Traffic Generation & Analysis
- ScriptCenter and DLS 1200 ScriptCenter™ Library

Spirent DLS Options

- IEEE 488: ACC-GPPCINT
- DLS 5Bxx Noise Libraries
- DLS 54xx Noise injectors

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