

Interference Emulator

Spirent Communications announces key feature enhancements to the TAS 8250 Cable Network & Interference Emulator. TAS 8250 emulates critical hybrid fiber/coax (HFC) cable network impairments in a controllable laboratory environment. The new version of the TAS 8250 provides advanced impairment generation capabilities to model complex HFC network characteristics and evaluate the performance of DOCSIS 1.1 cable modems and cable modem termination systems (CMTS). TAS 8250 also provides dynamic frequency allocation to model the frequency plans for different cable systems, allowing a variety of cable communications devices — including cable modems, CMTS, set-top boxes, and cable telephony products — to be tested on the same unit.

TAS 8250 has added key channelized HFC network impairments, including bandlimited noise, QAM-16, QPSK, AM, and CW interferers. The bandlimited noise impairment accurately models ingress — classified as noise within a narrow band of frequencies — which is common on the HFC network and can destroy data or voice communications. The QAM-16 and QPSK interferers model interference from other data traffic on the cable network while the AM and CW interferers model spurious signals present on the cable network. Any communications device that operates over the HFC network must be tested in the presence of these impairments to ensure acceptable performance.

TAS 8250 can also now be configured to emulate two different cable system frequency plans — the 5 - 42/50 - 860 MHz system commonly found in the U.S. and the 5 - 65/80 - 860 MHz system commonly found in Europe. By testing products destined for either type of cable system with a single instrument, users can easily correlate test data between development groups and facilities, thus reducing development costs.

TAS 8250 also works with the TAS FLEX5/Cable RF Channel Emulator and SmartBits network performance analyzer to provide even more capabilities for testing cable network communications products. Combined with TASKIT/Cable, these instruments form a complete, automated test system for cable modems and CMTS, which greatly simplifies performance characterization and DOCSIS certification testing.

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