

Product Overview

ACE9000 Advanced Channel Emulator

The ACE9000 Advanced Channel Emulator is the most advanced non-terrestrial RF channel emulation solution to date. The emulated impairments include delay, signal Doppler, attenuation, phase offset, AWGN, frequency hopping, payload, and multipath fading. The instrument can house up to four 600 MHz instantaneous bandwidth channels. Impairment emulation can be set to fixed values in Static Mode, or continuously changed in real time in Dynamic Mode without any phase discontinuities.

KEY SPECIFICATIONS AND FEATURES:

- 600 MHz of instantaneous bandwidth per channel
- Timing synchronization up to 16 channels
- Link emulation including:
 - Phase continuous delay, Doppler, and attenuation changes
 - AWGN and Eb/No
 - 12 tap (path) multipath fading with Rayleigh, Rician, and CW. Angle of Arrival (AOA), k-factor, and correlation controls
 - RF frequency-agile up/down converters
- Payload emulation including:
 - IMUX/OMUX amplitude and group delay distortion
 - Amplifier compression (AM/AM and AM/PM)
 - Phase noise
- Static and dynamic link emulation
- Ephemeris data generation using SATGEN
- Remote instrument control through ACE Client application

SATGEN II Satellite Data Generation Software

SATGEN II is a satellite orbit modeling software that generates link parameter files formatted specifically for the ACE9000 Advanced Channel Emulator. The program calculates Doppler, delay, and path loss for up to eight entities per channel, and up to four channels. Entities include a fixed location earth transponder, a moving land vehicle or ship, aircraft, and specified satellite orbits.

More Resources

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