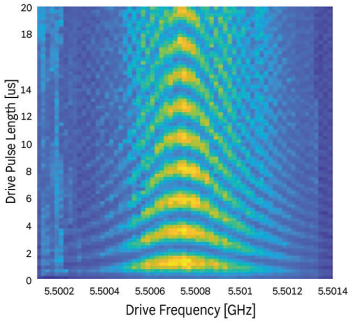
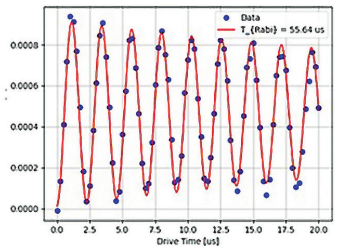
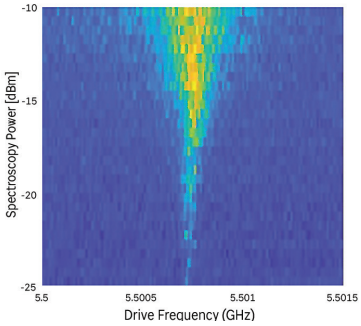
Applications

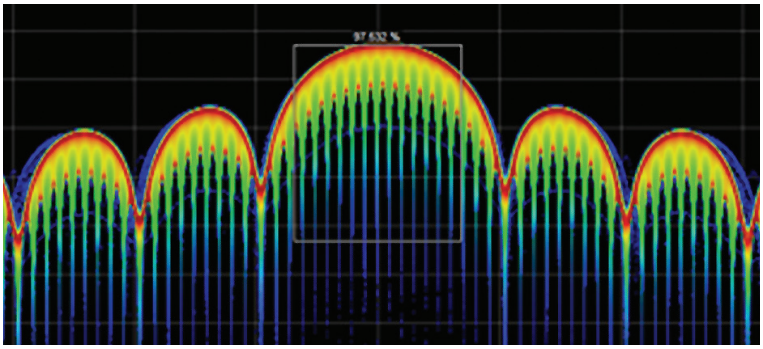
Quantum Physics - Proteus plays a part in many quantum physics experiments. Its unique AWT architecture allows for the generation and analysis of pulses in real time, with fast measurement response and feedback provided with its FPGA-based decision-block architecture. Applications include NMR/EPR, device characterization, computing, communications, and sensing. With direct to RF/u W capability, it eliminates the need for complicated up/down converting units and requires no IQ alignments. It can be scaled to thousands of coherent channels, and its advanced signal processing engine has the capability of analyzing up to 10 frequency multiplexed readout lines.



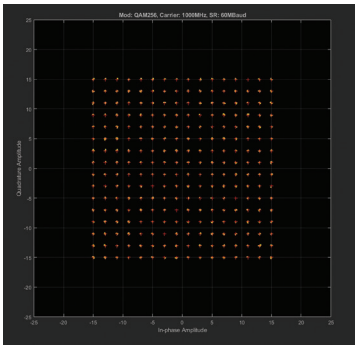


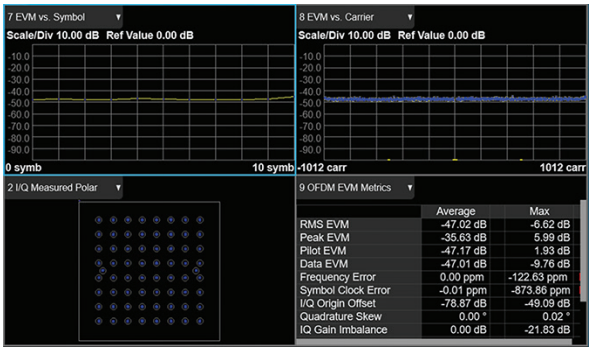


Radar and Electronic Warfare - The Proteus is an ideal tool for real-time waveform generation and analysis up to and including X-band. The transceiver allows for real-time closed loop analysis for fast feedback systems such as radar target generation and adaptive electronic warfare systems. The scalable, multi-channel, coherent, deterministic waveform playout capability allows for the generation of multiple active emitters, while its 2GHz of bandwidth allows for the easy creation of background electromagnetic emissions.



Next Generation Wireless Communications Systems – When designing, developing, and manufacturing new wireless systems – based on technologies such as multipule-input and multiple-output (MIMO) antenna matrices and orthogonal frequency-division multiplexing (OFDM) – we built the Proteus on a scalable, wide bandwidth (2GHz) architecture, with high-performance RF DAC/ADC (EVM better than -50dBc) that is compatible with MATLAB. This allows you to create, model, then transfer waveforms or sequences of waveforms to theProteus for real world testing.





Generate any Imaginable Scenario - Proteus has an innovative hardware-based, task-oriented programming system for complex waveform sequences. You can generate and download waveforms simultaneously and stream data directly to the FPGA (bypassing the memory) at speeds of up to 4GS/s. A full and easy-to-program digital subsystem of up and down converters along with finite impulse response filters and FFT and multiple real-time averaging blocks make the Proteus AWT one of the most comprehensive measurement solutions available.