

# X3D Ray Tracing Module

ADD-ON MODULE TO SIGNALPRO OFFERING GPU ACCELERATED RAY TRACING FOR COMPLEX SERVICE AREA ENVIRONMENTS

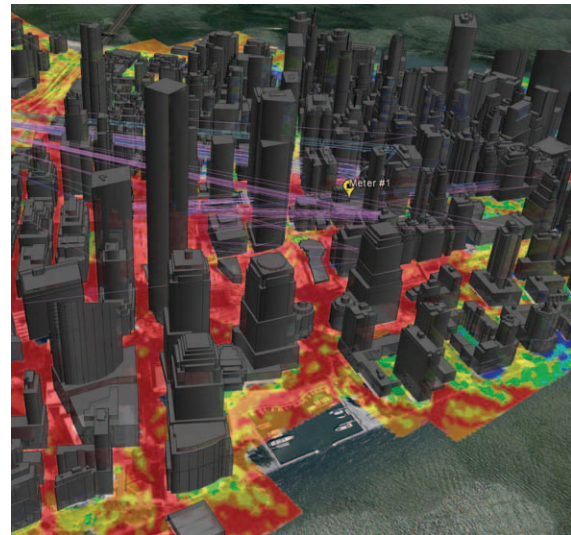
The Remcom® X3D Module provides a highly accurate, site specific wireless propagation model with GPU accelerated ray tracing. Calculations explicitly take into account 3D antenna patterns and detailed building, floor plan and terrain features present in the propagation environment, including their material properties. The module's use of GPU cards to achieve incredibly fast run times, paired with its exact path algorithms achieve both accuracy and speed for a wide range of applications.

## Applications

- Indoor and outdoor-to-indoor coverage
- Communication with moving vehicles and mobile devices
- Base station coverage in urban environments
- Small-cell backhaul
- Ad-hoc and temporary networks

## Comprehensive Network Design

The Remcom X3D Ray Tracing Module can be used in conjunction with any SignalPro module, providing the most powerful network planning tool available.



## Channel Modeling

The X3D model predicts propagation in complex environments where energy undergoes multiple reflections, diffractions and transmissions. The complex channel characteristics in urban, indoor, indoor-outdoor and rugged terrain scenarios are captured with a full 3D ray trace followed by an exact path calculation.

- Received power, path loss, path gain
- Three-dimensional propagation paths
- Electric field magnitude and phase
- Power delay profile
- Complex impulse response
- Delay Spread