



## FEATURES & BENEFITS

- Monostatic / Bistatic / Multistatic radar operation
- Exceptional clutter rejection
- High resolution (1.4 GHz bandwidth with resolution <math><6''</math>)
- Short range operation (a few inches to hundreds of feet) with minimal blind range
- Detailed API with sample C and MATLAB code
- Highest possible RF bandwidth at the lowest possible center frequency
- Fast update rates (up to 20 kHz)
- Raw radar scan data can be motion filtered and processed for detections / Doppler shift
- Ideal for propagation analysis and development of RF channel models

## APPLICATIONS

- Motion / presence detection
- Synthetic Aperture Radar (SAR) imaging
- Vital sign detection and monitoring
- Tagless people tracking
- Collision and obstacle avoidance
- Drone altimetry
- Security fences
- Proximity sensing

## KIT ELEMENTS

- 2 KinetIQ 100 dev boards in protective enclosures
- 4 Broadspec UWB antennas
- 2 Rechargeable USB batteries with chargers
- Monostatic Radar Module (MRM) software
- Channel Analysis Tool (CAT) software

## Ultra wideband radar and channel analysis for research and education

The Humatics KinetIQ 100 development board can be used as a standalone monostatic radar or as a system of bi- or multistatic radars. Using an Ultra Wideband (UWB) pulsed signaling technique, it is a cost-effective replacement for more expensive radar sensors in many detection and monitoring applications, both indoors and outdoors, in all weather and lighting conditions. It adds a unique capability to augment existing security technologies and provide real-time alerts, camera cueing, and interdiction functionality.

Using the Monostatic Radar Module (MRM) software, the KinetIQ 100 development board becomes a very flexible radar front end which repeatedly provides the RF impulse response of a volume defined by its antenna pattern. Raw waveform scans can be displayed in real-time, as well as detection lists consisting of the distance and reflection amplitude of targets within its scan range. Humatics also sample C and sample MATLAB code so that researchers and educators can write their own applications. The published API also supports user creation of custom interfaces.

The Channel Analysis Tool (CAT) software allows Radar Development Kit users to view and log the waveforms as they propagate through an RF channel. These captured waveforms can be used as a propagation tool to develop a channel model or as a bistatic or multistatic radar.