

# DTC-305 XpressSim

## RF Channel Simulator

### Features

- Software option to add real-time channel impairments to the output of a DekTec modulator card
- Simulates reflections from buildings and mountains (echo paths), reception with a moving receiver (Doppler effect) and uncorrelated noise
- Up to 20 echo paths with programmable delay and attenuation. The number of paths that can be simulated depends on CPU and modulation type
- Four echo path types:
  - Constant phase
  - Constant Doppler
  - Rayleigh fading with Gaussian spectrum
  - Rayleigh fading with Jakes spectrum
- Addition of Gaussian-distributed noise with adjustable SNR
- Ricean channel can be simulated by using multiple Doppler paths

### Applications

- Evaluating the performance of receivers and receiver ICs
- Development of channel-estimation algorithms
- Demonstration of the capabilities of receiver chips
- Settop-box repair



### Key Attributes

Parameter	Value
Number of echo paths	0 .. 20*
Echo delay	0 .. 28μs
Modulation Standards	DTMB, DVB-T, DVB-T2, ISDB-T

\* Maximum number of echo paths depends on CPU speed

### PC Requirements

Platform	Windows XP/2k3/Vista, 512MB
Processor	Core2 @ 2MHz*

\* Or equivalent AMD processor

### Supported Adapters

Type	Description
DTA-115	Multi-standard VHF/UHF modulator
DTA-116	Multi-standard 36MHz IF modulator
DTA-117	Multi-standard 44MHz IF modulator

### Ordering Information

Type	Description
DTC-305-CM	XpressSim real-time RF channel simulator