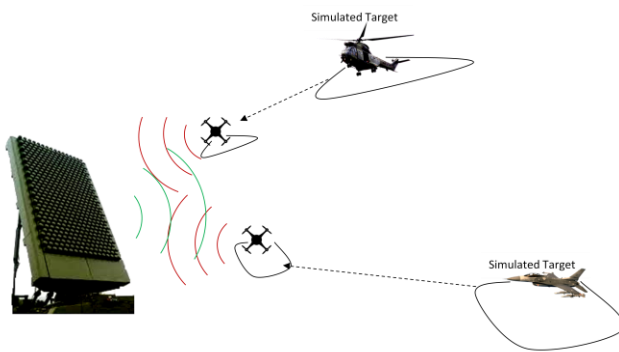


Drone mounted DRFM based Radar Target Simulator (DDRTS) from UTS allows economical testing of RADAR based systems in radiation mode. The product facilitates generation of 3D tracks of targets.

Drone carries a portable Digital Radio Frequency Memory (DRFM) based Radar target simulator (RTS). Simulator employs digital memory of the wave forms to generate delay and Doppler shifts corresponding to the targets defined by the user. Provision is made to define the targets flying beyond visual range. Drone along with portable RTS flies near RADAR (between 100mts to 1000mts) on projected trajectory of the target defined by the user. Multiple drones to be used to simulate multi target scenario.

Conceptual Diagram:



The above diagram illustrates two targets flying in the blind range electronically generating delay and Doppler corresponding to simulated target echo. The GUI of the product facilitates radar user to draw 3D trajectory of target.

Drone moves in pre defined 3D trajectory such that Radar receives test signals from selected directions (Azimuth and Elevation). The system consists of following segments:

- Ground control station
- DDRTS systems (1 to 8)
 - Drone platform
 - DRFM based RTS payload

UTS developed DDRTS for Single Target mode as well as Multi Target mode with variation in their features and performance.

RTS Specifications:

- ✓ Frequency range – 100 MHz to 6 GHz*
- ✓ Supported Radar waveform bandwidth – 50MHz
- ✓ No of Targets simulated:
 - 1 (Single Target mode)
 - 8 (Multi target mode, all in same direction)
- ✓ Range Simulation :
 - Single target mode – 1km to 1000km
 - Multi target mode – 1km to 150 km
- ✓ Range Resolution : 5 meters
- ✓ Trajectory for the simulated target
- ✓ RCS type (single point, multi point models)
- ✓ RCS Fluctuation type (different swerling models)
- ✓ Range and Doppler (Fixed value or as per trajectory)
- ✓ On board jammer (Enable/Disable)
- ✓ Power supply – 12V (inbuilt in Drone)

Drone Specifications:

- ✓ Platform type – Quadcopter/ Hexacopter
- ✓ Command Link – 2.4 GHz
- ✓ Range –up to 1000metres
- ✓ Endurance – 20 mins with 1kg payload
- ✓ Operating Temperature – 0 – 50 °C
- ✓ Max wind speed – 30kmph.

Ordering Information:

P/N: UTS-DDRTS-XY-v1.1

Contact us with your specifications for obtaining quote specific to your requirements

Where, X – Frequency band
Y – Target mode