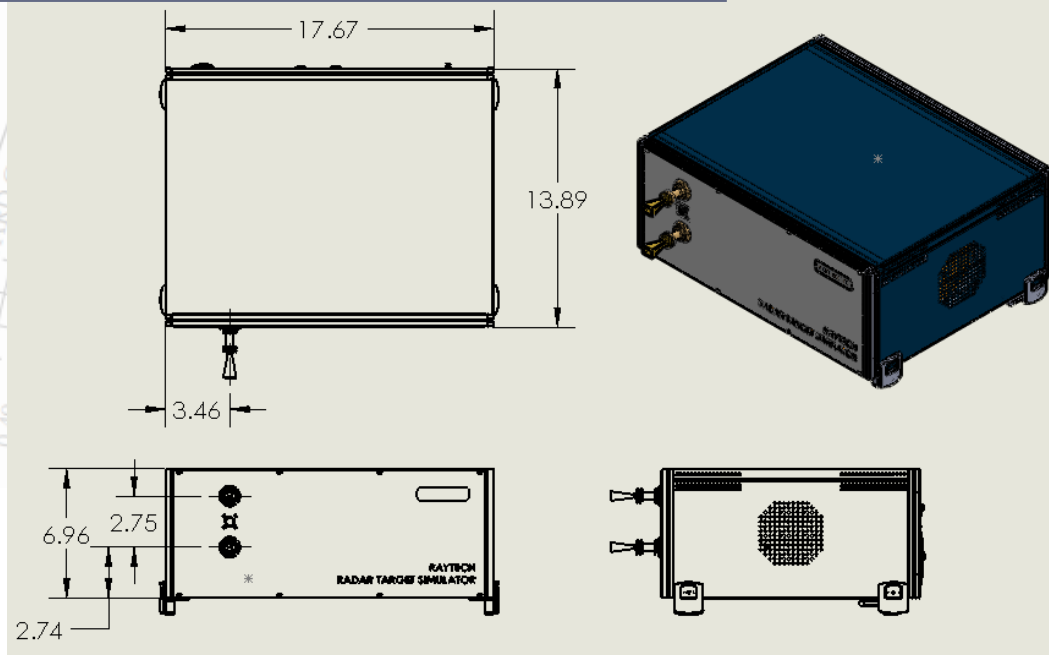
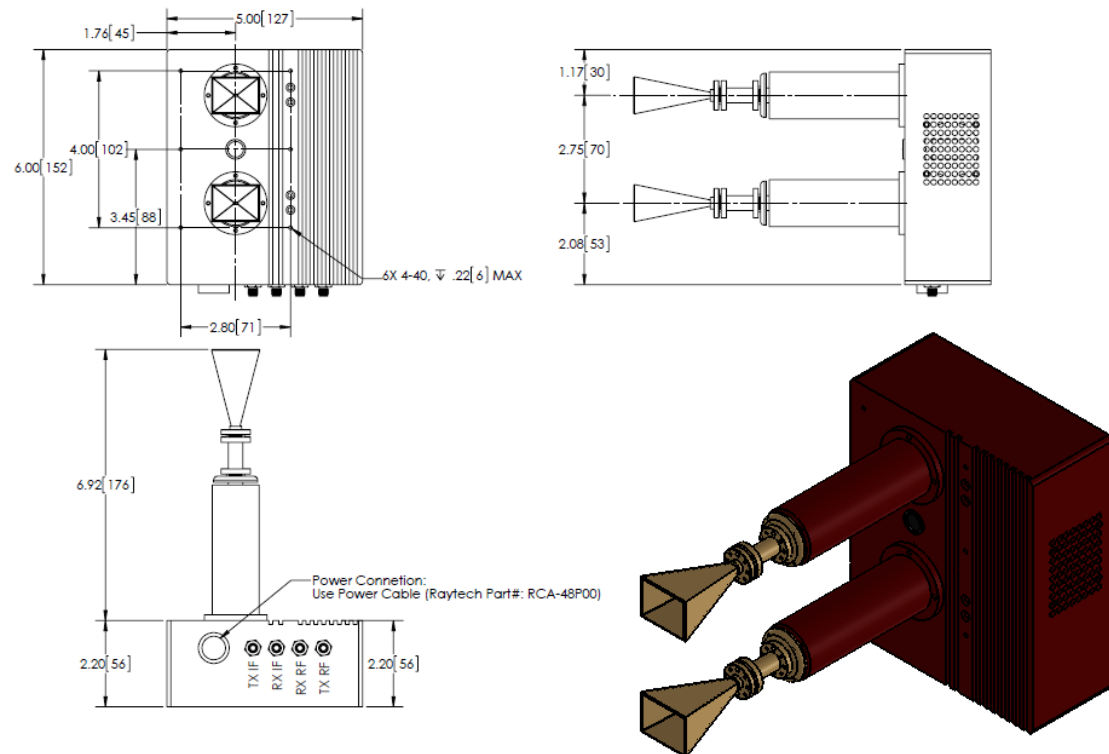


**Single Unit Outline Drawing (inches)**



**RF TXRX Head Outline Drawing (inches)**



**RAYTECH, INC.**  
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Note: Raytech Inc. reserves the right to change the information presented without notice.

**RAYTECHX RAYTECH, INC**  
**Millimeter-wave, Innovation**



**COUPLER TRANSITION COMBINER ISOLATOR CUSTOM**

**ANTENNA FILTER COAX-ADAPTER SYSTEM ASSEMBLY**

**RAYTECH, INC. IS SPECIALIZED IN DESIGNING, MANUFACTURING  
 AND TESTING ON HIGH PERFORMANCE & CUSTOMIZED  
 MILLIMETER-WAVE PRODUCT FROM 10 -170 GHz**

# Automotive Radar Target Simulator

## 76 GHz to 81 GHz

## AXRT Series

### Product Description

Raytech's AXRT series **Automotive Radar Target Simulator** (ARTS) is designed to cover 76 – 81 GHz, providing realistic moving targets at fixed or continuous distances with a target speed variation from –360 km/h to +360 km/h range. Raytech's AXRT series employs analog delay lines to enhance 5 GHz instantaneous bandwidth covering 4 - 300 m target distances in 256 steps. Furthermore, the target distance step resolution for far- & short-range can be reconfigured upon the customer's request as shown in Table 1. Raytech employs an 8 bit (256 step) switch matrix to realize continuous target range as the standard model but the resolution can be increased up to 12 bits upon request.

Customer can measure the average power and occupied bandwidth through IF port (SMA) on the rear panel or Raytech can add signal analyzer in the same box upon request.

Raytech's AXRT series is the most cost effective but robust target simulator, specially developed for volume production line.



**AXRT-7702T2, 2 GHz Instantaneous Bandwidth with Fixed Target Distance**



**AXRT-8005C0, 5 GHz Instantaneous Bandwidth with continuous Target Distance**



**AXRT-X series provides separates RF head module from main enclosure for easy chamber installation**

Tabel 1 Target distance setup example

	Target Distance Range
Case 1 (Default)	4 – 299.8 m, 1.16 m step
Case 2	4–131.5 m, 0.5 m step
Case 3	4–1024 m, 2m step

SPECIFICATION		
MODEL	AXRT-XXYYZZWVS	
<b>RF Range</b>		
Frequency range	XX (Center Freq) = 77 for 76 - 78 GHz 79 for 76 - 81 GHz	
Instantaneous Bandwidth	YY = 02 for 2 GHz Bandwidth 05 for 5 GHz Bandwidth	
<b>Input Power</b>		
Max. input power (at RF flange)	0 dBm	
Min. input power (at RF flange)	-65 dBm	
Recommended input power (at RF flange)	-20 dBm	
<b>Target Distance Simulation</b>		
Configuration	Continuous Target	Fixed Target
Min. physical distance, RTS to DUT	1 m	
Min. simulated target distance	1 m (physical) + 3 m (simulated)	
Max. simulated target distance	299.8 m	
Distance simulation resolution	1.16 m	
Distance simulation accuracy	+ / - 0.3 m	
Ordering Information	ZZ = C0 for continuous target T2 for fixed 2 target T4 for fixed 4 target	
<b>Radar Cross Section Simulation (RCS) and Other RF Performance Specifications</b>		
RCS Adjustment Range	50 dB, 1 dB steps	
Spurious Emission	40 dBc	
Phase Noise	-90 dBc/Hz @10 kHz	
<b>Target Speed Simulation</b>		
Doppler simulation range	- 360 km/h to 360 km/h	
Doppler simulation resolution	0.1 km/h	
Doppler simulation accuracy	+ / - 0.05 km/h	
<b>Additional Features</b>		
Configuration: V = S for single enclosure X for separate TXRX Head	S = Company Reserve	
IF port (SMA) for frequency analysis		
(Optional) Built-in Occupied Bandwidth and Average Power Measurement, Ordering Information: W = S for add-in, = 0 for none		
Alignment laser		