COMREL Technologies

AMS18GAC ANTENNA MEASUREMENT CHAMBER

AMS18GAC Antenna Measurement chamber is a far field antenna measurement chamber designed to test varieties type of antennas. User will able to ensure the antenna design meets the specifications or simply to characterize it. AMS18GAC Antenna Measurement chamber will be able to measured typical parameters of antennas which such as gain, and radiation pattern . The applicable frequency range is from 700 MHz to 18Ghz applications. Other frequency ranges can also be accommodated with different chamber configurations or absorber treatment.

ANECHOIC CHAMBER

This Antenna chamber is fully anechoic chamber with external dimension 6m x 3m x3m (Height x Width x Length). Fully Anechoic chamber will be constructed by RF shielded panel. Our RF shielded enclosure is designed to achieve the performance of Magnetic Field for 60dB at 10kHz and 80dB at 100kHz .Electric Field for 100dB from 150kHz to 50MHz.and Plane Wave for 100dB from 50MHz to 1GHz. Microwave for 100dB at 18GHz.

Antenna Characterization

- **Radiation Pattern**

- **Gain**

- **Effective Radiated Power**

DATA ACQUISITION SYSTEM

We provide own solution for a hardware and software integration. AMS18G Antenna Measurement System (AMS) is designed to be compact, user-friendly system suitable to interface with various type of VNAs. It comes with a dual-axis rotating platform (elevation plane and azimuth plane). Antenna Measurement System(AMS) will be integrated with antenna plotting software (IAMS).
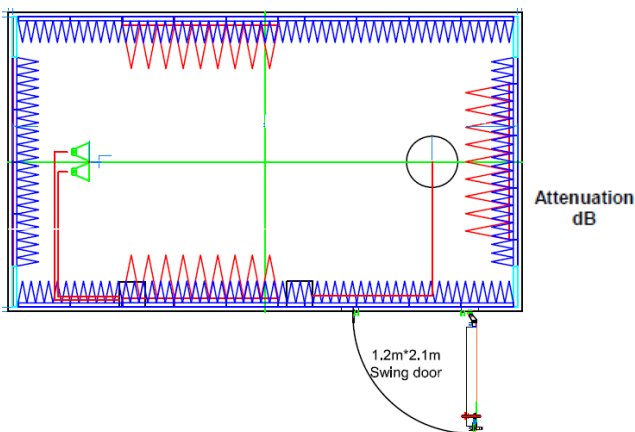
Comrel Technologies provide services and support for installation and setup for fully anechoic chamber, positioner, antenna, RF cabling, measurement and calibration. We are able to customizable variety of frequency range, dimensional of anechoic chamber, and type of absorber depends on user requirement and specification.
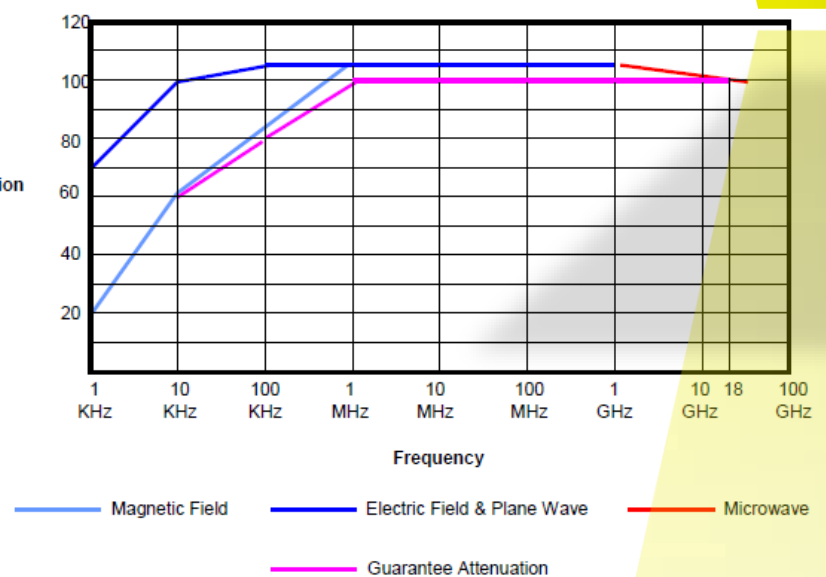
Anechoic Chamber Specification

Overall Dimension	:	6m x 3m x 3m (Length x Width x Height)
Operating Frequency	:	700MHz-18Ghz
Shielding system	:	Modular Pan-type
Magnetic Field	:	60 dB @ 10 kHz, 80 dB @ 100 kHz, 100 dB @ > 1 MHz
Electric Field	:	100 dB from 200 kHz thru 50 MHz
Plane Wave	:	100 dB @ 30 MHz to 1 GHz
Microwave	:	100 dB @ 18 GHz
Shielding Door Size	:	1.2m(W) x 2.1m(H) (Customer specified size is available
Shielding steel thickness	:	2mm
Power Lines Filter	:	Two(2) units of type 240V(Single-phase) , 30A , 0Hz to 60Hz
Accessories	:	CCTV (Others optional is upon customer request)

Chamber Layout Plan

1.2m*2.1m Swing door

Shielding Effectiveness of PAN Shielding Room

Attenuation dB

Frequency

— Magnetic Field   — Electric Field & Plane Wave   — Microwave

— Guarantee Attenuation

System Specification AMS18G

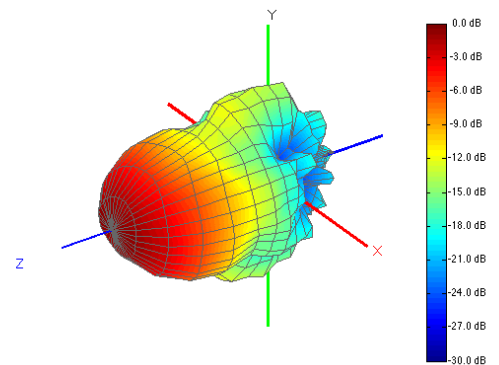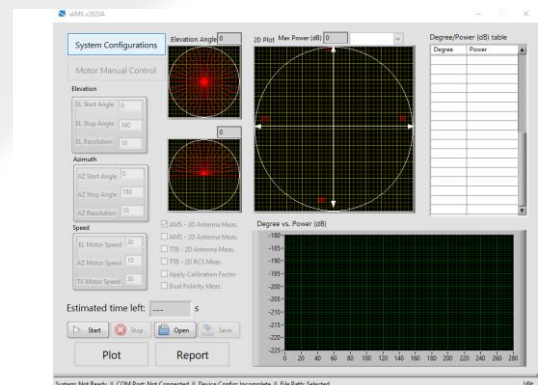|		
Frequency Range	:	0.8 to 18 GHz (refer to VNA and RF Cable options)
Rotating Platform	:	Dual-axis rotation platform 360° continuous movement for Elevation (EL) plane 90° · movement for Azimuth (AZ) plane
Angular Resolution	:	Selectable, up to 1° per step
Supported AUT Types	:	Microstrip antenna, cell phone Allowable weight: 2.5 kg, dimension: 320 mm x 320 mm
Antenna Connector	:	SMA Male
Input Power Supply	:	24V 2.7A
Operating Temperature	:	0°C to 45°C
Measurement Software	:	iAMS™ Integrated Control and Antenna Measurement Software A personal computer is required to run the iAMS™ software Support 2D and 3D radiation pattern plots Export data format: *.csv
Standard Accessories	:	3 m PC interface cable (1), AC-DC power adapter (1), Tripod (1)
Optional Accessories	:	Horn Antenna, 900MHz-18 GHz) (2), Horn Antenna Mounting Jig (1), Patch Antenna Mounting Jig (1)

3D Antenna Plotting plot

Feature Highlights

- **Quick Setup**
- **Dual-axis movement (EL and AZ planes)**
- **High resolution (up to 1° per step)**
- **Wide frequency range (up to 18 GHz)**
- **Max 2.5 kg antenna DUT**
- **Compatible with various VNAs**
- **Measured data in standard *.csv format**
- **Sample MATLAB codes for 2D/3D antenna pattern plots**

GUI for IAMS software