

Antenna Measurement Summary Report

MODEL NAME	BCM10400U
TESTED DATED	2026.07.28
ISSUED DATE	2026.07.28
TEST LAB NAME	Field Theory Consulting Inc.
TEST LAB ADDRESS	1029 Butterfield Road, Vernon Hills, IL 60061
TEST ENGINEER	Paul Gjerde

RELEASE CONTROL RECORD

REPORT NO.	REASON FOR CHANGE	DATE ISSUED
1	Original release	2026.07.28

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GENERAL INFORMATION

ANTENNA BRAND:	Field Theory Consulting Inc.
ANTENNA MODEL NAME:	FT900P916
ANTENNA TYPE:	Stamped Metal Inverted-F
MEASUREMENT STATNDARD	ANSI/IEEE Std 149 2021

1. Test Methods

The antenna was measured in a 5-meter fully anechoic antenna chamber equipped with a dual-pol quad-ridged horn receiver antenna and an EL-AZ positioner with laser positioner.

Formula & Calculations

Gain:

$$G_{AUT} = \frac{[S_{21}^2]}{[G_{REF}]} \left(\frac{\lambda}{4\pi d} \right)^{-2}$$

Efficiency:

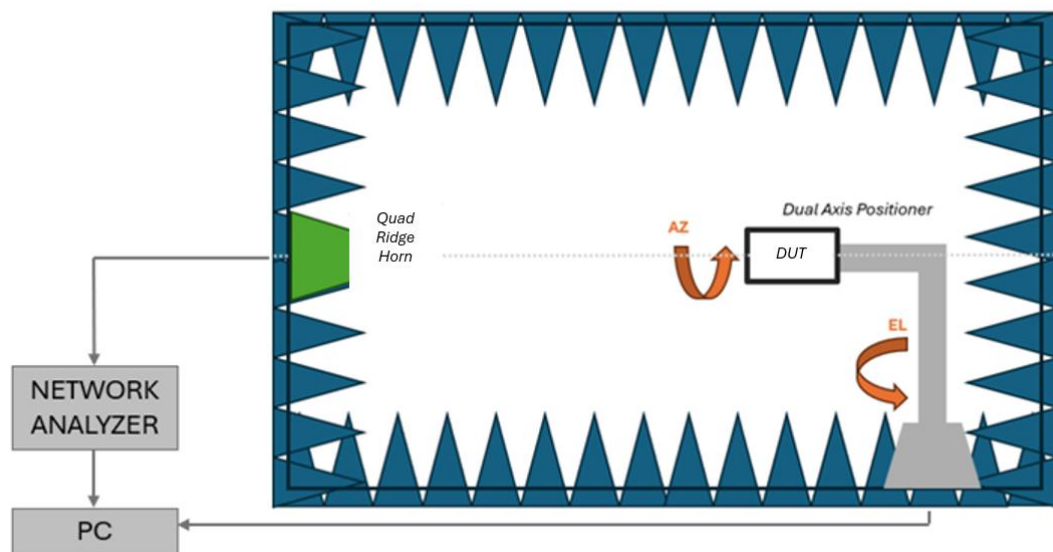
$$\varepsilon = \frac{\pi}{2NM} \sum_N \sum_M \frac{S_{21}^2(\theta_M, \phi_N)}{P_L G_T} \cos(\phi_N)$$

2. Description of the anechoic chamber:

Length: 5 m

Width: 3 m

Height: 3 m



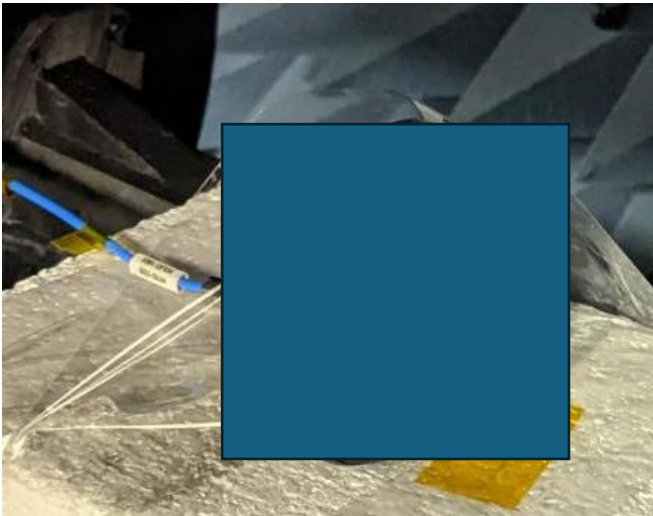
3. Test Equipment List

TYPE OF EQUIPMENT	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DUE DATE
Network Analyzer	Anritsu MS46122B	2135304	11/10/2026
Quad-Ridge Horn Antenna	ETS-Lindgreen 3164-10	217936	11/10/2026
5 Meter Anechoic Chamber	Braden Shielding Systems	F70331	N/A
RF Cable	ENS Microwave S160-160-MKS-MKS	3042020	11/10/2026
RF Cable	ENS Microwave S160-120-MKS-MKS	12042018	11/10/2026
RF Cable	ENS Microwave EMC1-K1K1-72	1GVT4 19002201	11/10/2026
RF Cable	ENS Microwave EMC1-K1K1-72	1GVT4 19002202	11/10/2026
RF Cable	ENS Microwave EMC1-K1K1-216	1GVT4 19002202 001	11/10/2026
RF Cable	ENS Microwave EMC1-K1K1-216	GVT4 19002202 002	11/10/2026
DUT Positioner	DE LLC D6025	NA	NA
RF Switch	Mini-Circuits RC-1SPDT-A18	1810010005	11/10/2026

4. Measurement Uncertainty

FREQUENCY RANGE	MEASUREMENT UNCERTAINTY
780~2200 MHz	0.5 dB
2200~3000 MHz	0.8 dB
3000~6000 MHz	1.0 dB

5. Testing Setup Photograph

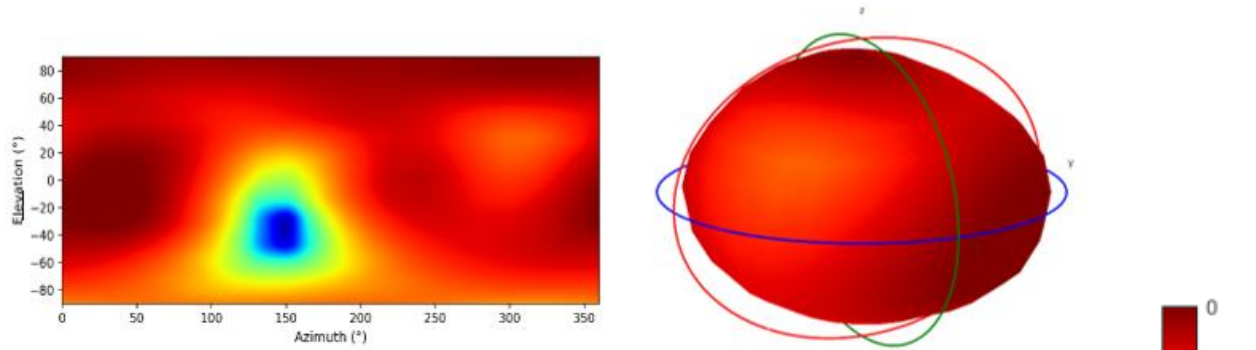


6. Antenna Radiation Performance

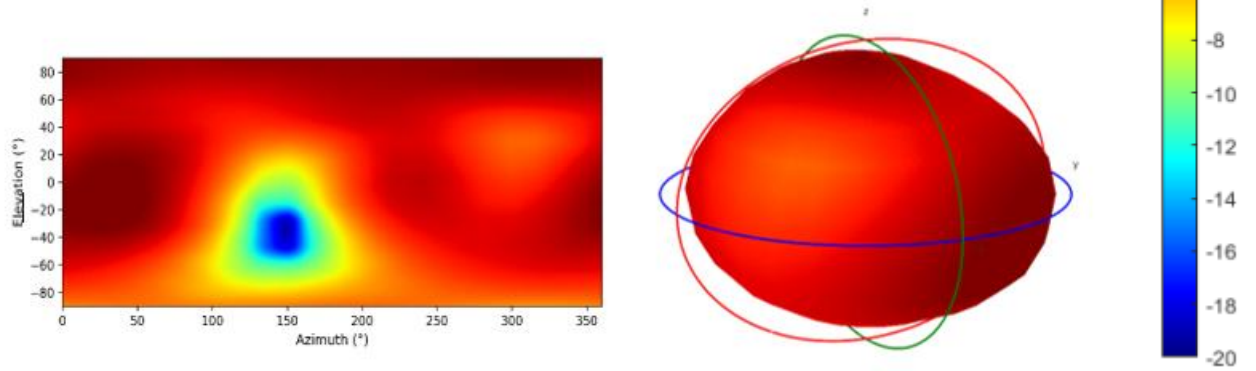
Frequency (MHz)	902 MHz	915 MHz	928 MHz
Average Gain (dBi)	-3.0	-3.0	-3.0
Peak Gain (dBi)	-0.8	-0.6	-0.6
Efficiency (%)	50	51	50

7. 2D/3D Antenna Patterns

902 MHz :



915 MHz :



928 MHz :

