REGULATORY TESTING FROM START TO CERTIFICATE

Intro

Antenna gain documentation is required for all FCC Part 15 devices. Must provide either an antenna datasheet/ specification or a test report with gain measurements and plots. This information cannot be held confidential. Additionally, proprietary information about the design itself can remain confidential in either the ‘operational description’ or ‘schematic’.

1. **Company: CoreTigo**
2. **Product name: TigoGateway**
3. **RF module/chip: Tigo RFcore M1 (FCC ID: 2ATSM-TGRFCM1)**

4. **Antenna description**

Antenna type	Omnidirectional
Antenna manufacturer/part number	TLW2.5A-SMA-Male
Antenna datasheet	**Please refer to Appendix A >>**
Frequency range	2400-2500MHz
Modulation	GFSK
Antenna gain max (peak)	1.5dBi
Cable loss	N/A
Connector type	SMA male

5. **Antenna layout**
   Please refer to Appendix A >>

6. **Antenna radiation pattern**
   Please refer to Appendix A >>

7. **Antenna photo**
   Please refer to Appendix A >>

8. **RF-auxiliaries – N/A**

Appendix A - Radiation Pattern

Model:TLW2.5A-SMA-Male

Wifi Antenna 2.4G rubber antenna

Electrical specifications	
Frequency Range(MHz)	2400-2500MHz
Impedance	50ohm
Gain	1.5dBi
Polarization	Vertical
Radiation	Omni
VSWR	⩽ 2.0 typical at center
Maximum input power (W)	50 W
Mechanical specifications	
Connector	Regular SMA-Male
Height	2.6-2.7cm (25.6mm)
Radome Material	TPEE
Color	Black
Wavelength	1/4 wave
Operating temperature (℃)	－40° to +90° C

SMA-Male

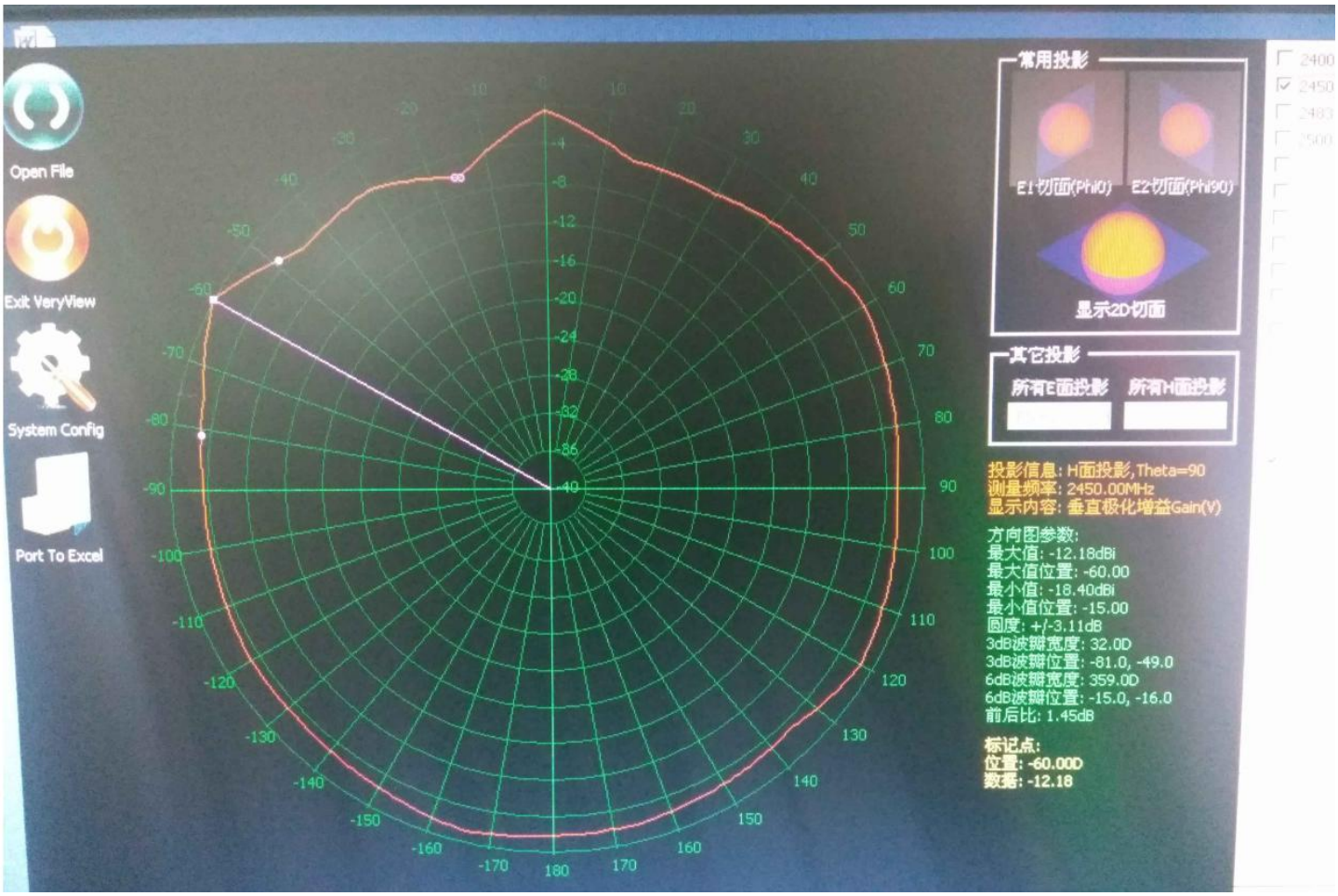
Model:TLW2.5A-SMA-Male

VSWR Testing chart

Radiation pattern

E-Plane:

H-Plane:



Gain pattern test report:

Frequency (MHz)	Total Gain (dBi) In +X Axis	Total Gain (dBi) In +Y Axis	Total Gain (dBi) In -X Axis	Total Gain (dBi) In -Y Axis
2400	0.4	0.5	0.8	0.4
2410	0.4	0.4	0.8	0.3
2420	0.5	0.4	0.7	0.3
2430	0.6	0.6	0.9	0.6
2440	0.7	1.0	1.3	1.1
2450	1.0	1.3	1.5	1.4
2460	1.0	1.3	1.5	1.3
2470	0.8	1.1	1.2	1.1
2480	0.4	0.6	0.7	0.6
2490	0.1	0.0	0.1	0.1
2500	0.8	0.7	0.9	0.8