January 03, 2022

TUV SUD America CB
10 Centennial Drive FL2
Peabody, MA 01960

Attention: Director of Certification

FCC ID: 2APIM-FTR30V002

RE: Minimum separation distance calculation per guidance from KDB 447498 D01 Mobile Portable RF Exposure v06.

A. General Population/Uncontrolled Exposure:

EUT	Fortem Technologies TrueView R30 Radar
Input Power of the Antenna	9141.1324mW (worst case Average power of the EUT between Part 87 and Part 90)
Antenna Gain	15 dBi
Frequency	16200 MHz
FCC Limit (§1.1310 (d)(4) and (e))	1.0 mW/cm^2 @ 16200 MHz
Averaging Time	30 mins

Equation for predicting RF field was used to determine the minimum distance that will comply with the requirements:

$$S = \frac{PG}{4\pi r^2}$$

Where: S=the power flux

P=input power of the antenna

G=antenna gain relative to an isotropic antenna

r=distance from the antenna to the point of investigation

From this formula, using 1.0 mW/cm^2 as *S*, the distance *r* is then calculated. This is the minimum distance of compliance with the power density requirements.

$$r = \sqrt{\frac{PG}{4\pi S}}$$

$$r = \sqrt{\frac{(9141.1324 \text{ mW})(31.623\ numeric\ antenna\ gain)}{4\pi\ (1.0\ \frac{mW}{cm^2})}}$$

$$r = \sqrt{\frac{289070.0299\ mW}{12.57\ \frac{mW}{cm^2}}}$$

Therefore *r* = **151.64 centimeters**

Minimum separation distance from the EUT when operating should be greater than 151.64 cm.

B. Occupational/Controlled Exposure:

FCC Limit (§1.1310 (d)(4) and (e))	5.0 mW/cm^2 @ 16200 MHz with (Occupational/Controlled Exposure)
Averaging Time	6 mins

Conditions of FCC §1.1310 (e)(1) applies. Using the same approach for General Population/Uncontrolled Exposure, the minimum separation distance calculated for Occupational/Controlled Exposure will be 67.81 cm (*r* = **67.81 centimeters)**.

Sincerely,

Omar Castillo
Name
Authorized Signatory
Title: EMC Test Engineer