April 13, 2020

TUV SUD BABT
Octagon House, Concorde Way
Segensworth Rd N, Fareham
PO15 5RL

Attention: Director of Certification

FCC ID: 2APIM-FTR30SKYD

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	2275.10 mW (worst case Average power of the EUT between Part 87 and Part 90)
Antenna Gain	16 dBi
Frequency	16450 MHz
FCC Limit (§1.1310 (d)(4) and (e))	1.0 mW/cm² @ 16450 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/cm² as *S*, the distance *r* is then calculated. This is the minimum distance of compliance with the power density requirements.

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

$$r = \sqrt{\frac{(2275.1 \text{ mW})(39.81 \text{ numeric antenna gain})}{4\pi \ (1.0 \ \frac{mW}{cm^2})}}$$

$$r = \sqrt{\frac{90571.731 \ mW}{12.57 \ \frac{mW}{cm^2}}}$$

Therefore *r* = **84.90 centimeters**

Minimum separation distance from the EUT when operating should be greater than 84.90 cm.

B. Occupational/Controlled Exposure:

FCC Limit (§1.1310 (d)(4) and (e))	5.0 mW/cm² @ 16450 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 38 cm (*r* = **37.96 centimeters**).

Sincerely,

Ferdie S. Custodio
Name
Authorized Signatory
Title: Senior EMC Test Engineer /Wireless Team Lead