



April 13, 2020

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

Attention: Director of Certification

FCC ID: 2APIM-FTR20SKYD

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

<i>EUT</i>	Fortem Technologies TrueView R20 Radar
<i>Input Power of the Antenna</i>	2426.61 mW (worst case Average power of the EUT)
<i>Antenna Gain</i>	12 dBi
<i>Frequency</i>	16600 MHz
<i>FCC Limit (§1.1310 (d)(4))</i>	1.0 mW/cm ² @ 16600 MHz
<i>Averaging Time</i>	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.

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

$$r = \sqrt{\frac{(2426.61 \text{ mW})(15.85 \text{ numeric antenna gain})}{4\pi (1.0 \frac{\text{mW}}{\text{cm}^2})}}$$

$$r = \sqrt{\frac{38459.18 \text{ mW}}{12.57 \frac{\text{mW}}{\text{cm}^2}}}$$

Therefore *r* = **55.32 centimeters**

Minimum separation distance from the EUT when operating should be greater than 55.32 cm.

B. Occupational/Controlled Exposure:

FCC Limit (§1.1310 (d)(4) and (e))	5.0 mW/cm ² @ 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 25 cm (*r* = **24.74 centimeters**).

Sincerely,

Ferdie S. Custodio

Name

Authorized Signatory

Title: Senior EMC Test Engineer /Wireless Team Lead