MPE/RF EXPOSURE REPORT

FCC CFR 47 Part 1.1310

Report No.: RDWN73-U2_FCC_MPE Rev A

Company: Radwin

Model Name: NEO, NEO DUO

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To: FCC CFR 47 Part 1.1310

Report Serial No.: RDWN73-U2_FCC_MPE Rev A

This report supersedes: NONE

Applicant: Radwin
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Issue Date: 19th April 2021

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1. MAXIMUM PERMISSABLE EXPOSURE

Calculations for Maximum Permissible Exposure Levels
Power Density = Pd (mW/cm^2) = EIRP/(4*π*d^2)
EIRP = P * G
P = Peak output power (mW)
G = Antenna numeric gain (numeric)
d = Separation distance (cm)
Numeric Gain = 10 ^ (G (dBi)/10)

These calculations represent worst case in terms of the exposure levels.

Limits for Occupational/Controlled Exposure for professional installation: 5 mW/cm^2

Non-Beamforming

Freq. Band (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density (mW/cm^2) @ 20cm	Power Density Limit (mW/cm^2)	Min Calculated safe distance for Limit (cm)	Calculated Power Density (mW/cm^2) @ Safe Distance
5150.0 - 5250.0	10.00	10.00	25.75	375.84	0.748	5.00	7.734	5.00
5250.0-5350.0	10.00	10.00	19.91	97.95	0.195	5.00	3.948	5.00
5470.0-5725.0	10.00	10.00	19.87	97.05	0.193	5.00	3.930	5.00
5725.0 - 5850.0	11.00	12.59	24.98	314.77	0.788	5.00	7.942	5.00

Beamforming

Freq. Band (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density (mW/cm^2) @ 20cm	Power Density Limit (mW/cm^2)	Min Calculated safe distance for Limit (cm)	Calculated Power Density (mW/cm^2) @ Safe Distance
5150.0 - 5250.0	16.00	39.81	19.95	98.86	0.783	5.00	7.91	5.00
5250.0-5350.0	16.00	39.81	13.88	24.43	0.194	5.00	3.93	5.00
5470.0-5725.0	16.00	39.81	13.93	24.72	0.196	5.00	3.96	5.00
5725.0 - 5850.0	17.00	50.12	18.93	78.16	0.779	5.00	7.90	5.00

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

The following assessments are worst case exposure conditions where the RADWIN NEO DUO contains 2 radio modules:- 2 x 5GHz 802.11 with both radios transmitting simultaneously;-

Non-BeamForming

Freq. Band (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density (mW/cm^2) @ 20cm	Power Density Limit (mW/cm^2) E_{ref}	Min Calculated safe distance for Limit (cm)	Summation $E_i/E_{ref\ @\ 20\ cm}$
5150.0 - 5250.0	16.00	39.81	19.95	98.86	0.748	5.00	7.734	0.748
5725.0 - 5850.0	17.00	50.12	18.93	78.16	0.788	5.00	7.942	0.788
EIRP TOTAL (mW/EIRP) :				7721.15	**20 cm distance Total Evaluation:**			**1.54 mW/cm^2**

BeamForming

Freq. Band (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density (mW/cm^2) @ 20cm	Power Density Limit (mW/cm^2)	Min Calculated safe distance for Limit (cm)	Summation $E_i/E_{ref\ @\ 20\ cm}$
5150.0 - 5250.0	16.00	39.81	19.95	98.86	0.783	5.00	7.91	0.783
5725.0 - 5850.0	17.00	50.12	18.93	78.16	0.779	5.00	7.90	0.779
EIRP TOTAL (mW/EIRP) :				7852.9195	**20 cm distance Total Evaluation:**			**1.56 mW/cm^2**

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

Specification
Maximum Permissible Exposure Limits
FCC §1.1310 Limit = 5mW / cm^2 from 1.310 Table 1

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