

RF Exposure Report (FCC)

Report No.: WIR130826-RF Exposure Rev. 2

Test Model: OW10Hx

Test Date: May 16, 2024

Issued Date: June 24, 2024

Applicant: Intellian Technologies USA Inc
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1. Certificate of Conformity**Product:** OW10Hx**FCC ID:** XXZ-OW10HX**Brand:** Intellian Technologies USA Inc**Test Model:** OW10Hx**Applicant:** Intellian Technologies USA Inc**Test Date:** May 16, 2024**Standard:** 47 CFR FCC Part 2.1093

Donald Salguero
Wireless Laboratory Engineer

Engineering Statement: The measurements shown in this report were made in accordance with the procedures indicated. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements.



Michael Griffiths
Manager, Wireless Laboratory

Report Status Sheet

Revision	Report Date	Reason for Revision
Ø	June 7, 2024	Initial Issue.
1	June 15, 2024	Updated section 2.
2	June 24, 2024	Scenario Limited to Possible Installation Orientation

2. RF Exposure

Requirement:

47 CFR 2.1091(c)(1)

Evaluation of compliance with the exposure limits in § 1.1310 of this chapter, and preparation of an EA if the limits are exceeded, is necessary for mobile devices with single RF sources having either more than an available maximum time-averaged power of 1 mW or more than the ERP listed in Table 1 to § 1.1307(b)(3)(i)(C), whichever is greater. For mobile devices not exempt by § 1.1307(b)(3)(i)(C) at distances from 20 centimeters to 40 centimeters and frequencies from 0.3 GHz to 6 GHz, evaluation of compliance with the exposure limits in § 1.1310 of this chapter is necessary if the ERP of the device is greater than ERP_{20cm} in the formula below. If the ERP of a single RF source at distances from 20 centimeters to 40 centimeters and frequencies from 0.3 GHz to 6 GHz is not easily obtained, then the available maximum time-averaged power may be used (i.e., without consideration of ERP) in comparison with the following formula only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

47 CFR 2.1091(c)(2)

For multiple mobile or portable RF sources within a device operating in the same time averaging period, routine environmental evaluation is required if the formula in § 1.1307(b)(3)(ii)(B) of this chapter is applied to determine the exemption ratio and the result is greater than 1.

Evaluation:

FCC RF exposure

Limit per 1.1310 for a transmitter operating on frequency range (1500-100000 MHz) : **1mW/cm²**

Scenario: Antenna installed such that main lobe is aimed at 37 degrees elevation from the horizon.

Operating Frequency: 14-14.5 GHz

Max Conducted Power: 18.19dBm

Max Off-Axis Antenna Gain between 0-10 degrees of elevation: 10dBi

EIRP: 28.19 dBm = 659 mW

Operational Duty Cycle = 20%

Duty Cycle Corrected Max EIRP = 131.8 mW

$$S = \frac{EIRP}{4\pi r^2} \left[\frac{mW}{cm^2} \right]$$

Solving for the safe distance

$$r = \sqrt{\frac{EIRP}{4\pi S}} \text{ [cm]}$$

$$R = \sqrt{(131.8 / (4 * 3.1416 * 1))} = 3.24 \text{ cm}$$

Minimum safe distance for a mobile/fixed device is 20 cm

Since $R \leq 20\text{cm}$, EUT's Safe separation distance is 20 cm