

# Reference number: HELEM2402000058-2 v1.1 RF EXPOSURE ASSESSMENT Page 1 of 2

Manufacturer: liwari Tracking Solutions Oy

Address: Kidekuja 2, FI-88610 Vuokatti, Finland

Model: CloudTag

Type: -

FCC ID: 2BFQ6TAG101

Test laboratory: SGS Fimko Oy

Address: Karakaarenkuja 4, Fl-02610 Espoo, Finland

**Accreditation body:** FINAS **Designation number:** F10002

#### REFERENCE DOCUMENTS

KDB 447498 D01 General RF Exposure Guidance v06 Test Report HELEM2402000056-1 v1.0

#### **EUT SPECIFICATION**

The equipment under test is a UWB tag for indoor positioning system.

Operating frequency range: 3993.6 MHz (UWB channel 2)

Channel width: 543.5 MHz

Maximum output power (e.i.r.p.) -2.18 dBm/50 MHz

Antenna model/type: Integral
Antenna gain: +3.5 dBi

Device category: Portable

Environment: General Population/Uncontrolled Separation distance: 5 mm assumed for assessment



## **ASSESSMENT**

## **Exemption limits:**

A single RF source is exempt if it satisfies the SAR Test Exclusion Threshold conditions presented in KDB document 447498 D01 v06 clause 4.3.1. For equipment operating between 100 MHz and 6 GHz and for test separation distances ≤ 50 mm, the SAR Test Exclusion Threshold is calculated according to clause 4.3.1 a):

$$P_{\text{(mW)}} = \frac{d_{\text{(mm)}} \times 3.0}{\sqrt{f_{\text{(GHz)}}}}$$

where  $d_{\text{(mm)}}$  is the test separation distance, and  $f_{\text{(GHz)}}$  is the operating frequency of the equipment.

#### Assessment results:

For  $d_{\text{(mm)}} = 5$  and  $f_{\text{(GHz)}} = 3.9936$  the SAR Test Exclusion Threshold is:

$$P_{\text{(mW)}} = \frac{5 \times 3.0}{\sqrt{3.9936}} \approx 8 \text{ mW (9 dBm)}$$

The maximum output power of the EUT (-2.18 dBm e.i.r.p.) is below the threshold.

### **CONCLUSION**

The assessment shows that the device qualifies for SAR Test Exclusion.

Date: October 16, 2024

Henri Mäki

**Testing Engineer** 

Humi Mai