

MPE test report

According to the standard:
CFR 47 FCC PART 15

Equipment under test:
ASK Contact Less Reader
With 5 antennas

FCC ID: *T2X-V3-CLESS*

Company:
FLOWBIRD

Distribution: Mr EPENYOY

(Company: FLOWBIRD)

Number of pages: 6

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			Name and Function	Visa
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This document is the result of testing a specimen or a sample of the product submitted. It does not imply an assessment of the conformity of the whole manufactured products of the tested sample.
Information in italics are declared by the manufacturer/customer and are under his responsibility



DESIGNATION OF PRODUCT: *ASK Contact Less Reader with 5 antennas*

Serial number (S/N): *Module: 000401*
Antenna 1: 302506
Antenna 2: 314043
Antenna 3: 103865
Antenna 4: 103092
Antenna 5: 322469

Reference / model (P/N): *Module: ELM1000035854*
Antenna 1: ELM1000004108
Antenna 2: ELM404304686
Antenna 3: ELM1000006460
Antenna 4: CAR1000000081
Antenna 5: ELM1000008317

Software version: *CSC 1.24*

MANUFACTURER: *FLOWBIRD*

COMPANY SUBMITTING THE PRODUCT:

Company: FLOWBIRD

Address: PARC LAFAYETTE
6 RUE ISAAC NEWTON
25075 – BESANCON CEDEX 9 - FRANCE

Responsible: Mr EPENYOY

Person(s) present during the tests: Mr EPENYOY

DATES OF TEST: From 3-Nov-21 to 9-Nov-21

TESTING LOCATION: EMITECH ANGERS laboratory at JUIGNE SUR LOIRE (49) FRANCE
FCC Accredited under US-EU MRA Designation Number: FR0009
Test Firm Registration Number: 873677

TESTED BY: B. VOVARD

VISA:



WRITTEN BY: B. VOVARD

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REVISIONS HISTORY

Revision	Date	Modified pages	Modifications
0	17-Dec-21	/	Creation

1. INTRODUCTION

This report presents the results of radio test carried out on the following radio equipment: **ASK Contact Less Reader with 5 antennas**, in accordance with normative reference.

The equipment under test integrates:

- 13.56 MHz function not already certified

2. PRODUCT DESCRIPTION

Category of equipment (ISED): I

Utilization: "contactless" system of validation, payment or identification

Antenna type and gain: 5 External antennas (unknown gains)

Operating frequency range: From 13.110 MHz to 14.010 MHz

Number of channels: 1

Channel spacing: Not concerned

Modulation: ASK

Power source: 12 Vdc

Power level, frequency range and channels characteristics are not user adjustable.

Test frequency:

Frequency tested: 13.56 MHz

3. NORMATIVE REFERENCE

The standards and testing methods related throughout this report are those listed below.

They are applied on the whole test report even though the extensions (version, date and amendment) are not repeated.

CFR 47 (2021)	Radio Frequency Devices
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ANSI C63.10	2013 Procedures for Compliance Testing of Unlicensed Wireless Devices.
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447498 D01 General RF Exposure Guidance v06	RF Exposure procedures and equipment authorization policies for mobile and portable equipment
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OET BULLETIN 65	Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields
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4. RF EXPOSURE

Maximum measured power = 64.12 dB μ V/m at 10m = 5×10^{-6} mW
with $P = (E \times d)^2 / (30 \times G_p)$ with $d = 10$ m and $G_p = 1$

In accordance with KDB 447498 D01 General RF Exposure Guidance v06:

$$PSD = EIRP / (4 \times \pi \times R^2)$$

$$5 \times 10^{-6} / (4 \times \pi \times (20 \text{ cm})^2) = 1.07 \times 10^{-9} \text{ mW/cm}^2 \text{ (limit = } 0.979 \text{ mW/cm}^2 \text{)}$$

The equipment fulfils the requirements on power density for general population/uncontrolled exposure and therefore fulfils the requirements of 47 CFR §1.1310.