

FCC RF Exposure Report

Product name: WISR R3
Applicant: Orlaco
FCC ID: 2ADBX-PR1A

Test report No. : 190501396 FCC RF Exposure Report v1.0

Laboratory information

Accreditation

Telefication complies with the accreditation criteria for test laboratories as laid down in ISO/IEC 17025:2005. The accreditation covers the quality system of the laboratory as well as the specific activities as described in the authorized annex bearing the accreditation number L021 and is granted on 30 November 1990 by the Dutch Council For Accreditation (RvA: Raad voor Accreditatie).

Telefication is designated by the FCC as an Accredited Test Firm for compliance testing of equipment subject to Certification under Parts 15 & 18. The Designation number is: NL0001.

Telefication is a Wireless Device Testing laboratory recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements. The Industry Canada registration number for the 3 meter test chamber of Telefication is: 4173A-1.

Documentation

The test report must always be reproduced in full; reproduction of an excerpt only is subject to written approval of the testing laboratory. The documentation of the testing performed on the tested devices is archived for 10 years at Telefication Netherlands.

Testing Location

| | |
|--------------------|---|
| Test Site | Telefication BV |
| Test Site location | Edisonstraat 12a 6902 PK Zevenaar The Netherlands Tel. +31316583180 Fax. +31316583189 |
| Test Site FCC | NL0001 |

Revision History

| Version | Date | Remarks | By |
|---------|------------|--|----|
| v1.0 | 09-09-2019 | Release version | KR |
| v2.0 | 18-10-2019 | Updated clause 1.4 Product specifications of Equipment under test and EIRP power | KR |
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1 General Description

1.1 Applicant

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 E-mail: info@orlaco.nl
 Contact name: Mr. A. Canrinus

1.2 Manufacturer

Manufacturer name: Orlaco Products B.V.
 Address: Postbus 193, Barneveld, the Netherlands
 Zip code: 3770 AD
 Telephone: 0342 404 555
 E-mail: compliance@orlaco.com
 Contact name: --

1.3 Tested Equipment Under Test (EUT)

Product name: PR1A91DA1
 Brand name: Orlaco
 Product type: Wireless Video System
 FCC ID: 2ADBX-PR1A
 IC ID: 12390A-PR1A
 Software version: V 0.7.1.0
 Hardware version: PR1A91DA1
 Date of receipt: 07-05-2019
 Tests started: 07-05-2019
 Testing ended: 20-05-2019

1.4 Product specifications of Equipment under test

| | |
|--|--|
| TX Frequency range (MHz) | 5150 – 5250 5725 – 5850 |
| RX frequency range (MHz) | 5150 – 5250 5725 – 5850 |
| Maximum output power to antenna (dBm) ¹ | 5150 – 5250MHz range: 19.4 5725 – 5850MHz range: 22.1 |
| Antenna type | MIMO: 2x chip antenna |
| Antenna gain (dBi) | 5 GHz WLAN: +3.0 dBi |
| Type of modulation | BPSK, QPSK, 16-QAM, 64-QAM |
| Emission designator | 37MOD1D |

1.5 MPE Calculation Method

Calculation method of RF Safety Distance:

$$PD = 10 * \frac{P_{out} * G}{4\pi r^2}$$

Where:

PD = Power Density in W/m^2

P_{out} = Output power in mW

G = Gain of antenna

R = Distance between observation point and centre of the radiator in cm

1.6 System description

The EUT can be powered by both 12V and 24V batteries. Additionally, the EUT can be mounted on a metal back plane or on a non-metal backplane.

For each frequency range, the worst case configuration of input voltage and backplane with regards to emissions is determined by an exploratory measurement. The final measurements are performed on the worst-case configuration of input voltage and presence of metal back plane.

The module is installed according to the installation instructions of the module manufacturer without modification.

1.7 MPE calculation result

| Technology | Frequency (MHz) | Power (mW eirp) | Antenna Gain (dBi) | Distance (cm) | Max power density (mW/cm^2) | Limit (mW/cm^2) |
|------------|-----------------|-----------------|--------------------|---------------|---------------------------------|---------------------|
| Wi-Fi | 5190 | 174 | 3.0 | 20 | 0.1 | 1 |
| Wi-Fi | 5765 | 322 | 3.0 | 20 | 0.1 | 1 |