

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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Contact name: Mr. A. Canrinus

1.2 Manufacturer

Manufacturer name: Orlaco Products B.V.
Address: Postbus 193, Barneveld, the Netherlands
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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

Pout = 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