

TEST REPORT

Reference No...... : WTD26D02045121W003
FCC ID : 2BLE2-DLZEROCS
Applicant..... : Digital Logic Ltd
Address..... : Nemanjina 57A, 12000 Pozarevac Serbia
Manufacturer : Digital Logic Ltd
Address..... : Nemanjina 57A, 12000 Pozarevac Serbia
Product..... : uFR Zero CS - Contactless Card Reader
Model(s) : uFR Zero CS with USB, uFR Zero CS USB, uFR Zero CS with TTL UART, uFR Zero CS UART
Standards..... : FCC 47CFR Part 2 Subpart J Section 2.1093
Date of Receipt Sample : 2026-03-02
Date of Test : 2026-03-05 to 2026-06-23
Date of Issue..... : 2026-07-21
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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3. Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD26D02045121W003	2026-03-02	2026-03-05 to 2026-06-23	2026-07-21	Original	-	Valid

4. General Information

4.1. General Description of E.U.T.

Product:	uFR Zero CS - Contactless Card Reader
Model(s):	uFR Zero CS with USB, uFR Zero CS USB, uFR Zero CS with TTL UART, uFR Zero CS UART
Model Description:	Differences between models with USB port types and models with UART port types was PCB is the same. Models with UART port types utilizes communication over IDC connector and Models with USB port types communicates only through USB connection. Differences between uFR Zero CS with USB and uFR Zero CS USB was only model name. Differences between uFR Zero CS with TTL UART and uFR Zero CS UART was only model name. Model uFR Zero CS with USB and uFR Zero CS with TTL UART were tested in this report.
Test Sample No.:	1-1/1
Hardware Version:	1.13.
Software Version:	10.0.73

4.2. Details of E.U.T.

Operation Frequency:	13.56MHz
Transmitted Power:	63.43dBuA/m @3m distance
Type of Modulation:	ASK
Antenna installation:	PCB coil antenna

Note:

#: The antenna gain is provided by the applicant, and the applicant should be responsible for its authenticity, WALTEK lab has not verified the authenticity of its information.

Battery: 5V  300mA

4.3. Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files.

Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

4.4. Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

☐ Yes ☒ No

If Yes, list the related test items and lab information:

Test Lab: N/A

Lab address: N/A

Test items: N/A

4.5. Abnormalities from Standard Conditions

None.

5. Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	FCC Part 2.1093	PASS

6. RF Exposure

Test Requirement: FCC 47CFR Part 2 Subpart J Section 2.1093
 Evaluation Method: FCC 47CFR Part 1 Subpart I Section 1.1307,
 KDB 447498 D01 General RF Exposure Guidance v06

6.1. Procedures and Requirements

Determination of Exemption:
For single RF sources

Option A

Option A 1-mW Test Exemption

Applies to all frequencies and all distances

- a) Could be considered SAR-based and MPE-based exclusions
- b) $P < 1\text{mW}$
- c) Limitation—when there are simultaneously operating transmitters this exclusion only applies when all simultaneously operating transmitters meet this exemption
- d) Refer 1.1307(b)(3)(i)(A) and 1.1307(b)(3)(ii)(A)

Option B SAR-Based Exemption

Frequency range 300 MHz -6 GHz, $5\text{mm} \leq \text{distance} \leq 40\text{cm}$

- a) The maximum time-averaged power or effective radiated power (ERP), whichever is greater, $\leq P_{th}$.
- b) P_{th} is calculated based on separation distance d cm from transmitter to person for the device operating at f GHz.

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20\text{ cm}} (d/20\text{ cm})^x & d \leq 20\text{ cm} \\ ERP_{20\text{ cm}} & 20\text{ cm} < d \leq 40\text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20\text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20\text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3\text{ GHz} \leq f < 1.5\text{ GHz} \\ 3060 & 1.5\text{ GHz} \leq f \leq 6\text{ GHz} \end{cases}$$

d = the separation distance (cm);

Option C MPE-Based Exemption

1.1307(b)(3)(i)(C): ERP is below a threshold calculated based on the distance R between the person and the antenna / radiating structure, where $R > \lambda / 2\pi$.

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	$1,920 R^2$.
1.34-30	$3,450 R^2/f^2$.
30-300	$3.83 R^2$.
300-1,500	$0.0128 R^2f$.
1,500-100,000	$19.2R^2$.
Note: R in meters, f in MHz	

For multiple RF sources

According to 47CFR 1.1307(b)(3)(ii), the calculation formula is as follow:

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

6.2. Calculation formula

According to ANSI C63.10,

$$E[\text{dB}\mu\text{V/m}] = \text{EIRP}[\text{dBm}] - 20 \log(d[\text{m}]) + 104.77$$

For conducted measurements below 1000 MHz, the field strength shall be computed as specified in above, and then an additional 4.7 dB shall be added as an upper bound on the field strength that would be observed on a test range with a ground plane for frequencies between 30 MHz and 1000 MHz, or an additional 6 dB shall be added for frequencies below 30 MHz.

6.3. Evaluation Results

E[dBμV/m]	d[m]	EIRP[dBm]	EIRP[mW]
63.43	3	-31.77	0.00067

EIRP=0.00067<1mW

Option A is applicable.

Conclusion:

RF Exposure is FCC compliant.

=====End of Report=====