

# RF Exposure Report

FCC ID : U4GJTSSDCOII  
Equipment : Joya Touch Single Slot Dock Charge Only  
Brand Name : Datalogic  
Model Name : Joya Touch Single Slot Dock Charge Only  
Applicant : Datalogic S.r.l.  
Via S. Vitalino 13, 40012 Lippo di Calderara di Reno (BO) - Italy  
Manufacturer : Datalogic S.r.l.  
Via S. Vitalino 13, 40012 Lippo di Calderara di Reno (BO) - Italy  
Standard : FCC CFR 47 part 2.1091

The product was received on Oct. 02, 2023 and testing was started from Oct. 04, 2023 and completed on Oct. 04, 2023. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample provide by manufacturer and the test data has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1091 and FCC KDB 680106 D01v04 and has been pass the FCC requirement.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Cona Huang / Deputy Manager



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**Revision History**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA392115	Rev. 01	Initial issue of report	Nov. 30, 2023
FA392115	Rev. 02	Update Equipment Name and Model Name	Feb. 21, 2024

## 1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Joya Touch Single Slot Dock Charge Only
Brand Name	Datalogic
Model Name	Joya Touch Single Slot Dock Charge Only
FCC ID	U4GJTSSDCOII
Frequency Range	110.01 KHz ~ 148 KHz
Modulation Type	ASK
HW Version	02
SW Version	IP6809B_5_S_WTM1A05_WIRQJ(1)
Antenna Type	Coil Antenna

## 2. RF Exposure Limit Introduction

§ 1.1310 The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency(RF) radiation as specified in § 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of § 2.1093 of this chapter.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	* 100	6
3.0-30	1842/f	4.89/f	* 900/f <sup>2</sup>	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	* 100	30
1.34-30	824f	2.19/f	* 180/f <sup>2</sup>	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz

\* = Plane-wave equivalent power density

(1) Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when a person is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure. The phrase fully aware in the context of applying these exposure limits means that an exposed person has received written and/or verbal information fully explaining the potential for RF exposure resulting from his or her employment. With the exception of transient persons, this phrase also means that an exposed person has received appropriate training regarding work practices relating to controlling or mitigating his or her exposure. Such training is not required for transient persons, but they must receive written and/or verbal information and notification (for example, using signs) concerning their exposure potential and appropriate means available to mitigate their exposure. The phrase exercise control means that an exposed person is allowed to and knows how to reduce or avoid exposure by administrative or engineering controls and work practices, such as use of personal protective equipment or time averaging of exposure.

(2) General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.



### 3. KDB 680106 D01 EQUIPMENT APPROVAL CONSIDERATIONS

Requirement	Devices
(1) Power transfer frequency is less than 1 MHz.	Yes. Operating Frequency is less than 1MHz
(2) Output power from each primary coil is less than or equal to 15 watts.	Yes. The maximum power is 5Watts
(3) The system may consist of more than one source primary coil, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.	Yes. The device support one primary coil only and charging one client
(4) Client device is placed directly in contact with the transmitter.	Yes. The client device is placed directly in contact with the WPT source.
(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).	Yes. this is a desktop WPT source
(6) The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.	The measurement was taken based on KDB 680106 D01v04. The H-Field worst case leakage of mobile condition is 37.40%

Remark: Inductive wireless power transfer applications with supporting field strength results and meeting all of the above requirements are not required to submit a KDB inquiry for devices approved using SDoC or a PAG for equipment approved using certification to address RF exposure compliance.

### 4. Test Mode

This device has been tested in the following charging conditions as below:

Test Mode	Test Setup Configuration	Charging Current Condition
TM1	Test w/ Client Device installed	< 15% Battery status
TM2	Test w/ Client Device installed	50% Battery status
TM3	Test w/ Client Device installed	> 85% Battery status

### 5. Measurement Equipment

Instrument	Manufacturer	Model No.	Serial No.	Freq. Range	Last Cal.	Due Date
Electric and Magnetic field Probe-Analyzer	Narda S.T.S / PMM	EHP 200AC	170WX80309	3KHz~30MHz	Nov. 24, 2022	Nov. 23, 2023

## 6. RF Exposure Evaluation

**General Note:**

1. The device support Wireless Power Consortium with a maximum power transfer to the client device of 5W.
2. There is no mechanical / magnetic connection mechanism between client and smart phone (this application) so charging is only supported for desktop/tabletop use.
3. The equipment under test was placed on a wooden desk inside of shield room. The isotropic field probe was used to measure the field strength from each surfaces, the detail setup photo please refer to Appendix A.
4. Per KDB 680106 D01v04 , RF exposure evaluation field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit. Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m.
5. The evaluated the field strength in the scenario which device-being-charged is removed suddenly, the test was performed for the worst test mode and worst position (measurement probe pointing towards the charging coil)

Position / Condition	E-Field Measurement (V/m)					limit	Percentage (%)
	Front 20cm	Back 20cm	Left Side 15cm	Right Side 15cm	Top Side 15cm		
TM1	0.5156	0.6223	0.6189	0.6158	0.8572	614	0.15
TM2	0.4488	0.7970	0.6914	0.5185	0.9449		
TM3	0.4845	0.6985	0.6589	0.5895	0.9531		
WPT client(s) move in the coupling region of the WPT source							
	E-Field Measurement (V/m)						
TM3 <sup>(6)</sup>					0.9415		

Position / Condition	H-Field Measurement (A/m)					limit	Percentage (%)
	Front 20cm	Back 20cm	Left Side 15cm	Right Side 15cm	Top Side 15cm		
TM1	0.1908	0.5853	0.1917	0.2039	0.1884	1.63	37.4%
TM2	0.1917	0.6103	0.1844	0.2183	0.1849		
TM3	0.1854	0.5752	0.1895	0.2127	0.1796		
WPT client(s) move in the coupling region of the WPT source							
	H-Field Measurement (A/m)						
TM2 <sup>(6)</sup>		0.5818					

### Conclusion:

The field strength limit refers to Part 1.1310 and the test result of exposure evaluation is less than 50% of the applicable MPE limit.