



No.: FCCSZ2024-0005-EMC

TEST REPORT



NAME OF SAMPLE : FlashLink

APPLICANT : DeltaTrak Inc.

CLASSIFICATION OF TEST : N/A

CVC Testing Technology (Shenzhen) Co., Ltd.

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		-				
Applicant		Name: DeltaTrak Inc. Address: 1236 Doker Drive, Modesto, CA 95351 US				
Manufaaturar		Name: Go	Id Step Ele	ectronics	(Shen Zhen) Co., Ltd.	
Manufacturer		Address: I	NO.12 XI H Street,Lo Province,	u Tang,Pi ng Gang I China	ng Dong Community,Ping Di District,Shen Zhen,Guangdong	
		Product N	ame: Flas	hLink		
		Model/Typ	e: FlashLi	nk NOW a	and FlashLink AIR	
Equipment Ur	nder Test	Brand Nar	ne: DeltaT	rak		
		Sorial NO	· N/A			
		Senai NO.	. N/A			
		Sample N	0.:3-1			
Date of Receipt.	2024.01.22		Date of	Testing	2024.01.22 ~ 2024.02.02	
-	Test Specificati	on			Test Result	
FCC Pa	rt 15, Subpart I	B, Class B			PASS	
		The e	quipment (under test	was found to comply with the	
		requiremen	its of the s	tandards a	applied.	
Evaluation of Tes	t Result					
					Seal of CVC	
					Issue Date: 2024.02.02	
Tested by:		Reviewed	by:		Approved by:	
Zhw W Zhu Yulii	ulin	Huo	ing M	enoj	MAS	
Name	Signature	⊦ Name	luang Men Sic	g jnature	Dong Sanbi Name Signature	
Other Aspects: N	ONE.				,	
Abbreviations:OK, Pass	s= passed	Fail = failed	N/A= not ap	plicable	EUT= equipment, sample(s) under tested	

This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FCCSZ2024-0005-EMC	Original release	2024.02.02

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1. SUMMARY OF TEST RESULTS

	EMIS	SION	
Standard	Test Item	Result	Remarks
	Conducted Test	PASS	Minimum passing margin is 21.0dB at 4.866MHz
FCC Part 15, Subpart B,	Radiated Test	PASS	Minimum passing margin is
Class B	(30MHz~ 1GHz)	1 400	12.31dB at 384.473MHz
	Radiated Test	DASS	Minimum passing margin is
	(Above 1GHz)	FA00	8.18dB at 15732.673MHz

1.1 List of Test and Measurement Instruments

Equipment	Manufacturer	Model No.	Serial Number	Cal. interval	Cal. Due
Conducted emission					
EMI Test Receiver	Rohde&Schwarz	ESR3	102694	1 year	2024.5.25
limiter (10 dB)	Rohde&Schwarz	ESH3-Z2	102824	1 year	2024.5.16
Voltage probe	Rohde&Schwarz	CVP9222C	28	1 year	2024.5.16
Current probe	Rohde&Schwarz	EZ-17	101442	1 year	2024.5.21
ISN network	Rohde&Schwarz	ENV 81	100401	1 year	2024.5.16
ISN network	Rohde&Schwarz	ENV 81 Cat6	101896	1 year	2024.5.16
LISN(single-phase)	Rohde&Schwarz	ENV216	102569	1 year	2024.4.11
#1Shielding room	MORI	854	N/A	3 year	2026.5.16
Radiation Spurious					
EMI Test Receiver	Rohde&Schwarz	ESR 26	101718	1 year	2024.5.25
Loop antenna (8.3k~30MHz)	Rohde&Schwarz	HFH2-Z2E	100951	1 year	2024.5.26
Antenna(30MHz~1000MHz)	SCHWARZBECK	VULB 9168	1132	1 year	2024.2.14
Horn antenna(1GHz-18GHz)	ETS	3117	227634	1 year	2024.3.25
Horn antenna(18GHz-40GHz)	SCHWARZBECK	BBHA 9170	01003	1 year	2024.3.25
3m anechoic chamber	MORI	966	CS0200019	3 year	2026.5.18
Attenuator	/	SJ-5dB	607684	1 year	2024.2.21
#1 control room	MORI	433	CS0300028	3 year	2026.5.16
Temperature and humidity meter	/	C193561473	CS0200071	1 year	2024.5.21

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1.2 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

No.	Item	Measurement Uncertainty
1	Conductedemission test	+/- 2.7 dB
2	Radiated emission 30MHz-1GHz	+/- 4.6 dB
3	Radiated emission 1GHz-18GHz	+/- 4.4 dB
4	Volatage fluctuations and flicker	±1.4 %
Remai	rk: 95% Confidence Levels, k=2.	

1.3 Test Location

The tests and measurements refer to this report were performed by EMC testing Lab of CVC Testing Technology (Shenzhen) Co., Ltd.

Lab Address: No. 1301, Guanguang Road, Xinlan Community, Guanlan Street, Longhua District, Shenzhen City, Guangdong Province 518110 P.R.China

Post Code: 518110 Tel: 0755-23763060-8805 Fax: 0755-23763060 E-mail: sz-kf@cvc.org.cn FCC(Test firm designation number: CN1363) IC(Test firm CAB identifier number: CN0137) CNAS(Test firm designation number: L16091)

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2. GENERAL INFORMATION

2.1 General Product Information

PRODUCT	FlashLink
BRAND	DeltaTrak
TEST MODEL	FlashLink NOW and FlashLink AIR
FCC ID	2ATXY-23300
	1. DC 3.6V from battery
POWER SUPPLY	2. 5V from USB host unit
HARDWARE VERSION:	23300-DT_V1_0_20240124
SOFTWARE VERSION:	DeltaTrak_23300-GL_H1.1_F1.0.0v21
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	USB, unshielded, 1.0m

Remark:

1. For more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

- 2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
- 3. EUT photo refer to the report (Report NO.: FCCSZ2024-0005-EUT).

2.2 Description of Accessories

N/A

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2.3 Independent Operation Modes

The EUT were tested under the following modes, the final worst mode was marked in boldface and recorded in this report.

	EMISSION Test Modes	
For Co	nducted Emission Tests	
	Test Mode	Test Voltage
1	Normal Working + LTE Link + GNSS IDLE + Sensor	DC 3.6V from battery
2	Normal Working + LTE Link + GNSS IDLE + Sensor + Charging	DC 5V from USB unit
For Ra	diated Emission Tests	
	Test Mode	Test Voltage
1	Normal Working + LTE Link + GNSS IDLE + Sensor	DC 3.6V from battery
2	Normal Working + LTE Link + GNSS IDLE + Sensor + Charging	DC 5V from USB unit
Remark	: The above test modes in boldface were the worst cases, only the	e test data of these modes were
reporte	d.	



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2.4 General Description of Applied Standards

According to the specifications of the manufacturers, the EUT must comply with the requirements of the following standards:

FCC PART 15, SUBPART B, CLASS B

ANSI C63.4:2014

All test items have been performed and recorded as per the above standards.

2.5 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

	Su	pport Equip	ment		
NO	Description	Brand	Model No.	Serial Number	Supplied by
1	External temperature sensor	N/A	N/A	N/A	Client

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3. EMISSION

3.1 Conducted Emission

3.1.1 Limits Of Conducted Emission

TEST	STANDARD:	FCC Part	15.	Subpart B	(Section: 15,107)
		1001010	,	Cappart D		,

	Class A	(dBuV)	Class B	(dBuV)
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

NOTE: 1. The lower limit shall apply at the transition frequencies.

NOTE: 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz. NOTE: 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

3.1.2 Test Procedures

The basic test procedure was in accordance with ANSI C63.4:2014 (section 7).

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The test results of conducted emissions at mains ports are recorded of six worst margins for quasi-peak (mandatory) [and average (if necessary)] values against the limits at frequencies of interest unless the margin is 20 dB or greater.

Note: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

3.1.3 Test setup



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3.1.4 Test Results

CONDUCTED WORST-CASE DATA:



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Test Mo	ode	See section 2.3	3 F	requency Ran	ge	150KHz ~ 3	30MHz
Test Vo	oltage	See section 2.3	3 Р	HASE		Line (N)	
Enviro Conditi	nmental ions	24.8deg. C,56	% RH T	ested By		Zhu Yulin	
	80 70 60 ≩ 50						
	40 30 20 10 150k 30		0 1M 2N Freque	H HZ	+ + + + 1 6 8 10M	н н И 20	M 30M
NO	40 30 20 10 150k 3(Frequency (MHz)	QuasiPeak	0 1M 2N Freque	M 3M 4M 5M ency in Hz	Margin (dB)	M 20	M 30M
NO 1		QuasiPeak (dBuV) 42.8	Average (dBuV)	A 3M 4M 5M ency in Hz	Margin (dB) 22.6	M 20	M 30M
NO 1 2		QuasiPeak (dBuV) 42.8 34.1	Average (dBuV)	M 3M 4M 5M ency in Hz Limit (dBuV) 65.4 59.6	Margin (dB) 22.6 25.5	M 20	M 30M Corr.Factor (dB) 19.6 19.5
NO 1 2 3		QuasiPeak (dBuV) 42.8 34.1 32.2	Average (dBuV) 	J J M 3M 4M 5N ency in Hz Limit (dBuV) 65.4 65.4 59.6 56.0	Margin (dB) 22.6 25.5 23.8	Line N N N	M 30M Corr.Factor (dB) 19.6 19.5 19.5
NO 1 2 3 4	E 40 30 20 20 10 150k 3(Frequency (MHz) 0.161 0.323 0.562 3.536	QuasiPeak (dBuV) 42.8 34.1 32.2 	Average (dBuV) 23.7	A 3M 4M 5M ency in Hz Limit (dBuV) 65.4 59.6 56.0 46.0	Margin (dB) 22.6 25.5 23.8 22.3	M 20	M 30M Corr.Factor (dB) 19.6 19.5 19.5 19.9
NO 1 2 3 4 5		QuasiPeak (dBuV) 42.8 34.1 32.2 	Average (dBuV) 23.7 24.6	Limit (dBuV) 65.4 59.6 56.0 46.0 46.0	Margin (dB) 22.6 25.5 23.8 22.3 21.4	Line N N N N N N	Corr.Factor (dB) 19.6 19.5 19.5 19.9 20.0

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3.2 Radiated emission

3.2.1 Limits Of Radiated

TEST STANDARD:

FCC Part 15, Subpart B (Section: 15.109), for above 1GHz(section 3.2.2 Table 4) FCC Part 15, Subpart B

Frequency (MHz)	Distance (m)	Class A (dBuV)	Class B (dBuV)	
30 - 88	3	QP: 49.5	QP: 40	
88 - 216	3	QP: 54	QP: 43.5	
216 - 960	3	QP: 56.9	QP: 46	
960-1000	3	QP: 60	QP: 54	
Above 1000	3	Avg: 60 Peak: 80	Avg: 54 Peak: 74	

NOTE: 1. The lower limit shall apply at the transition frequencies.

NOTE: 2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

NOTE: 3. All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

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3.2.2 Test Procedures

The basic test procedure was in accordance with ANSI C63.4:2014 (section 12).

1. From 30 MHz to 1GHz test procedure as below:

- 1) The radiated emissions were tested in a semi-anechoic chamber.
- 2) The Product was placed on the non-conductive turntable 0.1 m above the ground at a chamber.
- 3) Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 120 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
- 4) For each frequency whose maximum record was higher or close to limit, measure its QP value: vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

2. Above 1GHz test procedure as below:

- 1) The radiated emissions were tested in a fully Anechoic Chamber.
- Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 1MHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
- 3) For each frequency whose maximum record was higher or close to limit, measure its AV value: rotate the turntable from 0 to 360 degrees to find the degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to AV value and specified bandwidth with Maximum Hold Mode, and record the maximum value.

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3.2.3 Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



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3.2.4 Test Results (Below 1GHz)



(CVC)

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Test Mo	est Mode See section		on 2.3	Frequer	Frequency Range		30-1000MHz					
Test Voltage		See secti	See section 2.3		Detector Function		Quasi-Peak(QP)					
Environmental Conditions		25.7deg.	25.7deg. C,52% RH		Tested By		Zhu Yulin					
Vertical												
e	⁶⁰ T											
5	i0											
4	0											
[m//m]	0 2				5	6						
Level[d			3	. السب	5	6 CONTRACTOR	tel and the second statements					
20 - The stand of												
10												
	0 +		100M	[1			1G				
	QP Limit QP Detector	ertical PK		Frequency[Hz]								
NO	Freq.	Reading	Factor	Level	Limit	Margin	Height	Angle				
	[MHz]	[dBµV]	[dB/m]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]				
1	34.074	25.47	5.14	20.33	40.00	14.53	100	207				
2	46.201	26.44	6.51	19.93	40.00	13.56	100	343				
3	115.175	22.53	3.31	19.22	43.50	20.97	100	295				
4	144.083	25.30	4.34	20.96	43.50	18.20	100	41				
5	252.249	30.33	11.12	19.21	46.00	15.67	100	12				
o Dav 1	304.0/1	29.17	0.99	22.18	40.00		100	41				
Remark: 1. The emission levels of other frequencies were greater than 200B margin. 2. Level $(dB_UV/m) = Reading (dB_UV/m) + Factor (dB)$												
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).												
4. Margin(dB) = Limit[dBµV/m] - Level [dBµV/m]												

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3.2.5 Test Results (Above 1GHz)



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4. PHOTOGRAPHS OF TEST SETUP

Please refer to the attached file (Test Photos).



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5. PHOTOGRAPHS OF THE EUT

Please refer to the attached file (External Photos and Internal Photos).

----- End of the Report ------

Important

(1) The test report is invalid without the official stamp of CVC;

(2) Any part photocopies of the test report are forbidden without the written permission from CVC;

(3) The test report is invalid without the signatures of Approval and Reviewer;

(4) The test report is invalid if altered;

(5) Objections to the test report must be submitted to CVC within 15 days.

(6) Generally, commission test is responsible for the tested samples only.

(7) As for the test result "-" or "N" means "not applicable", "/" means "not test", "P" means "pass" and "F" means "fail"

The test data and test results given in this test report should only be used for purposes of scientific research, teaching and internal quality control when the CMA symbol is not presented.

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