March 10, 2020

Federal Communications Commission
7435 Oakland Mills Road
Columbia MD 21046

Exhibit Subject: Request for Re-use of Reference Data

We, Astronics CSC submit this formal request to the FCC Authorization and Evaluation Division for an expedited review of a new authorization application. The purpose of this exhibit is this application includes test data from another FCC ID for the reference of EMC/Radio Parameters. This exhibit follows guidance in ***FCC KDB 484596 D01 Referencing Test Data v01*** and it identifies the suitability of using existing reference EMC/Radio Parameter data for a new application.

1- Introduction:

Astronics CSC has created a new product called the Sierra In-Flight Entertainment (IFE) System. This new product incorporates an existing certified WiFi Access Point (manufactured by Aruba Networks) into the new Sierra product housing. The Astronics integration removes the complete electronics assembly from the Aruba certified access point enclosure and incorporates the Aruba electronics/PCB without making changes to the electronics/PCB into the new Sierra IFE product housing.

The electronics/PCB from the certified Aruba Access Point are certified as noted:
Date of Grant: 2/12/2018; 3/8/2018
The Aruba WiFi Access Point is certified as FCC ID: Q9DAPIN0303.
Equipment Class: DTS, UNII-TX
Rule Parts: 15.247, 15.407
Frequency Range(MHz) 2402-2480; 2412-2480
Frequency Range(MHz) 5180-5240; 5260-5320; 5500-5720; 5745-5825

The Aruba electronics/PCB are integrated into the Sierra IFE system with a new certification as noted:
Date of Grant: New Grant
The new Astronics Sierra IFE system is being certified as FCC ID: 2AL4H-E7131901.
Equipment Class: DTS, UNII-TX

Rule Parts: 15.247, 15.407
Frequency Range(MHz) 2402-2480; 2412-2480
Frequency Range(MHz) 5180-5240; 5260-5320; 5500-5720; 5745-5825

Astronics CSC takes full responsibility that the test data in the Aruba reference EMC/Radio reports, the spot checks of compliance for the new Sierra IFE, and any new testing represents compliance in full for the new FCC ID.

2- Explanation of Differences:

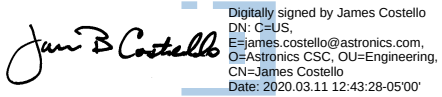
The Aruba WiFi Access Point (FCC ID: Q9DAPIN0303) electronics/PCBs and antenna(s) are removed from the housing in which the Aruba electronics are certified. The Aruba electronics/PCBs and antenna(s) are then designed and integrated into the Astronics Sierra IFE (FCC ID: 2AL4H-E7131901). The antennas are located beneath a radome on the Sierra IFE. The integration of the Aruba electronic assembly into the new Sierra IFE host does not change any of the hardware, firmware, or software as initially certified by Aruba.

3- Spot Check Verification Data Section:

Spot checked data is represented by Elite reports
ETR 1904684-01
ETR 1904684-02
See Reference Section cross reference for cited reports.

4- Reference Section:
The following table noted below provides a detailed matrix listing the cross references for test reports and certified Aruba Access Point products cited with other FCC ID(s).

Sincerely Yours,



James Costello
Chief Technical Officer
Astronics CSC
804 S. Northpoint Blvd
Waukegan, IL 60085
847.244.4500

ASTRONICS
CONNECTIVITY SYSTEMS & CERTIFICATION

Cross Reference Matrix for Justification of Data Reuse.

The FCC ID's and Reports noted in this table represent the original certification and testing performed on the Aruba APIN0303 WiFi Access Point. Since the electronics/PCB from this product are integrated into the Astronics Sierra IFE without the Aruba electronics being changed, much of the original test data noted in this table is used to support the equipment authorization for the Astronics Sierra IFE.

Reference Device	FCC ID	Test Laboratory	Report No.	Rpt Issued	Rule Part	Range (MHz)	Technology	Reference Data Review and Comments
Aruba APIN0303	Q9DAPIN0303	MRT Technology (Suzhou) Co., Ltd	1711TW0103-U1&2	11/19/2017 12/30/2017	15.247	2402-2480	WLAN 802.11b/g/n & BT [2.4GHz]	This report(s) provides test data for the original Aruba APIN0303.
Aruba APIN0303	Q9DAPIN0303	MRT Technology (Suzhou) Co., Ltd	1711TW0103-U3	11/15/2017	15.407	5180-5240 5745-5825	WLAN 802.11a/n/ac [UNII Band I, III]	This report provides test data for the original Aruba APIN0303.
Aruba APIN0303	Q9DAPIN0303	MRT Technology (Suzhou) Co., Ltd	1711TW0103-U7	11/15/2017	15.407	5260-5320 5500-5720	WLAN 802.11a/n/ac [UNII Band II, II-Ext]	This report provides test data for the original Aruba APIN0303.
Aruba APIN0303	Q9DAPIN0303	MRT Technology (Suzhou) Co., Ltd	1710TW0103-U8	2/13/2018	15.407 (h)(2)	5260-5320 5500-5720	DFS WLAN 802.11a/n/ac [UNII Band II, II-Ext]	This report provides test data for the original Aruba APIN0303.

A variant of the APIN0303 is also certified by Aruba Networks identified as the APINP303. It uses the same Qualcomm RF Chipset Model: IPQ4019 and DFS waveform detection mechanism, unchanged from previous Aruba systems. This information is included in the analysis to illustrate that the same Qualcomm chipset used in different Aruba products are equally compliant with respect to DFS performance. The same results should be expected for the Sierra IFE.

Aruba APINP303	Q9DAPINP303	MRT Technology (Suzhou) Co., Ltd	1810TW0102-U5	2/13/2018	15.407 (h)(2)	5260-5320 5500-5720	DFS WLAN 802.11a/n/ac [UNII Band II, II-Ext]	This report illustrates continued DFS compliance when re-tested in a variant of the original Aruba system.

The FCC ID's and Reports noted in this table represent the spot check testing performed on the Sierra IFE that incorporates the Aruba APIN0303. Since the electronics/PCB from the APIN0303 are integrated into the Astronics Sierra IFE without the Aruba electronics being changed, only radiated spot check testing is performed to support the equipment authorization for the Astronics Sierra IFE. In every case all spot check testing identifies passing results.

New Device	FCC ID	Test Laboratory	Report No.	Rpt Issued	Rule Part	Range (MHz)	Technology	
Sierra IFE	2AL4H-E7131901	Elite Electronic Engineering	1904684-01	12/18/2019	15.247	2402-2480	WLAN 802.11b/g/n & BT [2.4GHz]	Spot checks of spurious radiated emissions performed 802.11b 1Mbps Ch 1,6,11 802.11n20 MCSO Ch 11 802.11n40 MCSO Ch3/6/9 802.11n40 MCSO BF Ch9
Sierra IFE	2AL4H-E7131901	Elite Electronic Engineering	1904684-02	11/15/2017	15.407	5180-5240 5745-5825	WLAN 802.11a/n/ac [UNII Band I, III]	Spot checks of spurious radiated emissions performed 802.11a Ch 36/44/48/149/157/165 802.11n20 Ch 149/157/165
Sierra IFE	2AL4H-E7131901	Elite Electronic Engineering	1904684-02	11/15/2017	15.407	5260-5320 5500-5720	WLAN 802.11a/n/ac [UNII Band II, II-Ext]	Spot checks of spurious radiated emissions performed 802.11a Ch 52/60/64/100/120/140 802.11ac20 Ch 100/120/140 802.11ac40 Ch 54/62 802.11ac80 Ch 58 802.11n20 BF Ch 52/60/64
Sierra IFE	2AL4H-E7131901	Elite Electronic Engineering			15.407 (h)(2)	5260-5320 5500-5720	DFS WLAN 802.11a/n/ac [UNII Band II, II-Ext]	No additional spot check testing for DFS was determined necessary and no additional spot check testing performed for DFS. Rationale: 1- Complete DFS testing was originally performed on FCC ID: Q9DAPIN0303 per report 1710TW0103-U8. 2- There are no changes to the Aruba electronics/PCB with the integration into the Sierra IFE. The Sierra IFE uses the same Qualcomm RF Chipset Model: IPQ4019 and DFS waveform detection mechanism, unchanged from previous Aruba systems. 3- DFS Spot checks were completed on a similar Aruba "data reuse" for FCC ID QQ9DAPINP303. In this example, the same Aruba electronics/PCB FCC ID: Q9DAPIN0303 were incorporated in a new Aruba access point FCC ID QQ9DAPINP303. For this grant spot checks were performed conducted and radiated with compliant results. 4- Given that DFS has been tested on Aruba electronics/PCB incorporating the same Qualcomm RF chipset, and that the Sierra IFE incorporates the Aruba electronics/PCB without changes, it was concluded retesting for a third time would not be productive.

804 S. Northpoint Blvd. | Waukegan, IL 60085
+1.847.244.4500