

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

Application of Panasonic Avionics Corporation for 60-Day Special Temporary Authorization (“STA”) to Conduct Earth Stations Onboard Aircraft (“ESAA”) Operations

Call Sign E100089
File No. SES-STA-_____

APPLICATION FOR SPECIAL TEMPORARY AUTHORIZATION

Panasonic Avionics Corporation (“Panasonic”), pursuant to Section 25.120 of the Commission’s rules, respectfully requests special temporary authorization (“STA”) for a period of 60 days,¹ beginning March 31, 2021, to operate its previously licensed Single-Panel Antenna (“SPA”) and Panasonic Phased Array (“PPA”) terminals with the NSS-12 satellite at the 57° E.L. orbit location, which will replace the Yamal-401 satellite in the Panasonic network to provide coverage in the Eastern Europe and Central Asia regions.²

Grant of the STA sought herein will serve the public interest by ensuring the uninterrupted delivery of broadband services during the Commission’s review of Panasonic’s separate modification application to add NSS-12 as an authorized point of communications to its earth station aboard aircraft (“ESAA”) blanket license.³ Panasonic includes a draft Form 312

¹ 47 C.F.R. § 25.120(b)(3) (“The Commission may grant a temporary authorization for a period not to exceed 60 days, if the STA request has not been placed on public notice, and the applicant plans to file a request for regular authority for the service”).

² See Panasonic Avionics Corporation, File No. SES-LIC-20100805-00992, Call Sign E100089, and subsequent filings and modifications (“*ESAA Blanket License*”). ESAAAs are now included in a broader category of broadband satellite mobility terminals called earth stations in motion (“ESIMs”) and governed by Section 25.228 of the Commission’s rules, 47 C.F.R. § 25.228.

³ Panasonic has sought to amend its existing modification application to ensure regular authority to communicate with the NSS-12 satellite consistent with Section 25.120(b)(3). See 47 C.F.R. §

Schedule B and Technical Appendix with technical information pertaining to the ESAA’s proposed operations with NSS-12, consistent with Section 25.117(c) of the Commission’s rules.⁴

I. BACKGROUND

Panasonic provides advanced aeronautical broadband satellite services that enable in-flight communications connectivity to passengers and crew using Ku-band ESAA terminals and a global network of U.S. and foreign satellites and gateway earth stations. Panasonic has fully described its system in prior submissions and hereby incorporates by reference the technical showings regarding the control functionality and other operational characteristics submitted in connection with such prior applications.⁵ Panasonic’s *ESAA Blanket License*, which supports its global ESAA operations on U.S.-registered aircraft (and non-U.S.-registered aircraft traversing U.S. airspace), must be regularly modified to reflect adjustments to Panasonic’s global network resulting from technological developments and changes in customer demand. Most recently, Panasonic filed a modification to add three satellites as authorized points of communication and amended that application to include the NSS-12 satellite in the modification.⁶

II. DISCUSSION

Panasonic hereby seeks an STA for its Single Panel Antenna (“SPA”) and Panasonic Phased Array (“PPA”) terminals to communicate with the NSS-12 satellite, as provided in Table 1, below. The Panasonic terminals will operate consistent with the coordinated parameters of the NSS-12 satellite and the Commission’s rules governing Ku-Band ESAAs.⁷ Grant of the STA

25.120(b)(3); *See* Panasonic Avionics Corporation, File No. SES-MFS-20200513-00528, Call Sign E100089 (“2020 Modification Application”), as amended by File No. SES-AFS-20210225-00404.

⁴ 47 C.F.R. § 25.117(c).

⁵ *See ESAA Blanket License*.

⁶ *See 2020 Modification Application*.

⁷ *See* 47 C.F.R. § 25.228.

will allow Panasonic to further optimize the ESAA system by making available essential satellite capacity along critical international flight routes during the pendency of its modification application to permanently add NSS-12 as a satellite point of communication.

A. Proposed New Satellite Point of Communication

The following table provides an overview of the basic parameters of ESAA operations with the NSS-12 satellite. The satellite is licensed by the Netherlands, a member country of the World Trade Organization (“WTO”), for services covered under the WTO Basic Telecommunications Agreement.⁸ Panasonic seeks to operate the NSS-12 satellite with the SPA and PPA terminals only.

Table 1 - Proposed Satellite Point of Communication⁹

Satellite	License Admin.	Orbital Location	Downlink Freq. (GHz)	ITU Region	Serves U.S.
NSS-12	Netherlands	57° E	10.95-12.75	1, 3	No

Section 25.228 of the Commission’s rules requires that ESAA transmissions comply with the applicable EIRP density limits in §25.218, unless coordinated pursuant to the requirements in §25.220.¹⁰ Panasonic will communicate with the NSS-12 satellite at previously approved off-axis EIRP spectral density (“ESD”) levels, consistent with its satellite coordination agreements

⁸ See 47 C.F.R. § 25.137(a)(2); see also *Amendment of the Commission’s Regulatory Policies to Allow Non-U.S. Licensed Satellites Providing Domestic and International Service in the United States*, Report and Order, IB Docket No. 96-111, 12 FCC Rcd 24094, ¶ 39 (1997) (“We adopt our proposal to apply a presumption in favor of entry in considering applications to access non-U.S. satellites licensed by WTO members to provide services covered by the ... WTO Basic Telecom Agreement.”); *Id.*, ¶ 64 (“[W]e will not evaluate the effective competitive opportunities in the route market for non-U.S. satellites licensed by a WTO member providing WTO covered services. Thus, we will not perform an ECO-Sat test on any route, whether a WTO route market or a non-WTO route market.”).

⁹ The ESAA terminals will operate in the uplink direction within the 14.0-14.5 GHz band consistent with satellite coordination agreements, the Commission’s rules, and applicable international requirements. See attached FCC Form 312 Schedule B for an overview of Panasonic’s ESAA transmit operations.

¹⁰ See C.F.R. § 25.228(a).

with all adjacent satellite networks within six degrees of orbital separation from the NSS-12 satellite.¹¹ Panasonic provides information regarding the operational characteristics of the ESAA terminals in the FCC Form 312 Schedule B and incorporates by reference the performance information and off-axis ESD data previously submitted for the SPA and PPA.¹² Accordingly, Panasonic will operate its terminals at all times consistent with the provisions governing Ku-band ESAA operations.

The NSS-12 satellite has not previously been authorized to communicate with U.S.-licensed ESAA terminals. Panasonic will only operate PPA and SPA terminals with NSS-12 outside of U.S. territory (*i.e.*, the satellite is neither providing service in U.S. airspace nor communicating with a U.S.-licensed gateway earth station). Accordingly, Panasonic provides relevant operational parameters, along with orbital debris mitigation and satellite end-of-life information, rather than a full U.S. market access demonstration under Section 25.137(d) of the Commission's rules. Panasonic also provides a coverage map and link budgets for the satellite in the attached Technical Appendix.¹³

¹¹ See C.F.R. §§ 25.220(d)(1); Technical Appendix at I.1 (Satellite Operator Certification Letter).

¹² See Panasonic Avionics Corporation, File No. SES-MFS-20120913-00818, Call Sign E100089 at Technical Appendix (off-axis ESD plots for the PPA terminal) and File No. SES-MFS-20160819-00730, Call Sign E100089 at Technical Appendix (off-axis ESD plots for the SPA terminal).

¹³ Panasonic notes that the power levels provided in the example link budgets are maximums and Panasonic will operate the terminals at or below the levels provided in the Schedule B at all times.

B. Remote Control Point

Network control and monitoring of the ESAAs in the Panasonic system will continue to be provided by the Panasonic Customer Performance Center (“CPC”) in Lake Forest, California, on a 24/7 basis. The CPC makes use of a network management system (“NMS”) to provide complete control and visibility to all components the Panasonic system. The NMS system has the capability of shutting down any component in the system that is malfunctioning. The primary points of contact at Panasonic’s CPC facility are provided below and in the FCC Form 312, Schedule B.

Panasonic Avionics Corporation
Customer Performance Center
26200 Enterprise Way
Lake Forest, CA 92630 USA
E: cpc@panasonic.aero
T: +1 949 462 1395
M: +1 949 690 6706

C. Non-Conforming ESAA Receive Operations

The Commission’s Table of Frequency Allocations (“Table of Allocations”) contemplates use of the 10.95-11.7 GHz (space-to-Earth) bands by ESAA terminals on an unprotected basis only, and permits such operations in the 11.7-12.2 GHz (space-to-earth) and 14-14.5 GHz (Earth-to-space) bands on a primary basis.¹⁴ As described in Table 1, the NSS-12 satellite also supports operations in the 12.2-12.75 GHz downlink band. Use of this available Ku-band downlink spectrum is essential to Panasonic’s in-flight broadband connectivity offering.

Panasonic will operate in the 11.2-11.45 GHz and 12.2-12.75 GHz bands on an unprotected, non-harmful interference basis outside the United States. In addition, the NSS-12

¹⁴ See 47 C.F.R. § 2.106, n. NG52 and n. NG527A; 47 C.F.R. § 25.228. Note also that ESAA receive operations in all downlink bands will be conducted only outside of the United States.

satellite will operate consistent with ITU regulations and there is no potential for interference from Panasonic's receive-only operations in the subject bands. Thus, Panasonic requests that the Commission permit ESAA operations with NSS-12 in these bands consistent with its practice of permitting ESAA terminals to operate outside the United States on a non-conforming, non-interference basis.¹⁵

D. Public Interest Statement

Grant of the requested STA during the pendency of the separately filed modification application, as amended, will serve the public interest by ensuring access to satellite capacity in the Eastern Europe and Central Asia regions and improving the operational capabilities of the Panasonic ESAA system. This will provide a direct benefit to U.S. consumers who will be able to access improved in-flight broadband applications and will further enhance competition and U.S. leadership in aeronautical broadband services. These benefits will be achieved consistent with the Commission's rules and policies for ESAA operations.

III. CONCLUSION

Based on the foregoing, Panasonic respectfully requests the Commission grant this STA to permit the previously licensed PPA and SPA terminals to communicate with the NSS-12 satellite for a period of 60 days.

¹⁵ See *ESAA Blanket License*.