2550 M Street, NW
Suite 300
Washington, DC 20037

www.lmiadvisors.com

June 5, 2018

VIA ELECTRONIC FILING

Anthony Serafini
Experimental Licensing Branch
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: UltiSat Inc., Call Sign WM9XHN, File No. 0201-EX-ST-2018;
Addition of New Antenna Type for Experimental Testing and Demonstration

Dear Mr. Serafini:

UltiSat Inc. ("UltiSat"), through its representative, hereby notifies the Commission, pursuant to Section 5.77 of the Commission's Rules, 47 C.F.R. § 5.77, that UltiSat will test and demonstrate an additional Ku-band terminal type pursuant to the above-referenced experimental special temporary authority ("STA"), which authorizes the operation of up to 100 BB45 (45cm) Ku-band aeronautical terminals. UltiSat will operate up to ten (10) BB30 (30cm) Ku-band aeronautical terminals within the same operational envelope and pursuant to the same terms and conditions embodied in the existing experimental STA. UltiSat does not request a change to the total number of authorized terminals.

The BB30 terminal, manufactured by Skytech and designed to be mounted on aircraft of various sizes, has been fully certified for aviation safety. UltiSat now seeks to test and demonstrate the terminal for U.S. government applications under its existing experimental authority.

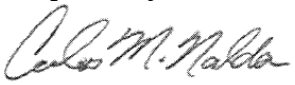
The BB30 terminal complies with Section 25.227 of the Commission's rules governing earth stations aboard aircraft ("ESAAs"),[1] although the terminal will be operated for limited testing and demonstration purposes only. UltiSat acknowledges and accepts that the conditions in its existing experimental license will apply to operation of the BB30 terminal, including operation on an unprotected, non-interference basis, and the requirement to immediately cease operations in the event of harmful interference.

[1] *See* 47 C.F.R. § 25.227.

Because the BB30 antenna will operate within the same emissions envelope as the currently authorized BB45 antenna and UltiSat will otherwise conform to the conditions of its existing experimental license, operation of the terminal is consistent with Section 5.77 of the Commission's Rules, 47 C.F.R. § 5.77.

Please do not hesitate to contact the undersigned with any questions you may have regarding this matter.

Respectfully submitted,



Carlos M. Nalda
LMI Advisors, LLC

On behalf of UltiSat Inc.

Attachment

BB30 (30cm) Antenna System – Performance Characteristics

Parameter	Performance
Antenna Directivity Gain:	29 dBi @ 10.7 GHz; 30.7 dBi @ 12.75 GHz 31.5 dBi @ 14.0 GHz; 31.5dBi @ 14.5 GHz
EIRP	45.5 dBW at 14.5 GHz
G/T (15^{o}K Sky Temperature):	9 dB/K @ 10.7 GHz 10.5 dB/K @ 12.75 GHz
Receive Frequency Range:	10.7 GHz to 12.75 GHz
Transmit Frequency Range:	14.0 GHz to 14.5 GHz
Polarization:	Linear Tx/Dual Pol Rx, Dual Pol Circular Rx only
Cross Polarization Rejection:	20 dB
Antenna Element Type:	Reflector
Tracking Field of View: Azimuth (continuous): Elevation:	 360^{o} +90^{o} to -0^{o}
RMS Pointing Accuracy: Azimuth: Elevation: Polarization:	 0.2^{o} 0.2^{o} Sufficient to maintain specified cross polarization
Azimuth, Elevation, Polarization Motion	Az, El, Roll, 60^{o} / sec, Pol 10°/sec
Azimuth, Elevation, Polarization Acceleration	Az, El, Roll 50^{o} / sec^{2} Pol 15°/sec^{2}