



U.S. Department
of Transportation
**Federal Aviation
Administration**

Aircraft Certification Service
Compliance & Airworthiness Division

Chicago ACO Branch
2300 East Devon Avenue, Rm 107
Des Plaines, IL 60018

April 7, 2021

Mr. Ryan C. Braun
Chief Operating Officer
uAvionix Corporation
2411 W. Winnemac Avenue
Chicago, IL 60625

Dear Mr. Braun:

This is in reply to your letters of January 25, March 26 and April 5, 2021, requesting Technical Standard Order (TSO) authorization for your ping200X. We accept your statement certifying that your article meets the requirements of TSO-C166b, Class B1S, TSO-C112e, Level 2els, Class 1 and TSO-C88b and that you meet the requirements of Title 14 Code of Federal Regulations Part 21 Subpart O. Effective this date, we authorize you to identify the following ping200X with the marking requirements defined in 14 CFR 45.15(b) and in TSO-C166b, TSO-C112e and TSO-C88b.

Part Number	Description
UAV-1002723-(), where UAV-1002723-001 is the first the series	ping200X Hardware
UAV-1002393-(), where UAV-1002393-003 is the first in a series	ping200X PF007 Operating Program Software

We consider your quality system, as defined in your quality control manual, uAvionix Corporation, Quality Assurance Manual, Document Number UAV-1000574-001, Revision P, dated September 10, 2020, satisfactory for production of this article at your Columbia Falls, Montana, manufacturing facility.

You must provide one copy, or online access, to data listed as a furnished data requirement in the TSO to the original owner/installer of each article or multiple articles if furnished to one source (e.g. an operator, type certificate holder, or repair station).

uAvionix Corporation must be furnished the following statement to the original owner or installer of each article (or multiple articles if furnished to one source):

“The conditions and tests for required for TSO approval of this article are minimum performance standards. Those installing this article, on or in a specific type or class of aircraft, must determine that the aircraft installation conditions are within the TSO standards which include any accepted integrated non-TSO functions. TSO articles and any accepted integrated non-TSO

function(s) must have separate approval for installation in an aircraft. The article may be installed only according to 14 CFR part 43 or the applicable airworthiness requirements.

You requested authorization to deviate from the following TSO requirements. These deviations were approved by FAA Memorandum dated October 22, 2020.

TSO	Standard	Paragraph	Title
TSO-C112e	RTCA DO-181E	2.2.19.1.9	UM Protocol (Figure 2-19)
TSO-C112e	RTCA DO-181E	2.2.19.1.10	Comm-A Protocol
TSO-C112e	RTCA DO-181E	2.2.19.1.1.1.b	Interrogation Acceptance Protocol and Broadcast Protocol
TSO-C112e	RTCA DO-181E	2.2.19.1, 2.2.19.1.15 and 2.2.19.2	Multisite Message
TSO-C112e	RTCA DO-181E	2.2.19.1.12.4	Air-Initiated Comm-B
TSO-C112e	RTCA DO-181E	2.2.2.4, 2.2.4.2.5, 2.2.6, 2.2.6.1.1, 2.2.6.1.2, 2.2.6.2, 2.2.6.3, 2.2.7.2.4, 2.2.7.3.1, 2.2.18.2.2, 2.2.18.2.3, 2.2.18.2.9	ATCRBS/Mode S All-Calls
TSO-C166b	RTCA DO-260B	2.2.3.2.6.3, 2.2.3.2.6.4	Airborne Velocity Subtypes 3 & 4

You requested authorization to deviate from TSO-C112e, TSO-C166b and TSO-C88b, for the use of RTCA/DO-178C in lieu of RTCA/DO-178B and authorization to deviate from TSO-C88b for the use of RTCA/DO-160G in lieu of previous revisions of RTCA/DO-160E. These deviations were granted by the Chicago ACO Branch letter dated August 24, 2020.

This TSO authorization, issued under 14 CFR 21.611, is effective until surrendered, withdrawn or otherwise terminated under the provisions of 14CFR 21.613. With notice, we may withdraw this TSO authorization if articles are not in compliance with the applicable TSO performance standards per 14 CFR 21.2.

You must obtain FAA approval prior to making any changes to the location of your manufacturing facilities pursuant to 14 CFR 21.609(b).

Without further FAA approval, we don't allow manufacturers to mark articles after they change their company's name, address, or ownership. You must notify the ACO and MIDO of name, address, or proposed ownership changes.

Per 14 CFR 21.614, a holder of a TSOA may not transfer it. If you wish to transfer it, you must request a transfer from the FAA.

Send to the office below any design change(s) for this TSO article as outlined in 14 CFR 21.619(a). You should notify us of minor design changes within 60 days, unless there is a separate agreed to timeframe. Also, as recipient of this authorization, we require you to report any failure, malfunction, or defect relating to articles produced under this authorization in accordance with the provisions of 14 CFR 21.3.

Please note that technical data the FAA retains may be subject to Freedom of Information Act (FOIA) requests. This office will notify you of any request(s) pertaining to your data and give you the opportunity to protect the data from public disclosure.

If you have any questions regarding this authorization, contact Mr. Jeffrey Kuen at (847) 294-7125 or by email jeffrey.kuen@faa.gov.

Sincerely,

Jeffrey S. Kuen
Senior Avionics Engineer, Systems Section
Chicago ACO Branch