



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

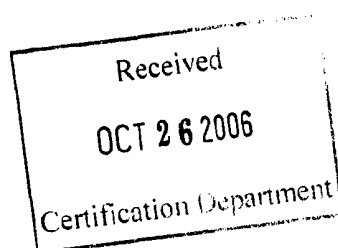
**Transport Airplane Directorate
Aircraft Certification Service**

1601 Lind Avenue S.W.
Renton, Washington 98055-4056

OCT 25 2006

In Reply
Refer To: 130S-06-610

Ms. Colleen M. Portch
Certification Services Administrator
Honeywell International, Inc.
15001 N.E. 36th Street
Redmond, WA 98052



Dear Ms. Portch:

**Subject: Technical Standard Order (TSO) Authorization for TSO C119b for the
Honeywell Traffic Alert and Collision Avoidance System (TCAS II)
TPL-100A MILACAS-FR Processor, Part Number (P/N) 940-0530-001
FOR MILITARY USE ONLY**

We received your letter, reference 06FAA074a dated October 9, 2006, in which you certified that the Honeywell TCAS II TPL-100A MILACAS-FR Processor, P/N 940-0530-001, meets the requirements of Title 14 Code of Federal Regulations (CFR) part 21, subpart O, and the standards of TSO-C119b. In your letter, dated July 5, 2006, you requested a deviation from some requirements of RTCA/DO-185A and RTCA/DO-160D minimum operational performance and environmental qualification standards for the equipment. The Seattle ACO (SACO) reviewed the deviation request and forwarded it to Federal Aviation Administration (FAA) Headquarters for concurrence via SACO memorandum, reference 130S-06-511, dated September 11, 2006. Concurrence was provided via the enclosed AIR-100 memorandum, dated October 16, 2006.

Your certification is acceptable. The TCAS II TPL-100A MILACAS-FR Processor, P/N 940-0530-001, meets TSO-C119b. Your Quality Manual, Document 033-9001-000, Revision U, dated July 31, 2006, has been previously approved by the FAA and is on file at the Seattle Manufacturing Inspection District Office, ANM-108S.

Effective this date, you are authorized to identify the TCAS II TPL-100A MILACAS-FR Processor, P/N 940-0530-001 with the marking requirements defined in 14 CFR § 21.607(d) and TSO-C119b and policy memorandum #PS-AIR100-2005-01 Military Requests for TSO Approval.

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Additional non-TSO functions contained in this article are:

Non-TSO Function	Performance Requirements	Verification Data
ADS-B Surveillance	System Requirements Document, MILACAS-FR (993-0174-300 Rev. F) (section 2.7.9.1.6)	Software Verification Test Results, MILACAS-FR (997-0174-200 Rev. -)
FFS Datalink	System Requirements Document, MILACAS-FR (993-0174-300 Rev. F) (sections 2.7.3.5, 2.7.6.2, 2.7.7.4.6, 2.7.12, 2.7.13, 2.8)	Software Verification Test Results, MILACAS-FR (997-0174-200 Rev. -)
FFS Surveillance	System Requirements Document, MILACAS-FR (993-0174-300 Rev. F) (sections 2.7.3.5, 2.7.6.2, 2.7.9.2, 2.7.10.2, 2.8)	Software Verification Test Results, MILACAS-FR (997-0174-200 Rev. -)

The statement of conformance for functional performance at the equipment level, as well as the hardware and software design assurance, and environmental qualification for the non-TSO function(s) is also accepted on a non-interference basis. The applicable Installation and operating instructions/limitations for the non-TSO functions are contained in "Maintenance Manual, TPL-100A Processor MILACAS-FR, PN 940 0530 001" (012-0793-001 Rev. 0).

Your Quality Control System, as defined in your Quality Control Manual, Quality Assurance Manual Policy/Procedure, Revision A, May 1, 2006, Index ID #17315, is considered satisfactory for production of this article.

The TCAS II TPL-100A MILACAS-FR Processor engineering development and design is located at,

Honeywell International Inc.
1500 N.E. 36th Street
Redmond, WA 98052

The TCAS II TPL-100A MILACAS-FR Processor Production Approval Holder will be:

Honeywell International Inc.
21111 N. 19th Avenue
Phoenix, AZ 85027

The following documents, submitted with your letters, have been reviewed and added to our files in support of your TSO application:

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Honeywell Data Items, PN 940-0530-001

Item	Document Title	Document Number	Rev.	Last Revised
	DO-178B Documentation			
1.	Plan for Software Aspects of Certification (PSAC), MILACAS-FR	992-0174-001	A	December 06, 2005
2.	Version Description Document, MILACAS-FR Application and Voice Database	996-0174-000	-	May 19, 2006
3.	Version Description Document, TPL-100A Boot	996-0185-000	E	May 19, 2006
4.	Version Description Document, MILACAS-FR Data Protection Database	996-0199-000	-	May 19, 2006
5.	Software Configuration Index, MILACAS-FR TPL-100A	993-0174-000	B	July 14, 2006
6.	Software Accomplishment Summary, MILACAS-FR	992-0174-800	-	July 17, 2006
7.	Test Procedure Automation Tool Qualification Data	992-0138-700	B	June 22, 2006
8.	CAS Qualification Tool Qualification Data	992-0138-730	-	December 16, 2003
9.	Structural Coverage Tool Qualification Data LDRA Tool Qualification Data	997-0174-710 997-0174-711	- A	June 22, 2006 July 6, 2006
10.	Tool Qualification Data for the Deos™ Registry Verification Tool	DEOSDOC18	3.3.2	N/A
11.	Tool Qualification Data for the Deos™ Structural Coverage Analysis Tool	DEOSDOC29	1.4.5	March 9, 2005
12.	FAA form 8110-3 recommending approval of the tool qualification data signed by DER Michael M. Bryan	N/A	N/A	N/A
13.	FAA form 8110-3 approving SAS, CID and VDDs signed by DER Michael M. Bryan	N/A	N/A	N/A
	Deos™ DO-178B Documentation			
14.	Software Accomplishment Summary for the Deos Kernel	DEOSDOC12 4	2.0.5	June 22, 2006
15.	Software Configuration Index Document for the Deos Kernel	DEOSDOC12 3	2.0.4	June 22, 2006
16.	Software Accomplishment Summary for the ANSI Library	DEOSDOC64	1.2.0	April 11, 2003
17.	Software Configuration Index Document for the ANSI Library	DEOSDOC65	1.3.0	May 22, 2003
18.	Software Accomplishment Summary for the GNU Startup Library	DEOSDOC54	2.0.0	April 4, 2005
19.	Software Configuration Index Document for the GNU Startup Library	DEOSDOC55	2.0.0	April 2, 2005
20.	Software Accomplishment Summary for the Deos Mailbox Transport Library	DEOSDOC91	2.0.0	Feb 23, 2005
21.	Software Configuration Index Document for the Deos Mailbox Transport Library	DEOSDOC92	2.0.0	Feb 25, 2005

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Item	Document Title	Document Number	Rev.	Last Revised
22.	Software Accomplishment Summary for the Math PowerPC Library	DEOSDOC74	1.3.0	April 12, 2003
23.	Software Configuration Index Document for the Math PowerPC Library	DEOSDOC75	1.3.0	May 22, 2003
24.	Software Accomplishment Summary for the Deos Socket API Library	DEOSDOC95	2.0.0	February 8th, 2005
25.	Software Configuration Index Document for the Deos Socket API Library	DEOSDOC96	2.0.0	February 8th, 2005
26.	FAA form 8110-3 recommending approval of Deos SAS's signed by DER Margaret J. Sonnek	N/A	N/A	N/A
27.	FAA form 8110-3 approving Deos SCI's signed by DER Margaret J. Sonnek	N/A	N/A	N/A
TSO Support Documentation				
28.	Maintenance Manual, TPL-100A Processor MILACAS-FR, PN 940-0530-001	012-0793-001 TR012-0793-34-01 TR012-0793-34-02	0 NA NA	March 1, 2006 June 30, 2006 September 8, 2006
29.	TCAS II/ACAS II Collision Avoidance System User's Manual	ACS-5059	6	January, 2004
30.	Plate, Identification (-030) Plate, Identification (-014)	620-1866 620-1868	R G	June 21, 2006 August 4, 2004
31.	Top Assembly, MILACAS-FR, 6MCU	940-0530-001	L	May 26, 2006
32.	TSO Report, MILACAS-FR	997-0174-500	-	June 30, 2006
33.	TSO Test Results, Media file-CD (includes TSO flight test reports) (included also the CD VDD doc # 050-0174-000 for information on how to extract and view MOPS test data)	050-2801-730	-	June 30, 2006
DO-160D Documentation				
34.	Qualification Test Report for the TPL-100A, Honeywell PN 940-0530-001	940-0530-404	B	June 26, 2006
Non-TSO Function Support Documentation				
35.	System Requirements Document, MILACAS-FR	993-0174-300	F	July 14, 2006
36.	Software Verification Test Results, MILACAS-FR	997-0174-200	-	July 14, 2006
37.	AIRVER Component Qualification Checklist	N/A	N/A	June 15, 2006

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As required by the TSO, the following statement must be furnished with each manufactured unit:

"The conditions and tests required for TSO approval of this article are minimum performance standards. It is the responsibility of those installing this article either on or within a specific type or class of aircraft to determine that the aircraft installation conditions are within the TSO standards. TSO articles must have separate approval for installation in an aircraft. The article may be installed only if performed under 14 CFR Part 43 or the applicable airworthiness requirements."

This authorization is not transferable to another person or location and is effective until surrendered, withdrawn, or otherwise terminated by the Administrator.

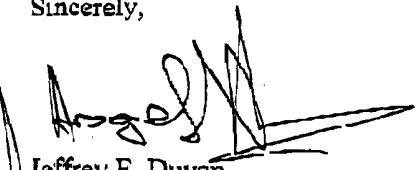
Please note that technical data retained by the FAA may be subject to the Freedom of Information Act (FOIA) request. As such, this office will notify you of all such requests pertaining to your data and afford you the opportunity to contest the release of the data.

This authorization pertains only to the manufacturing operations at the above address and this office must be notified in advance of any proposed relocation.

Since I am very much interested in the service we provide to the aviation community and the general public, it would be helpful if you would provide your thoughts and comments regarding how the approval process went. To gather this information, we have enclosed a short survey (with a self-addressed, stamped envelope) that I hope you will fill out and return. You will note that the return envelope is addressed to me. You may rest assured that your comments will receive my full attention and that I will hold your comments in strict confidence, should you request I do so. Please note that this customer service survey is common to all Aircraft Certification Offices within the FAA's Aircraft Certification Service and is aimed at enabling the Aircraft Certification Service to deliver the best services to each of our customers.

If you have any questions, please contact Mr. Patrice Adjibly of the Systems and Equipment Branch at telephone (425) 917-6459.

Sincerely,



Jeffrey E. Duven
Manager, Seattle Aircraft
Certification Office

2 Enclosures



Federal Aviation Administration

Memorandum

Date: OCT 27 2006

From: Stephen P. Van Trees, Manager, Avionic Systems Branch, AIR-130

Stephen P. Van Trees for

To: Angelos Xidias, Manager, Systems and Equipment Branch, ANM-130S

Cc: Bobbie Smith, AIR-103, Patrice Adjibly, ANM-130S

Prepared by: Sheila I. Mariano, Aerospace Engineer, AIR-130

Subject: Request for Deviation from TSO C119b for Honeywell's TPL-100A

This memorandum is in response to your request dated 11 September 2006, reference number 130S-06-511, for deviations against Technical Standard Order, TSO-C119b, Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS II, for Honeywell's TPL-100A MILACAS-FR Military TCAS II Airborne Equipment.

After review of your recommendation and their letter, dated July 5, 2006, reference number 06FAA069, which contains their formal request and supporting documentation, we concur that it meets the intent of 14 CFR §21.609, Approval for deviation. We, therefore, grant the deviation request.

In addition, we concur with your exception to their deviation request for category M of RTCA DO-160D, section 21 for the Maximum Level of Radiated RF Interference. The Honeywell unit meets category L of RTCA DO-160D, section 21; therefore, their request for deviation to category M from DO-160D is denied, and the unit should be labeled accordingly.

If you have any questions regarding this response, please contact Sheila I. Mariano at (425) 227-2675.