



香港特別行政區政府

民航處

Civil Aviation Department

The Government of the Hong Kong Special Administrative Region

DCA 4047H (RNAV 10) (04/2018)

APPLICATION FOR RNAV 10 OPERATIONAL APPROVAL (FOR HONG KONG OPERATORS)

(For Foreign Operators: apply RNAV 10 operational approval from the State of Operator or Registry)

Please complete the form in BLOCK CAPITALS using black or dark blue ink.

This form is designed to elicit all the required information from those operators requiring RNAV 10 operations approvals. The completed form and supporting documentation should be submitted to Civil Aviation Department at the address listed below:

Flight Standards and Airworthiness Division

Civil Aviation Department Headquarters

1 Tung Fai Road, Chek Lap Kok

Lantau, Hong Kong

Email: ops@cad.gov.hk

Fax: (852) 2362 4250

Note: Application submission should be at least 30 days before the start of operations

Section I Operator details and Signature (completion is mandatory)

Section II Notes for completion

Section III Operator's submissions matrix

Section IV Job Aid (completion is mandatory)



SECTION I. OPERATOR DETAILS AND SIGNATURE

1.	Name of Operator	
2.	Applicant's name	
3.	Title	
4.	Mailing Address	
5.	E-mail Address	
6.	Telephone Number/ Fax Number	
7.	Date of submission	

SIGNATURE: _____



SECTION II. NOTES FOR COMPLETION

1. Applicability
General description of the operation with references to appropriate standards and guidance material.
2. Operator's submissions matrix
Section III of this application form is to highlight the documents required for submission.
3. Documents to be included with the submission
Copies of all documents referred to in the operator's submissions matrix should be included when returning the completed application form to the Civil Aviation Department. Original documents should not be sent; photocopies are sufficient. Do not send complete manuals, only the relevant sections/pages.
FAILURE TO INCLUDE ALL RELEVANT DOCUMENTATION MAY RESULT IN A DELAY IN PROCESSING THE APPLICATION.
4. Submissions and enquiries
Email: ops@cad.gov.hk
Fax: (852) 2362 4250



SECTION III. OPERATOR'S SUBMISSIONS MATRIX

Reference documents	Submission based upon current regulatory material. Compliance statement should show how criteria have been satisfied.
Airworthiness navigation system capability compliance statement	Specify to what standards the navigation system complies.
Aircraft flight manual	Copy of the extract from the AFM showing the certification standard for PBN operation.
Navigation system FMS/autopilot interface capability	Full details of navigation system, FMS and autopilot including type, number, software version.
Navigation accuracy	Statement of certified navigation accuracy.
Navigation database	Details of the supplier of the navigation database, the supplier's approval status and, where necessary, additional quality assurance/data integrity checks applied by the operator or the supplier.
Maintenance	Details of maintenance procedures applicable to the navigation system and associated databases.
Charts	Details of the supplier of charts, supplier's approval status and, where necessary, additional quality assurance/data integrity checks applied by the operator or the supplier.



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Error reporting	Outline of error reporting process and procedures for error analysis, prevention and correction, including feedback to the CAD, navigation database and chart suppliers, as well as OEMs.
Standard operating procedures	Details of applicable operating procedures. It is recommended that the manufacturer's procedures are used as a starting point.
Operations manual	Details of dispatch requirements (navigation accuracy, MEL, RAIM, NOTAMs); RTF phraseology; SOPs; crew authorisation requirements; training and testing requirements.
Any further comments	



SECTION IV. RNAV 10 (DESIGNATED AND AUTHORISED AS RNP 10) JOB AID

APPLICATION TO CONDUCT RNAV 10 OPERATIONS

1. Introduction

RNAV 10 maintains the designation RNP 10, as specified in the ICAO *Performance-based Navigation (PBN) Manual* (Doc 9613).

2. Purpose of the job aid

- a) To provide information on the relevant reference documents.
- b) To provide a record of the operator application, the inspector comments and the operator follow-up action for each relevant paragraph in the reference document(s).

3. Actions recommended for the inspector and operator

- a) At the pre-application meeting, the operator and the inspector review the approval process events and establish the form and content of the approval application.
- b) The operator records references to material in company documents for each relevant paragraph in the job aid.
- c) The operator submits to the inspector the completed job aid with the application.
- d) The inspector records his/her findings for each relevant paragraph in the job aid indicating compliance or necessary corrective action.
- e) The inspector informs the operator as soon as possible when a corrective action is required.
- f) The operator provides the inspector with the revised material when so requested.



- g) The CAD provides the operator with the operations specifications (Ops Specs) and a formal approval when the tasks and documents have been completed.

4. Reference documents

<i>Publisher</i>	<i>Reference</i>	<i>Title</i>
ICAO	Annex 2	Rules of the Air
	Annex 6	Operation of Aircraft
	Doc 4444	Procedure for Air Navigation Services — Air Traffic Management
	Doc 7030	Regional Supplementary Procedures
	Doc 9613	Performance-based Navigation (PBN) Manual
FAA	Order 8400.12()	Required Navigation Performance 10 (RNP 10) Operational Approval
	AC 20-130	Airworthiness Approval of Navigation or Flight Management Systems Integrating Multiple Navigation Sensors
	AC 20-138()	Airworthiness Approval of Global Navigation Satellite System (GNSS) Equipment
	14 CFR Part 121, Subpart G	Manual Requirements
EASA	AMC 20-12	Recognition of FAA Order 8400.12a for RNP 10 Operations
CASA	AC 91U-2(0)	Required Navigation Performance 10 (RNP 10) Operational Authorisation
ICAO (SAM)	AC 91-001	Aircraft and Operators Approval for RNAV 10 Operations (Designated and Authorised as RNP 10)



PART 1. GENERAL INFORMATION

BASIC EVENTS OF THE APPROVAL PROCESS

	<i>Action by Operator</i>	<i>Action by Inspector</i>
1	Establish the need for the authorisation.	
2	Review the AFM, AFM supplement, TC data sheet, other appropriate documents (e.g. STCs, SBs, SLs) to determine aircraft eligibility. If necessary contact the aircraft and/or avionics OEM to confirm eligibility.	
3	Schedule a pre-application meeting with the inspector.	
4		During the pre-application meeting establish: - form and contents of the application; - documents required to support the application; - target date for the application submission; - requirement for flight validation.
5	Submit the application at least 30 days prior to startup of the planned operations.	
6		Review submission.
7	Ensure that amendments to manuals, programmes and other relevant documents are complete; provide training to flight crews, flight dispatchers and maintenance personnel; if required, conduct validation flight(s) as appropriate.	If required, participate in the validation flight(s).
8		Once the requirements have been met, issue operational approval.



PART 2. IDENTIFICATION OF AIRCRAFT AND OPERATORS

Name of Operator: _____

<i>Aircraft manufacturer, model and series</i>	<i>Registration number</i>	<i>Serial number</i>	<i>Long-range navigation system manufacturer, model and number</i>	<i>PBN specification</i>

Date when operator intends to begin RNAV 10 operations: _____

<p>Date when application received by CAD: _____</p> <p>Date of pre-application meeting: _____</p>	FOR OFFICIAL USE
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**PART 3. OPERATOR APPLICATION**

<i>Annex</i>	<i>Title</i>	<i>Inclusion by Operator</i>	<i>Comments by Inspector</i>
A	Request for authorisation		
B	Aircraft group A statement by the operator of the method used to determine eligibility of the aircraft/LRNS combination.		
C	Aircraft eligibility — airworthiness AFM, AFM revision, AFM supplement, TCDS showing that the aircraft RNAV systems are eligible.		
D	Aircraft eligibility — modifications (if applicable) Maintenance records documenting installation or modification of aircraft systems to achieve eligibility.		
E	RNP 10 time limit and area of Operations (if applicable) For aircraft equipped with INS/IRU only, details of time limit and area of operations/routes for which the aircraft is eligible.		
F	Maintenance For aircraft with established LRNS maintenance practices, references to the maintenance document/programme. For recently installed LRNSs, details of the full maintenance practices.		



<i>Annex</i>	<i>Title</i>	<i>Inclusion by Operator</i>	<i>Comments by Inspector</i>
G	Minimum equipment list Showing provisions for LRNS.		
H	Training Training programmes for flight crew, flight dispatchers and maintenance personnel.		
I	Operating policies and procedures Operations manual and checklists.		
J	Performance record Evidence of previous problems, incidents or path-keeping errors, together with corrective action applied.		
K	Withdrawal of approval The need for follow-up action on navigation error reports, with the possibility of removal of approval.		
L	Validation flight plan As required.		



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Contents of the application to be submitted by the operator

- compliance documentation for the aircraft/navigation systems;
- operating procedures and policies;
- sections of the maintenance manual related to LRNS (if not previously reviewed).

Note — Documents may be grouped in a single binder or may be submitted as individual documents.

**PART 4. CONTENTS OF THE OPERATOR APPLICATION**

#	Topic	<i>Specific ICAO reference</i>	<i>Operator compliance description</i>	<i>Inspector disposition/ comments</i>	<i>Follow-up by Inspector</i>
		<i>(Doc 9613 fourth edition Volume II, Part B, Chapter 1)</i>	<i>(Document reference/ method)</i>	<i>(Accepted/ not accepted)</i>	<i>(Status and date)</i>
1	Authorisation request Statement of intent to obtain authorisation.				
2a	Aircraft/navigation system eligibility Documents that establish eligibility. For RNP 10, the eligibility method(s) used and a list of the airframes included in each method.	1.3.3.1 1.3.3.2.1			



#	Topic	Specific ICAO reference	Operator compliance description	Inspector disposition/ comments	Follow-up by Inspector
		(Doc 9613 fourth edition Volume II, Part B, Chapter 1)	(Document reference/ method)	(Accepted/not accepted)	(Status and date)
2b	Dual LRNS At least 2 LRNSs with displays and functions suitable for oceanic operations.	1.3.4			
3	Time limit for aircraft equipped with INS/IRU and no GNSS	1.3.4.2.2 1.3.9.6			
4	Area of operation for aircraft equipped with INS/IRU and no GNSS	1.3.9.6			
5	Training Details of training programmes.	1.3.3.2.2.2 1.3.10			



#	Topic	Specific ICAO reference	Operator compliance description	Inspector disposition/ comments	Follow-up by Inspector
		(Doc 9613 fourth edition Volume II, Part B, Chapter 1)	(Document reference/ method)	(Accepted/not accepted)	(Status and date)
6	Operating policies and Procedures Operations manual and Checklists.	1.3.3.2.2.3 1.3.5			
7	Maintenance practices Document references for established LRNS maintenance practices. Complete copy of appropriate maintenance practices for new LRNS installations.	1.3.3.2.2.5			
8	MEL update Applicable only to operations requiring a MEL.	1.3.3.2.2.4			



#	Topic	<i>Specific ICAO reference</i>	<i>Operator compliance description</i>	<i>Inspector disposition/ comments</i>	<i>Follow-up by Inspector</i>
		<i>(Doc 9613 fourth edition Volume II, Part B, Chapter 1)</i>	<i>(Document reference/ method)</i>	<i>(Accepted/not accepted)</i>	<i>(Status and date)</i>
9	Past performance Record of operating history, including problems, incidents, track-keeping errors and corrective actions.	1.3.3.2.2.6			
10	Withdrawal of RNP 10 authority	1.3.12			
11	Validation flight plan If required.				



PART 5. OPERATING PROCEDURES

#	Topic	Specific ICAO reference	Operator compliance description	Inspector disposition/ comments	Follow-up by Inspector
		(Doc 9613 fourth edition Volume II, Part B, Chapter 1)	(Document reference/ method)	(Accepted/not accepted)	(Status and date)
1	Flight planning	—	—	—	—
1a	Verify that the aircraft is approved for RNP 10 operations.	1.3.7			
1b	Verify that two LRNSs are operational.	1.3.6			
1c	Verify that the RNP 10 time limit has been taken into account (INS/IRU only).	1.3.5.2			
1d	Verify that FDE is available (GNSS only).	1.3.5.2 1.3.8			
1e	Verify the FPL: “R” should appear in field 10 and PBN/A1 in field 18.	1.3.7			



#	Topic	Specific ICAO reference	Operator compliance description	Inspector disposition/ comments	Follow-up by Inspector
		(Doc 9613 fourth edition Volume II, Part B, Chapter 1)	(Document reference/ method)	(Accepted/not accepted)	(Status and date)
1f	Verify operational restrictions as appropriate.	1.3.5.2			
1g	Verify the flight-planned route including diversions.	1.3.7			
2	Pre-flight	—	—	—	—
2a	Verify equipment conditions: <ul style="list-style-type: none"> • review flight technical records; • confirm that maintenance actions are complete. 	1.3.5.3			
2b	Check the condition of navigation antennas and surrounding fuselage skin.	1.3.5.3			



#	Topic	Specific ICAO reference	Operator compliance description	Inspector disposition/ comments	Follow-up by Inspector
		(Doc 9613 fourth edition Volume II, Part B, Chapter 1)	(Document reference/ method)	(Accepted/not accepted)	(Status and date)
2c	Review the emergency procedures for RNP 10 operations.	1.3.5.3			
3	En-route	—	—	—	—
3a	Verify that both LRNSs are RNP 10 capable at the oceanic point of entry.	1.3.9.1			
3b	Prior to the oceanic point of entry, the aircraft position must be independently checked and updated if necessary.	1.3.9.2			
3c	Other mandatory navigation cross-checks.	1.3.9.3			



#	Topic	<i>Specific ICAO reference</i>	<i>Operator compliance description</i>	<i>Inspector disposition/ comments</i>	<i>Follow-up by Inspector</i>
		<i>(Doc 9613 fourth edition Volume II, Part B, Chapter 1)</i>	<i>(Document reference/ method)</i>	<i>(Accepted/not accepted)</i>	<i>(Status and date)</i>
3d	ATC to be notified if unable to comply with RNP 10 requirements or of any deviation required for contingency procedures.	1.3.9.4			
3e	Follow route centre line within 5 NM.	1.3.9.5			
4	Update LRNS position	1.3.9.7			



PART 6. CONTINGENCY PROCEDURES

#	Topic	Specific ICAO reference	Operator compliance description	Inspector disposition/ comments	Follow-up by Inspector
		(Doc 4444, Chapters 5 and 15)	(Document reference/ method)	(Accepted/ not accepted)	(Status and date)
1	Contingencies	15.2.1 and 15.2.2			
1a	Inability to comply with ATC clearance due to meteorological conditions, aircraft performance or pressurisation failure.	15.2.1.1			
1b	Weather deviation.	15.2.3			
1c	Air-ground communications failure.	5.4.2.6.3.2 and 15.3			



Personal Data Collection Statement

1. Purposes of Collection

The personal data provided by means of this form, including all the supporting documents included in the application, will be used by Civil Aviation Department for the following purposes:

- a. Processing of your application in this form;
- b. Carrying out relevant provisions of the Civil Aviation Ordinance (Chapter 448) and its subsidiary Orders / Regulations;
- c. Assisting in the enforcement of any other Ordinances and Regulations by other Government Bureaux and Departments;
- d. For communication purposes between Civil Aviation Department and yourself;
- e. For validation and verification of authenticity of your supporting documents in association with the application;
- f. For statistics and research purposes on the condition that the resulting statistics or results will not be made available in a form which will identify the data subjects.

It is obligatory for you to supply the personal data as required in this form. If you fail to supply the required data, we may not be able to process your application.

2. Classes of Transferees

The personal data you provided by means of this form may be disclosed to:

- a. Other Government Bureaux and Departments for the purposes mentioned in paragraph 1 above;
- b. Other Contracting States of the International Civil Aviation Organisation and Civil Aviation Authorities for the purpose mentioned in paragraph 1 above;

c. Other organisations or agencies for execution of their duties as required by Civil Aviation Department.

3. Access to Personal Data

You have a right of access and correction with respect to personal data as provided for in Sections 18 and 22 and Principle 6 of Schedule 1 of the Personal Data (Privacy) Ordinance. Your right of access includes the right to obtain a copy of your personal data provided by this form.

4. Enquiries

Enquiries concerning the personal data collected by means of this form, including the making of access and correction, should be addressed to :

Flight Standards Office
Flight Standards and Airworthiness Division
Civil Aviation Department Headquarters
1 Tung Fai Road
Hong Kong International Airport
Lantau, Hong Kong

(Attn.: Safety Officer (Technical Support))

Anti-bribery Reminder:

Anyone, while having dealings of any kind with the Civil Aviation Department (CAD), should not offer advantage to the CAD officers, or else he may commit an offence under section 4(1) and/or section 8 of the Prevention of Bribery Ordinance (Chapter 201 of Laws of Hong Kong), and be liable to a maximum penalty of a fine of \$500,000 and imprisonment for 7 years.