



**REPUBLIC OF SAN MARINO
CIVIL AVIATION AUTHORITY**

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APPLICATION FOR ELECTRONIC FLIGHT BAG APPROVAL

A vertical line in the margin indicates an amendment to the previous version.

1. DETAILS OF AIRCRAFT				
Registration Mark:	T7-			
Manufacturer's Designation of Aircraft:				
Serial Number:				
2. DETAILS OF AIRCRAFT OPERATOR				
Name of Operator:				
EFB Administrator:				
Telephone No.:		Email:		
3. EFB HARDWARE & SOFTWARE				
Hardware:	Portable		Installed	
Software application type:	Type A	Type B	Type A	Type B
Make & Type:				
Onboard power supply (for portable):	Yes		No	
Is permission being requested for documents required to be carried (under the applicable CAR OPS), to be available in electronic format only within an EFB?	Yes		No	
Is permission being requested for no paper-back up systems (paperless flight deck)?	Yes		No	
<i>(If yes, please ensure the EFB procedures are clearly described as guided by CAP 06.)</i>				
4. SUPPORTING DOCUMENTATION				
Operator's operational risk assessment	<i>required if no previous EFB approval with same operator on type – also see Note 1 below.</i>			
Details of mounting device/power source	<i>if applicable</i>			
AFM or STC	<i>if installed</i>			
Operations manual (SOPs)	<i>submit section on EFB or EFB Manual – also see Note 2 below</i>			
Initial operational evaluation test report	<i>AOC holders only – also see Note 2 below</i>			
Final operational evaluation test report	<i>AOC holders only – also see Note 2 below</i>			
Performance figures verification	<i>submit only if EFB used to calculate aircraft performance</i>			
Compliance Checklist completed and included (as applicable to type of operation)	<i>Section A to be completed for AOC Holders. Section B to be completed for General Aviation Operators.</i>			

Note 1: Operator's operational risk assessment guidance can be found in Appendix M to CAP 06.

Note 2: If the operator holds an EFB approval for the aircraft type with another ICAO Contracting State, then the operator's risk assessment and the aircraft's operational evaluation test report that such an approval was based on



may be submitted and accepted by San Marino CAA. In all other cases temporary approval will be granted for 90 days for the use of an EFB pending the submission of the final operational evaluation test report.

5. APPLICANTS DECLARATION			
<p>The undersigned certifies that the above items ticked indicate that the EFB installation, continuing airworthiness of systems, minimum equipment for dispatch, operating procedures and flight crew training comply with requirements of CAR OPS 1, CAR OPS 3, CAR OPS 2A or CAR OPS 2H, as applicable.</p> <p>I also confirm that the compliance checklist (below) has been completed and is an accurate statement of compliance.</p> <p>I also confirm that the use of the EFB does not interfere with equipment or systems required for flight.</p>			
Date:			
Name of Flight Operations Manager:		Signature of Flight Operations Manager:	



Electronic Flight Bag (EFB) – Compliance Checklist

This compliance checklist must be completed on initial application for use of an EFB and for subsequent significant changes, e.g. introduction of a new Type B application, change of hardware, or hardware operating system.

Section A – AOC Holders Only

Question	Operator’s Reference in Operations Manual or EFB Policy and Procedures Manual (if not applicable please make with N/A if applicable indicate reference).
Has a risk assessment been undertaken, and submitted, incorporating all the elements required by CAP 06 Paragraph 7.2?	
Has an EMI assessment of the EFB been undertaken and submitted, and using which method?	
Has the EFB undergone environmental testing, especially for rapid decompression in accordance with EUROCAE ED-14D/RTCA DO-160D guidelines and submitted?	
Have the details of the Initial Operational Evaluation Test been confirmed and a plan submitted to the Authority?	
When the Final Operational Report is issued and submitted, will it conform to the requirements of, and follow the format shown in CAP 06 paragraph 7.15 & Appendix I?	
Have all applications to be used on the EFB been classified (Type A or Type B) and detailed in the EFB Policy and Procedures Manual and listed in the OM Part A.	
Is the EFB able to be easily removed from its mount or stowage?	
Are any EFB ‘anti-theft’ devices removed before flight?	
Does the EFB have a suitable Mount or Viewable Stowage? If not have procedures been developed to ensure that it is stowed during critical phases of flight?	
Does the placement of the EFB device impair the crew’s external view or access to instruments? Would it impede emergency egress?	
Is the display within 90 degrees of the crew member’s line of sight, and would glare or reflection interfere with the pilot?	
If aircraft power is used, are the characteristics compatible with the EFB?	
Does the EFB have data connectivity to the aircraft; if so, how is transfer of data controlled?	
Are all connecting cables/power adaptors approved by the EFB manufacturer and placed so as not to cause obstruction?	
Does the EFB battery, and any additional battery power sources, meet the requirements of CAP 06 paragraph 6.2.1.2?	
If a viewable stowage is used has its location been documented as part of the EFB policy?	
Does the viewable stowage and associated mechanisms impede the flight crew members in the performance of any task?	
Is the viewable stowage easily locked in position?	
Does the viewable stowage’s range of movement accommodate the expected range of anthropometric constraints?	
Will the viewable stowage be able to withstand all foreseeable conditions such as turbulence or hard landings?	
With the viewable stowage fitted is there any interference with aircraft controls or equipment?	
Can the EFB device be switched off when held by the viewable stowage?	
Can the viewable stowage be removed from the aircraft without the use of tools?	
Have procedures been put in place to ensure that the means of securing the viewable stowage remain within acceptable limits, and who will be responsible for conducting these serviceability checks?	
If the viewable stowage uses a suction cup type attachment, how was it demonstrated that they will function following a rapid decompression?	



Question	Operator's Reference in Operations Manual or EFB Policy and Procedures Manual (if not applicable please make with N/A if applicable indicate reference).
How has it been demonstrated that following detachment of a viewable stowage it will not jam the flight controls, injure the crew or cause damage?	
Have the Human Machine Interfaces (HMI) of the EFB device and its applications been assessed against human factors principles as detailed in CAP 06 paragraph 7.5 & Appendix D?	
Does the placement of the EFB create unacceptable workload for the pilot or require undue 'head-down' movements during critical stages of flight?	
Has the degradation of the display due to ageing/abrasion been considered?	
Can the screen brightness be adjusted through a range to suit all ambient conditions	
Are all required EFB buttons suitably back-lit?	
Are all controls properly labelled?	
Is there an independent power source for multiple EFBs?	
Has an EFB Administrator been appointed, and where are his/her terms of reference defined?	
Has an EFB Policy and Procedures Manual been produced? Is this a stand-alone document or incorporated into other sections of the Ops Manual?	
Does the EFB Policy and Procedures Manual follow the format shown in CAP 06 Appendix G? If not, how will the operator demonstrate that all required sections have been adequately addressed?	
Will paper-backups be used during the Evaluation Test? If not have arrangements for a LOFT, and possible flight, observations been arranged?	
If the EFB duplicates information provided by aircraft avionics, is clear guidance as to which has primacy stated?	
Has a procedure been developed to ensure that crew verify that the configuration of the EFB and its databases are up to date?	
Have procedures been developed to ensure that crew workload is not adversely affected by use of the EFB, and list any times when the EFB should not be used?	
Have procedures been included to ensure the serviceability of the EFB before flight?	
Does the Operations Manual, or MEL, provide dispatch guidance for unserviceable elements of the EFB?	
Have maintenance procedures for the EFB been developed?	
Is there a programme to replace EFB batteries?	
How are EFB failures reported and how are crew notified of any unserviceability?	
How does the operator ensure the security of the EFB and its data? (Guidance given in ICAO Doc 10020 & CAP 06 paragraph 7.9)	
If electronic signatures are to be used, what procedures has the operator put in place?	
Has initial training on the EFB and its applications been conducted in accordance with the CAP 06 paragraph 7.13?	
Is EFB operation/training included in recurrent training packages?	
If SOPs are dependent on the use of EFB, do all training devices used allow the use of the EFB?	
If performance or mass and balance (M&B) applications are used, what is the source material for the information used by the software?	
How is the integrity of the database files protected from unintentional modifications?	
Does each software version have a unique version number?	
Does the EFB record each performance and M&B calculation for a minimum of 3 months?	



Question	Operator's Reference in Operations Manual or EFB Policy and Procedures Manual (if not applicable please make with N/A if applicable indicate reference).
Have performance and M&B data figures been compared to AFM data across a range of conditions? (See CAP 06 paragraph 7.6 & Appendix F)	
Do procedures specify that calculations must be performed independently by both pilots with a formal cross check, including aircraft output if appropriate, and include a gross error check?	
How does the performance application allow the display of both dispatch (regulatory, factored) and other results (e.g. in-flight or unfactored) for landing calculations?	
Have specific procedures been developed in the event of a single EFB failure?	
How have the additional training requirements of CAP 06 Appendix E been addressed?	
How does the M&B application meet the requirement to show a diagram displaying mass and c-of-g positions?	
How have the Human-factors considerations of CAP 06 Appendix D been addressed?	
How does the presentation of user entries differ from that of default values or entries from aircraft systems/other components of the EFB?	
What indication is shown when an unachievable operation is calculated (e.g. insufficient runway length)?	
Are all data input fields automatically cleared when the EFB shuts down or enters sleep mode, or when modifications are made?	
If an Airport Moving Map Display (AMMD) is used, does the position source meet the requirements of ETSO-C165a?	
How has it been demonstrated that the EFB platform meets the software requirements of the AMMD?	
Have specific AMMD crew procedures and training been developed highlighting that it is only an aid to positional awareness and not to be used as the basis for ground manoeuvring?	
If a commercial off-the-shelf (COTS) position source has been used, how have the requirements of CAP 06 Appendix H been met?	
Do navigational chart applications display all necessary information in an appropriate form?	
If In-Flight Weather (IFW) applications are used, do procedures dictate the primacy of documented weather data and that they are not to be used for tactical decisions or to replace certified weather radar?	
Does the IFW display distinguish between observed and forecast weather?	
Is the validity time of the data displayed?	
Does the IFW display have an appropriate legend?	
Does the IFW display indicate partial or total loss of data?	
What additional training and SOPs have been developed specific to the use of IFW?	
If own-ship position is to be displayed, does the aircraft also have a certified navigational moving map display? (Mandatory except on VFR flights)	
Does the position source for own-ship display meet the requirements of CAP 06 Appendix H?	
Is the own-ship position removed when position data is lost?	
Are the flight crew able to unambiguously differentiate the EFB function from avionics functions available in the cockpit, and in particular with the navigation display.	
If the own-ship position is displayed on terminal charts (SID, STAR or approach plates) is the label 'AIRCRAFT POSITION NOT TO BE USED FOR NAVIGATION' displayed?	
Is the EFB own-ship symbol different from that used in the aircraft's primary navigation display.	



Question	Operator's Reference in Operations Manual or EFB Policy and Procedures Manual (if not applicable please make with N/A if applicable indicate reference).
How is map orientation displayed (e.g. North-up or track-up), and how is this indicated?	
Apart from day-VFR with visual references, is information on track/ETA/Altitude/coordinates/speed removed?	
How do crew disable the own-ship position indication?	
Does EFB training emphasise that EFB own-ship position should not be used as a primary source of navigation?	
Do procedures specify the intended use of the own-ship position?	
Do procedures include EFB into the regular scan of flight deck systems indications, in particular, systematic cross-check with avionics before being used, whatever the position source?	
Have procedures been developed for the case of identification of a discrepancy between the EFB and Avionics?	
Does the OM Part A include the details of the EFB procedures/hardware/software?	



Section B – General Aviation Only

Question	Operator's Reference in Operations Manual or EFB Policy and Procedures Manual (if not applicable please make with N/A if applicable indicate reference).
Has a risk assessment been undertaken, and submitted, incorporating all the elements required by CAP 06 Paragraph 7.2?	
Has an EMI assessment of the EFB been undertaken and submitted, and using which method?	
Has the EFB undergone environmental testing, especially for rapid decompression in accordance with EUROCAE ED-14D/RTCA DO-160D guidelines and submitted?	
Have all applications to be used on the EFB been classified (Type A or Type B) and detailed in the EFB Policy and Procedures Manual and listed in the OM Part A.	
Is the EFB able to be easily removed from its mount or stowage?	
Are any EFB 'anti-theft' devices removed before flight?	
Does the EFB have a suitable Mount or Viewable Stowage? If not have procedures been developed to ensure that it is stowed during critical phases of flight?	
Does the placement of the EFB device impair the crew's external view or access to instruments? Would it impede emergency egress?	
Is the display within 90 degrees of the crew member's line of sight, and would glare or reflection interfere with the pilot?	
If aircraft power is used, are the characteristics compatible with the EFB?	
Does the EFB have data connectivity to the aircraft; if so, how is transfer of data controlled?	
Are all connecting cables/power adaptors approved by the EFB manufacturer and placed so as not to cause obstruction?	
Does the EFB battery, and any additional battery power sources, meet the requirements of CAP 06 paragraph 6.2.1.2?	
If a viewable stowage is used has its location been documented as part of the EFB policy?	
Does the viewable stowage and associated mechanisms impede the flight crew members in the performance of any task?	
Is the viewable stowage easily locked in position?	
Does the viewable stowage's range of movement accommodate the expected range of anthropometric constraints?	
Will the viewable stowage be able to withstand all foreseeable conditions such as turbulence or hard landings?	
With the viewable stowage fitted is there any interference with aircraft controls or equipment?	
Can the EFB device be switched off when held by the viewable stowage?	
Can the viewable stowage be removed from the aircraft without the use of tools?	
Have procedures been put in place to ensure that the means of securing the viewable stowage remain within acceptable limits, and who will be responsible for conducting these serviceability checks?	
If the viewable stowage uses a suction cup type attachment, how was it demonstrated that they will function following a rapid decompression?	
How has it been demonstrated that following detachment of a viewable stowage it will not jam the flight controls, injure the crew or cause damage?	
Has the degradation of the display due to ageing/abrasion been considered?	
Can the screen brightness be adjusted through a range to suit all ambient conditions	
Are all required EFB buttons suitably back-lit?	
Are all controls properly labelled?	
What is the intended power source for the EFB, and how does the operator demonstrate its safety and adequacy?	



Question	Operator's Reference in Operations Manual or EFB Policy and Procedures Manual (if not applicable please make with N/A if applicable indicate reference).
Has the safe stowage and use of the EFB under any foreseeable environmental conditions e.g. turbulence, been evaluated?	
What procedure has been adopted to ensure that any future changes to the EFB, hardware or software, are adequately risk assessed?	
What EFB administrative procedures have been developed to ensure adequate support for users, security validity and integrity of the device and software?	
If the EFB duplicates functions of the aircraft avionics, do procedures clearly identify which has primacy?	
Have procedures been developed to guide crew in the event that EFB information differs from that of the avionics?	
What procedures have been implemented to ensure that crew check that EFB data is up to date?	
What procedures have been implemented to ensure that the EFB does not cause excessive workload or preoccupation by the crew?	
What dispatch criteria have been established in the case of unserviceability of the EFB system?	
What procedures have been implemented for the routine maintenance of the EFB?	
What security procedures have been implemented to ensure the security of the EFB data?	
If electronic signatures are to be used, what procedures has the operator put in place?	
Has initial training on the EFB and its applications been conducted in accordance with the CAP 06 paragraph 7.13?	
If performance or mass and balance (M&B) applications are used, what is the source material for the information used by the software?	
Is the integrity of Performance and M&B applications checked by the programme before performing calculations?	
How is the integrity of the database files protected from unintentional modifications?	
Does Performance and M&B software have a unique version number?	
Are all Performance and M&B calculations retained for a minimum of 3 months?	
Have performance and M&B data figures been compared to AFM data across a range of conditions? (See CAP 06 paragraph 7.6 & Appendix F)	
Do procedures specify that calculations must be performed independently by both pilots with a formal cross check, including aircraft output if appropriate, and include a gross error check?	
How does the performance application allow the display of both dispatch (regulatory, factored) and other results (e.g. in-flight or unfactored) for landing calculations?	
How does the M&B application meet the requirement to show a diagram displaying mass and c-of-g positions?	
How have the Human-factors considerations of CAP 06 Appendix D been addressed?	
Are all data input fields automatically cleared when the EFB shuts down or enters sleep mode, or when modifications are made?	
If an Airport Moving Map Display (AMMD) is used, does the position source meet the requirements of ETSO-C165a?	
How has it been demonstrated that the EFB platform meets the software requirements of the AMMD?	
Have specific AMMD crew procedures and training been developed highlighting that it is only an aid to positional awareness and not to be used as the basis for ground manoeuvring?	



Question	Operator's Reference in Operations Manual or EFB Policy and Procedures Manual (if not applicable please make with N/A if applicable indicate reference).
If a commercial off-the-shelf (COTS) position source has been used, how have the requirements of CAP 06 Appendix H been met?	
Do navigational chart applications display all necessary information in an appropriate form?	
If In-Flight Weather (IFW) applications are used, do procedures dictate the primacy of documented weather data and that they are not to be used for tactical decisions or to replace certified weather radar?	
If own-ship position is to be displayed, does the aircraft also have a certified navigational moving map display? (Mandatory except on VFR flights)	
Does the position source for own-ship display meet the requirements of CAP 06 Appendix H?	
Is the own-ship position removed when position data is lost?	
Are the flight crew able to unambiguously differentiate the EFB function from avionics functions available in the cockpit, and in particular with the navigation display.	
If the own-ship position is displayed on terminal charts (SID, STAR or approach plates) is the label 'AIRCRAFT POSITION NOT TO BE USED FOR NAVIGATION' displayed?	
Is the EFB own-ship symbol different from that used in the aircraft's primary navigation display.	
How is map orientation displayed (e.g. North-up or track-up), and how is this indicated?	
Apart from day-VFR with visual references, is information on track/ETA/Altitude/coordinates/speed removed?	
How do crew disable the own-ship position indication?	
Does EFB training emphasise that EFB own-ship position should not be used as a primary source of navigation?	
Do procedures specify the intended use of the own-ship position?	
Do procedures include EFB into the regular scan of flight deck systems indications, in particular, systematic cross-check with avionics before being used, whatever the position source?	
Have procedures been developed for the case of identification of a discrepancy between the EFB and Avionics?	