**EFB application form – Initial or Variation application**

This application form shall be in possession of the Belgian CAA at least 30 days before the intended date of beginning of the operational evaluation test period.

For an initial application, this application form shall be completed together with Form 1163a AIR-OPS EFB compliance checklist.

To be returned to BCAA Operations Directorate at : ops.queries@mobilit.fgov.be

|  |
| --- |
| **A. Contact details** |
| Operator official name |  |
| Address (registered office) |  |
| Post code and Town |  |
| Nominated Person Flight Operations |  |
| Nominated Person Crew Training |  |
| Nominated Person Continuing Airworthiness |  |
| EFB Administrator |  |
|  E-mail address |  |

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| --- |
| **B. aircraft details** |
| Aircraft Manufacturer  |  |
| Aircraft Type/Mark/Series |  |
| Aircraft Registration(s) |  |
| Additional information |  |

|  |
| --- |
| **C. SCOPE** |
| EFB | [ ]  Initial application [ ]  Additional request |
| Intended date of the start of the operational evaluation test (test period) |  |
| Hardware class | [ ]  Viewable stowage [ ]  Mounting device |
| Software type | ☐ Type A ☐ Type B ☐ miscellaneous (non-EFB) software |
| Power supply | ☐ Aircraft power used ☐ EFB battery only |
| Data connectivity | ☐ No EFB-Aircraft interface ☐ Aircraft-EFB unidirectional ☐ Aircraft-EFB bidirectional |
| Purpose of the EFB |  |
| The EFB is to be used | ☐ On ground ☐ In-flight |
|  Phases | ☐ Non critical phases ☐ All flight phases - EMI docs enclosed |
|  Used by | ☐ Flight crew ☐ Cabin crew (non-EFB) |

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| **D. AIRWORTHINESS** |
| Aircraft modification | ☐ EFB has no impact on airworthiness ☐ EFB capability by aircraft design☐ Aircraft modification incorporated |
| Modification reference |  |
| Maintenance program | ☐ Instructions for continued airworthiness incorporated in AMP☐ No influence on AMP |
| Remark(s) |  |

|  |
| --- |
| **E. HARDWARE APPLICATION** |
| Hardware platform | ☐ Toughbook ☐ Tablet |
|  Make, type |  |
| Data storage device installed | ☐ Hard disk ☐ USB Stick ☐ CD/DVD ☐ Memory card (SD, CF,…) ☐ Other : |
|  Used for EFB | ☐ Hard disk ☐ USB Stick ☐ CD/DVD☐ Memory card (SD, CF,…) ☐ Other : |
| Data transfer features installed | ☐ USB ☐ Bluetooth ☐ IR ☐ Firewire ☐ Serial ☐ WIFI ☐ Ethernet ☐ Other : |
|  Used for EFB | ☐ USB ☐ Bluetooth ☐ IR ☐ Firewire ☐ Serial ☐ WIFI ☐ Ethernet ☐ Other : |
| Cursor navigation | ☐ Touch screen ☐ Trackball ☐ Touchpad ☐ Mouse ☐ Keyboard ☐ Other : |
| Batteries | ☐ Lithium batteries used - Liquid spillage issues addressed in documentation☐ No Lithium batteries used |
| Remark(s) |  |

|  |
| --- |
| **F. SOFTWARE APPLICATION(S)** |
| Operating system (Windows, Apple OS, MAC OS, Linux, Android, …) |  |
|  Additional information |  |
| Application(s) based on | ☐ Manufacturer application ☐ MS Office ☐ Adobe PDF ☐ html ☐ Other : |
|  Additional information |  |
| Program settings | ☐ by EFB Administrator only ☐ by end user ☐ by EFB Administrator + end user |
|  Additional information |  |
| Intensions / tasks | ☐ Data presentation (Manuals) ☐ Data processing (Calculations) |

|  |
| --- |
| **G. OPERATION, TRAINING, QUALIFICATION** |
| Enter the manual reference (Chapter, subchapter) for each of the following :  |
| System administration / Data base update |  |
| System description |  |
| System operation |  |
| System failure / Contingency procedure |  |
| Staff initial training |  |
| Staff recurrent training |  |

**POLICY & GUIDANCE NOTES**

1. **Applicability**

Applications from operators to use an EFB system shall be considered on a case by case basis.

It shall be necessary for the operator to propose the required changes to the Operations Manual and nominate an EFB Administrator. The EFB Administrator shall receive appropriate training and have a good working knowledge of the proposed system hardware and operating system.

Mounting devices, Installed Resources for Portable EFB’s and Installed EFB’s require the BCAA’s Airworthiness approval. The BCAA Airworthiness Division shall evaluate all maintenance/airworthiness factors and advise BCAA-OPS when Airworthiness approval has been granted.

Type A applications or Miscellaneous (non-EFB) software applications hosted in Portable EFB’s can be used by properly trained pilots when exercising their privileges and without the need for any notification or application for operational approval to the BCAA. Before using a type B application hosted on EFB, operators shall apply to the BCAA for operational acceptance.

The evaluation shall be conducted by the BCAA when the system hosts Type B applications.

1. **Application Form and Matrix**

The completed matrix below shall be submitted together with the application form. The application form and matrix shall be completed with the support of the **AIR-OPS Regulation (EU) No 965/2012** and **AMC 20-25A**.

All applicants should complete Column “**Document Reference**” of this matrix in full. A separate matrix and application form must be completed for different EFB model computing device.

All relevant documentation shall be submitted in digital format. These shall include :

* Applicable extracts from the Operations Manual parts A, B, D, Compliance Monitoring Manual and MEL, and a **EFB Policy and Procedures Manual** to include all EFB relevant information, policies and procedures.
* EMI demonstration report
* Environment testing
* Details of Risk Assessment conducted
* Validation result for Type B software applications
* AFM supplement and/or STC as applicable for mounting device and installed EFB
* Amendments to maintenance programme where applicable.

This application form shall be signed by the responsible manager and by the Compliance Monitoring Manager.

**Failure to complete the matrix may result in a delay in processing your application.**

1. **EFB Administrator**

The name and surname of nominated EFB Administrator is to be stated in the Operations Manual and shown in the company’s organisation structure. He should report to the Nominated Person Flight Operations.

Please remember that the EFB Administrator has to be suitably qualified and have received appropriate training to discharge his EFB duties.

1. **Documents to be included with the application**

Copies of all documents referred to in Column “**Document Reference**” of the matrixes below should be included when returning the completed application form to the BCAA.

**Failure to include all relevant documentation may result in a delay in processing the application.**

1. **Operational Evaluation Test (AMC3 SPA.EFB.100(b))**

The operator is required to conduct an operational evaluation test only after the evaluation of the application and receipt of authorisation from BCAA. The operator shall inform BCAA of the intention to commence the operational evaluation test. Sufficient time shall be given to the BCAA to review the submitted information.

The notification of the test should at least include :

* Starting date of the operational evaluation test
* Aircraft involved

At the end of the operational evaluation test period, the operator shall submit a report, called Final Operational Report, verifying that the elements covered in the matrix have been satisfied.

The operational evaluation test period should consist of an in-service proving period with a standard duration of 6 months. The BCAA may extend this period if the number of flights operated in this period is not sufficient to evaluate the EFB system. Operators wishing to reduce this proving period shall justify this by submitting the appropriate justification in its operational evaluation plan to the BCAA.

**Applications replacing paper products with an initial retention of paper backup :**

The paper backup shall initially be retained as a backup.

1. **Final Operational Report (AMC3 SPA.EFB.100(b) paragraph (b))**

At the end of the operational evaluation test, the operator shall produce and retain a final operational report, that summaries all the activities performed and the means of compliance used, supporting the operational use of the EFB system. An example of typical items that the operator should include in this report can be found in **GM1 SPA.EFB.100(b)**.

| **Nr** | **Description** | **Document Reference** | **BCAA Remark** |
| --- | --- | --- | --- |
| **H. COMPLIANCE MATRIX** |
| 1. **Airworthiness Approval (AMC 20-25A Section 5)**
 |
| 1 | **Installed EFB*** Approval of Installation and Hardware Aircraft Type Definition, Major/Minor Modification, Supplemental Type Certificate, Service Bulletin). Refer to 5.1.2.
 |  |  |
| 2 | **Installed Resources*** Installed resources such as a mounting device (an installed remote display, a control device or docking station). Refer to 5.1.1.
 |  |  |
| 3 | **Certification documentation*** AFM Supplement for the installed EFB and/or certified installed resources. Refer to 5.2.
 |  |  |
| 4 | * Instructions for Continued Airworthiness
* Aircraft Maintenance Programme
* Installed EFB
 |  |  |
| 1. **Operational Assessment (AIR-OPS Parts CAT & SPA)**
 |
| The operator shall conduct an operational evaluation test, which should allow verification that the below elements have been satisfied before final decision on the operational use of the EFB.The matrix below follows **AIR-OPS Parts CAT & SPA** sequence for ease of reference. |
| 1 | **Hardware Operational Assessment****(Applicable to Portable EFB and certain Installed Resources)** |
| Electronic Interference (EMI) demonstrationsRefer to AMC1 CAT.GEN.MPA.141(a) paragraph (f), which refers to AMC1 CAT.GEN.MPA.140.For PED device intended to operate during all phases of flight, the operator is responsible for ensuring that the PED will not interfere with aircraft equipment.* Advise which method of compliance is used. Refer to AMC1 CAT.GEN.MPA.140 paragraph (d)(1)(i).

For operators intending to activate transmitting capability of the EFB during flight other than in those certified at aircraft level (documented in AFM or equivalent document) the operator is responsible to ensure that the T-PED will not interfere with the operation of aircraft equipment.* Advise which test requirement is met and how. Refer to AMC1 CAT.GEN.MPA.140 paragraph (d)(1)(ii).
 |  |  |
| 2 | BatteriesRefer to AMC1 CAT.GEN.MPA.141(a) paragraph (g), which refers to AMC1 CAT.GEN.MPA.140 paragraph (f).When EFB are used with rechargeable lithium batteries operators should collect evidence of testing standards.* Advise to which standards the batteries are compliant.
 |  |  |
| 3 | Viewable Stowage Refer to AMC1 CAT.GEN.MPA.141(a) paragraph (h).* Document how the provisions of the location, procedures and other factors such as holding capacity are recorded.

*NOTE : This may be performed through vibration tests available from third parties.* |  |  |
| 4 | Display characteristicsRefer to AMC1 CAT.GEN.MPA.141(a) paragraph (b) and AMC1 SPA.EFB.100(b) paragraph (b).* Provide criteria for selection of placement of EFB and display characteristics.

*NOTE : Additional information can be found in GM1 CAT.GEN.MPA.141(a).* |  |  |
| 5 | Power sourceRefer to AMC1 SPA.EFB.100(b) paragraph (c).If a power source is used, advise how considerations in AMC1 SPA.EFB.100(b) paragraph (c) are certified and evidenced.  |  |  |
| 6 | Environmental TestingRefer to AMC1 SPA.EFB.100(b) paragraph (d).* Provide test results for the hardware unit intended for use.

*NOTE : New tests / results may be required when EFB model or battery type is changed.* |  |  |
| 7 | **Software Operational Assessment****(Applicable to all types of EFB)** |
| Fill in only if you want to use Type A software applications.* Advise how HMI and human factors guidance material are followed. (Refer to AMC1 SPA.EFB.100(b)(2))
* This software shall only be used by trained pilots. (Applicable only to Portable EFB)
 |  |  |
| 8 | Fill in only if you want to use Type B software applications.* This software shall be assessed in accordance with AMC1 SPA.EFB.100(b)(1) (Risk Assessment)
* If Airport Moving Map Display (AMMD) is used, provide operational procedures. (Refer to AMC1 SPA.EFB.100(b)(3))
 |  |  |
| 9 | Fill in only if you want to use Miscellaneous (non-EFB) software applications.* Provide details of how these applications are managed by the EFB administrator and how they do not adversely impact the operation of the EFB. Refer to AMC1 CAT.GEN.MPA.141(b) paragraph (b).
 |  |  |
| 10 | **Changes to EFB (AMC2 SPA.EFB.100(b))****(Applicable to all types of EFB)** |
| Provide documentation of how changes that require prior assessment and approval of BCAA and those which do not require approval are managed. |  |  |
| 11 | **Operational evaluation test (AMC3 SPA.EFB.100(b))****(Applicable to all types of EFB)** |
| The operator shall conduct an Operational Evaluation Test (test period) and submit a plan to the BCAA. |  |  |
| 12 | **Risk assessment for EFB systems (AMC1 SPA.EFB.100(b)(1))****(Applicable to all types of EFB)** |
| The operator shall carry out a risk assessment as part of its hazard identification and risk management process required by ORO.GEN.200.* Provide a copy of the risk assessment, detailing how items in AMC1 SPA.EFB.100(b)(1) paragraph (a) and AMC1 SPA.EFB.100(b)(1) paragraph (b) are discussed.
 |  |  |
| 13 | **Compliance Monitoring****(Applicable to all types of EFB)** |
| The EFB shall be included in the compliance monitoring system as required by ORO.GEN.200.* Provide evidence of compliance manuals/sections and audit plans specific to EFB use.
 |  |  |
| 14 | **Human Factors Assessment (AMC1 SPA.EFB.100(b)(2))****(Applicable to all types of EFB)** |
| Provide an assessment of the human machine interface, installation and aspects governing CRM when using EFB. Further elements to be assessed can be found in AMC1 SPA.EFB.100(b)(2). |  |  |
| 15 | **Role of EFB administrator (AMC1 SPA.EFB.100(b)(3)) and EFB policy and procedures manual (AMC2 SPA.EFB.100(b)(3)) (Applicable to all types of EFB)** |
| The role of the EFB administrator is a key factor in the management of EFB systems. Provide details of the roles/duties and responsibilities of the administrator. These shall also include minimum training requirements.Procedures for continuity of management in case of absence are also required. The EFB policy and procedures manual shall be controlled and under the responsibility of the EFB Administrator. Document how the procedures and layout of the manual contain those elements in GM1 SPA.EFB.100(b)(3) (this is a non-exhaustive list). |  |  |
| 16 | **Flight crew operating procedures (AMC3 SPA.EFB.100(b)(3) paragraphs (a), (b) and (c)) (Applicable to all types of EFB)** |
| Detail the following aspects :* Procedures for using EFB systems with other flight crew compartment systems.
* Flight crew awareness of EFB software/database revisions.
* Procedures to mitigate and/or control workload.
* Define flight crew responsibilities for performance calculations.
 |  |  |
| 17 | **Dispatch Considerations (AMC3 SPA.EFB.100(b)(3) paragraph (d))****(Applicable to all types of EFB)** |
| Dispatch considerations for EFB systems may either be included in the Operations Manual or MEL. Refer to AMC3 SPA.EFB.100(b)(3) paragraph (d) for details. |  |  |
| 18 | **EFB system maintenance (AMC3 SPA.EFB.100(b)(3) paragraph (e))****(Applicable to all types of EFB)** |
| Procedures shall be established for the routine maintenance of the EFB system. These shall also include actions in case of failures or unserviceability. |  |  |
| 19 | **EFB system security (AMC3 SPA.EFB.100(b)(3) paragraph (f))****(Applicable to all types of EFB)** |
| The EFB system shall be secure from unauthorised intervention. * Provide details of procedures and measures taken by the EFB administrator to ensure system security.

NOTE : Further guidance can be found in GM3 SPA.EFB.100(b)(3). |  |  |
| 20 | **Electronic signatures (AMC3 SPA.EFB.100(b)(3) paragraph (g))****(Applicable to all types of EFB)** |
| If operator intends to use electronic signatures to signify acceptance or authority in EFB applications, these need to fulfil the same degree of security requirement as a handwritten one or any other form of signature it intends to replace.  |  |  |
| 21 | **Flight crew training (AMC4 SPA.EFB.100(b)(3))****(Applicable to all types of EFB)** |
| Flight crew shall be given specific training on the use of EFB before it is operationally used. Training procedures shall be included in the OM Part D.* Provide extracts of ground training programme and syllabus to be followed.
* Provide elements that shall be assessed during LOFT and line training sessions.

NOTE : Further guidance can be found in GM2 SPA.EFB.100(b)(3). |  |  |
| 22 | **Specific considerations for mass and balance and performance applications** **(AMC5 SPA.EFB.100(b)(3)) (Applicable to all types of EFB)** |
| If aircraft mass and balance and performance application will be managed through EFB usage, these shall form part of the evaluation. Further considerations can be found in AMC5 SPA.EFB.100(b)(3). |  |  |
| 23 | **Airport Moving Map Display (AMMD) application with own-ship position** **(AMC6 SPA.EFB.100(b)(3)) (Applicable to all types of EFB)** |
| If an Airport Moving Map Display (AMMD) is used, the position source shall meet the requirements of ETSO-C165a.It shall been demonstrated that the EFB platform meets the software requirements of the AMMD.Specific AMMD crew procedures and training shall be developed highlighting that it is only an aid to positional awareness and not to be used as the basis for ground manoeuvring. |  |  |
| 24 | **Use of Commercial Off-The-Shelf (COTS) position source (AMC7 SPA.EFB.100(b)(3))** **(Applicable to all types of EFB)** |
| If a commercial off-the-shelf (COTS) position source has been used, the requirements of AMC 7 SPA.EFB.100(b)(3) shall be detailed.NOTE : Further guidance can be found in GM5 SPA.EFB.100(b)(3). |  |  |
| 25 | **Chart applications (AMC8 SPA.EFB.100(b)(3))** **(Applicable to all types of EFB)** |
| Navigational chart applications shall display all necessary information in an appropriate form. |  |  |
| 26 | **In-flight weather (IFW) applications (AMC9 SPA.EFB.100(b)(3))** **(Applicable to all types of EFB)** |
| If In-Flight Weather (IFW) applications are used, procedures shall dictate the primacy of documented weather data and they are not to be used for tactical decisions or to replace certified weather radar.* The IFW display shall distinguish between observed and forecast weather.
* The validity time of the data shall be displayed.
* The IFW display shall have an appropriate legend.
* The IFW display shall indicate partial or total loss of data.
* Provide details of additional training and SOPs that have been developed specific to the use of IFW.

NOTE : Further guidance can be found in GM4 SPA.EFB.100(b)(3). |  |  |
| 27 | **Applications displaying own-ship position in flight (AMC10 SPA.EFB.100(b)(3))****(Applicable to all types of EFB)** |
| If own-ship position is to be displayed, the aircraft shall also have a certified navigational moving map display (except on VFR flights).* The position source for own-ship display shall meet the requirements of AMC7 SPA.EFB.100(b)(3).
* The own-ship position shall be removed when position data is lost.

The flight crew shall be able to unambiguously differentiate the EFB function from avionics functions available in the cockpit, and in particular with the navigation display.* Provide details about the display.
* Provide means to disable the own-ship position indication to the flight crew.

EFB training shall emphasise that EFB own-ship position shall not be used as a primary source of navigation.* Specify the intended use of the own-ship position.
* 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.
* Provide procedures for the case of identification of a discrepancy between the EFB and Avionics.

NOTE : Further guidance can be found in GM6 SPA.EFB.100(b)(3). |  |  |
| 28 | **EFB POLICY AND PROCEDURES MANUAL (GM1 SPA.EFB.100(b)(3))** |
| These details may be included in the EFB Policy and Procedures Manual or in any other controlled document which may be referenced during application phase. |  |  |

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| --- |
| List of attached annexes : |
|  |
| **Name & Signature & Date of Signature** *(dd/mm/yyyy)* **of responsible manager :**  | **Name & Signature & Date of Signature** *(dd/mm/yyyy)* **of Compliance Monitoring Manager :** |