BY ORDER OF THE COMMANDER
AIR FORCE GLOBAL STRIKE COMMAND

AIR FORCE GLOBAL STRIKE COMMAND
INSTRUCTION 11-270

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Flying Operations

ELECTRONIC FLIGHT BAG OPERATIONS

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This instruction implements AFPD 11-2, *Aircrew Operations*, by prescribing procedures for Electronic Flight Bag (EFB) program implementation, execution, and sustainment. This instruction applies to all Air Force Global Strike Command (AFGSC) flying units, as well as Air Force Reserve Command (AFRC) and Air National Guard (ANG) Total Force Integration (TFI) flying units that maintain an association with active duty AFGSC flying units. It does not apply to United States Space Force. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and disposed of in accordance with the Air Force Records Information Management System (AFRIMS) Record Disposition Schedule (RDS). Refer recommended changes and questions about this publication to Headquarters Air Force Global Strike Command Standardization and Evaluation (HQ AFGSC/A3TV) at 245 Davis Ave E, Ste 168, Barksdale AFB, LA 71110, DSN 781-3456, Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*. The authorities to waive wing, and unit level requirements in this publication are identified with a tier number ("T-0, T-1, T-2, T-3") following the compliance statement. See DAFI 33-360, *Publications and Forms Management*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate tier waiver approval authority, or alternately, to the publication OPR for non-tiered compliance items, utilizing guidance identified in DAFI 33-360. This publication may be supplemented at any level, but all direct supplements must be routed to the OPR of this publication for coordination prior to certification and approval. The

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SUMMARY OF CHANGES

This interim change revises AFGSCI 11-270 by (1) changing the terminology used for the term Blacklist to Denying and applicable references. A margin bar (|) indicates newly revised material.

Chapter 1

GENERAL INFORMATION

1.1. Purpose. This instruction provides directive guidance on the HQ AFGSC EFB program, to include its development, processes, operation, and employment. This instruction does not apply to portable electronic devices designed to display only digital versions of Technical Orders (eTOs). On-going efforts may add additional capability and are not addressed in this instruction. HQ AFGSC/A3TV will provide guidance on these additional capabilities via Flight Crew Information File (FCIF) as they become available. **(T-2)**

1.2. Roles and Responsibilities.

1.2.1. AFGSC/A3 will provide overall guidance for the operational aspects and requirements of the AFGSC EFB program. **(T-2)**

1.2.1.1. AFGSC/A3TV will serve as the overall program Office of Primary Responsibility (OPR) and will designate a MAJCOM-level EFB Program Manager and alternate EFB Program Manager. **(T-2)** The AFGSC EFB Program Manager will maintain overall responsibility for the AFGSC EFB program, including establishment of the AFGSC EFB Baseline Configuration. **(T-2)** AFGSC/A3TV maintains an AFGSC EFB SharePoint site, which serves as the focal point for the latest information, policy, and guidance affecting the AFGSC EFB Program. The site is located at: **https://cs2.eis.af.mil/sites/10963/dir/a3/a3t/a3tv/efb1/SitePages/Home.aspx**.

1.2.1.2. AFGSC/A3TV will issue FCIF messages regarding EFBs when necessary and will publish announcements on the AFGSC EFB Programs SharePoint Site or send direct emails and HHQ messages. **(T-2)** AFGSC/A3TV, in conjunction with their Standardization & Evaluation augmentees, may evaluate unit EFB programs as part of the Air Force Inspection System (AFIS) and AFI 90-201, **Attachment 3** items. AFGSC/A3TV is also responsible for providing operational policy and guidance on EFB usage and also evaluating the accuracy of available publications.

1.2.2. AFGSC A5/8 serves as the primary MAJCOM liaison to Mission Design Series (MDS) System program offices (SPO).

1.2.3. AFGSC/A6 will advise and assist AFGSC/A3 on all communication and information technology aspects of the EFB, including, but not limited to, policy, security, information assurance, and mobile device management. **(T-2)** AFGSC/A6 will provide a Certified Information Systems Security Professional (CISSP) to advise EFB efforts. **(T-2)** Furthermore, AFGSC/A6 will serve as the primary MAJCOM liaison to communications agencies outside of HQ AFGSC on EFB issues. **(T-2)**

1.2.3.1. AFGSC/A6 has no responsibilities for EFB programs outside of AFGSC.

1.2.4. AFGSC/JA will advise AFGSC/A3 on legal matters relevant to the EFB program, and serve as the MAJCOM liaison on EFB issues to legal agencies outside of HQ AFGSC. **(T-2)**

1.2.5. AFGSC/PA will collaborate with AFGSC/A3 on any required or desired internal/external messaging related to the AFGSC EFB program, and assist AFGSC/A3 and subordinate agencies with media issues related to the EFB program. **(T-2)**

1.2.6. AFGSC/SE will advise AFGSC/A3 on safety issues related to the EFB program, and serve as the MAJCOM liaison on EFB issues to safety agencies outside of HQ AFGSC. **(T-2)**

1.2.7. Wing Commanders will ensure wing-level advocacy and support for the EFB program as follows: **(T-2)**

1.2.7.1. Ensure subordinate wing level agencies and personnel support the EFB program as specified in this instruction.

1.2.7.2. Account for EFB sustainment costs in annual wing budgetary processes. EFB-related sustainment costs include but are not limited to EFB-compatible flight gloves, procurement of AFGSC-approved mounting solutions (suction cup mounts, knee boards, etc.), purchase additional EFBs, and commercial internet contracts required to support EFB connectivity requirements.

1.2.7.3. If desired, designate and provide, in writing, primary and alternate Wing EFB Program Managers to work in a functional relationship with the AFGSC EFB Program Manager (AFGSC/A3TV). Submit appointment letters to AFGSC A3T EFB Workflow e-mail org box. If no Wing level program managers are appointed, the Wing Commander will delegate this responsibility to the Operations Group. **(T-2)**

1.2.8. Group Commanders will ensure group-level advocacy and support for the EFB program as follows: **(T-3)**

1.2.8.1. Designate and provide, in writing, primary and alternate Group EFB Program Managers to work in a functional relationship with the AFGSC EFB Program Manager (AFGSC/A3TV). Submit appointment letters to AFGSC A3T EFB Workflow e-mail org box.

1.2.8.2. Ensure subordinate group level agencies and personnel support the EFB program as specified in this instruction.

1.2.8.3. Account for EFB sustainment costs in annual group budgetary processes. EFB-related sustainment costs include but are not limited to EFB-compatible flight gloves, procurement of AFGSC-approved mounting solutions (suction cup mounts, knee boards, etc.), purchase additional EFBs devices, purchase of EFB applications, and commercial internet contracts required to support EFB connectivity requirements.

1.2.9. Flying Squadron Commanders will designate and provide, in writing, primary and alternate Squadron EFB Program Managers to the Group EFB Program Manager and the AFGSC EFB Program Manager (AFGSC/A3TV). **(T-2)** Submit appointment letters to AFGSC A3T EFB Workflow e-mail org box.

1.2.9.1. Account for EFB sustainment costs in annual group budgetary processes. EFB-related sustainment costs include but are not limited to EFB-compatible flight gloves, procurement of AFGSC-approved mounting solutions (suction cup mounts, knee boards, etc.), purchase additional EFBs devices, purchase of EFB applications, and commercial internet contracts required to support EFB connectivity requirements.

1.2.10. Communications Squadron Commanders will provide communications, information assurance, and information technology support to unit-level EFB programs as follows: **(T-3)**

1.2.10.1. Ensure EFB hardware is entered in the AF Information Technology Asset Management (ITAM/AIM) module and is identified on the appropriate unit Equipment Control Officer's (ECO) account IAW AFMAN 17-1203, *Air Force Information Technology (IT) Asset Management (ITAM).*

1.2.10.2. Support procurement and maintenance of commercial internet access IAW Global Information Grid waiver. Commercial internet access is a unit-funded mission-critical requirement due to the large amount of bandwidth required to update EFB devices in units.

1.2.10.3. Coordinate unit-level policies and procedures, IAW applicable MAJCOM, Air Force, and DoD policy, to permit the introduction of EFB devices into Classified Processing Areas (CPA) identified as mission essential by EFB Program Managers.

1.2.11. EFB Program Managers (Wing, Group and Squadron) will maintain overall responsibility for the EFB program as follows: **(T-2)**

1.2.11.1. Identify, address, and elevate, as necessary, EFB requirements and concerns to leadership and the AFGSC EFB Program Manager.

1.2.11.2. Serve as the EFB system administrator for their assigned devices to ensure they are configured, issued, tracked, updated, and maintained as required by this instruction.

1.2.11.3. Coordinate with Technical Order Distribution Officers (TODO) to provide aircrews with current electronic flight publications and guidance on approved methods to keep all required publications up-to-date on the EFB in accordance with this instruction.

1.2.11.4. Provide the AFGSC EFB Program Manager with feedback on operational assessments and development of EFB solutions. Units designated as lead for testing and evaluation will provide monthly project updates to include at a minimum, status, issues encountered and timeline updates, until testing and evaluation is complete. **(T-2)**

1.2.11.5. May also serve as the equipment custodian, responsible for accountability and tracking of devices.

1.2.11.6. Group EFB Program Managers will provide training on the proper use of EFBs and will provide continuity to subordinate units. **(T-3)**

1.2.12. Operations Group Standardization and Evaluations (OGV) will enforce standardization and evaluations policy applicable to the EFB program, including currency of required flight publications and configuration compliance with AFGSC EFB Baseline Configuration. **(T-2)** Should serve as a focal point for the wing/group EFB program, as determined by the Wing/Group commander.

1.3. Waivers. AFGSC/A3 is the waiver authority for the provisions of this instruction. Submit waiver requests through the chain of command to HQ AFGSC/A3TV for processing, coordination, and approval.

1.3.1. Configuration Waivers. Configuration waivers, deviations, and change requests will be submitted to AFGSC/A3TV on AF Form 4169, Request For Waiver From Information Assurance Criteria for coordination with the designated approval authority (DAA). **(T-2)** Configuration waivers, deviations, and requests will be processed IAW the AFGSC Change Management Plan. **(T-2)**

Chapter 2

PROGRAM IMPLEMENTATION

2.1. General.

2.1.1. Implementation Plan. HQ AFGSC EFB program implementation has reached the continuous phase of sustainment and improvement. During this phase, new technologies and capabilities are developed, tested and implemented to fully leverage the capabilities of the EFB platform.

2.1.2. Lead Units. Only AFGSC-designated lead units are authorized to evaluate EFB hardware and software solutions, program management procedures, create MDS-specific EFB tactics, techniques, and procedures (TTP), and to identify and elevate MDS-specific EFB requirements. AFGSC/A3TV will authorize designated lead units to evaluate new devices, features, accessories, etc., as they are released by industry. Designated lead units are: **(T-2)**

2.1.2.1. B-2A/T-38A: 509 BW, Whiteman AFB, MO.

2.1.2.2. B-52H: 2 BW, Barksdale AFB, LA.

2.1.2.3. UH-1N: 582 HG/OGV, multiple locations.

2.1.2.4. B-1B: 7 BW, Dyess AFB, TX.

2.1.2.5. E-4B: 1 ACCS, Offutt AFB, NE.

2.2. Funding.

2.2.1. MAJCOM Funding.

2.2.1.1. Initial procurement of EFB hardware, including the device, charging cord, and protective case based on MDS platform requirements and/or unit manpower authorizations.

2.2.1.2. Hardware Refresh. . HQ AFGSC/A3TV, after coordination in the AFGSC budget process, will procure updated EFB hardware at intervals driven by device usable service-life and current EFB program requirements. **(T-2)** Number of devices procured will be based on MDS platform requirements and unit manpower authorizations. **(T-2)**

2.2.1.3. Procurement and sustainment of licenses for EFB software to display Flight Information Publications (FLIP), and Mobile Device Management.

2.2.1.4. Requirements identified by AFGSC/A3. MDS Program Element Managers will program sufficient funding on an annual basis to support EFB sustainment. **(T-2)**

2.2.2. Unit Funding Requirements (Wing/Group/Squadron). Units will budget for and fund the following EFB-related requirements: **(T-3)**

2.2.2.1. Procurement of additional EFB devices, as required. Any additional device(s) procured by a unit must be listed as an approved EFB on the AFGSC EFB Baseline Configuration. **(T-2)** Upon receipt of the device(s), the unit will work with the AFGSC EFB Program Manager to enroll them in AFGSC's Device Enrollment Program (DEP) and Mobile Device Management (MDM). **(T-2)** All devices used as EFBs are required to be enrolled in AFGSC's DEP and MDM, prior to operational use. **(T-2)**

2.2.2.2. Procurement of any device or services necessary for the AFGSC EFB program to maintain compliance with a valid Authority to Operate (ATO).

2.2.2.3. Procurement of authorized EFB mounting solutions, if desired. A list of approved mounting solutions will be located on the AFGSC EFB SharePoint site. **(T-2)**

2.2.2.4. Procurement of standalone EFB management computers and docking stations.

2.2.2.5. Procurement of compatible flight gloves.

2.2.2.6. Commercial internet access and sufficient quantities of AFGSC EFB Baseline Configuration approved wireless routers, to support unit EFB requirements.

2.2.2.7. Any approved peripheral devices such as GPS/ADS-B receivers and battery extenders, not previously funded by **paragraph 2.2.1.4**, along with any data subscriptions as needed to meet unit requirements.

2.2.2.8. Unit-specific EFB applications. Units may only purchase AFGSC EFB approved applications, as specified on the AFGSC EFB Baseline Configuration, located on the AFGSC EFB SharePoint site. Units will submit a request to HQ AFGSC/A3TV for any applications not listed on the EFB Baseline Configuration. **(T-2)** All applications must be reviewed for security by an appropriate DoD agency. Contact AFGSC/A3TV for information on this process. **(T-2)** The requesting unit is responsible for competing required paperwork and providing a copy of the application for evaluation. Upon approval, units will work with AFGSC EFB Program Manager to install the requested application(s) at unit expense. **(T-2)**

2.2.2.9. Temporary Duty (TDY) expenses related to initial/recurring EFB Program Manager and/or Mobile Device Management training, and any other TDY required to properly execute the unit-level EFB program.

Chapter 3

OPERATIONS AND EMPLOYMENT

3.1. Approved Devices.

3.1.1. AFGSC/A3TV will announce approved EFB devices via the AFGSC EFB SharePoint, and the current AFGSC EFB Baseline Configuration. **(T-2)** The AFGSC EFB Program Manager will provide device implementation, funding processes, and associated timelines. **(T-2)**

3.1.1.1. Recommendations for new devices, features, accessories, etc., will be submitted to AFGSC/A3TV for review. **(T-2)**

3.1.1.2. Certain EFB manufacturers provide devices that contain GPS receivers embedded within the unit. In conjunction with the embedded GPS receiver, the devices can contain cellular radios, giving the devices the capability to connect to national cellular networks. If devices with cellular capabilities are procured with the intent of utilizing the embedded GPS receiver, at no time will the cellular capability ever be activated or a sim card inserted into the device. **(T-2)**

3.1.2. All devices approved for use are deemed sufficiently secure to view/store/process information identified in this instruction and approved by the data owners.

3.2. Operating Instructions.

3.2.1. Authorized EFB Devices. Only government-issued EFB devices listed on the AFGSC EFB Baseline Configuration may be used to store DoD information and for flight operations IAW AFMAN 17-1301, *Computer Security (COMPUSEC),* and this instruction.

3.2.2. Required Equipment:

3.2.2.1. Exclusive Use Stand-Alone (EUSA) computer. Non-networked, government purchased.

3.2.2.2. Approved external hard drive (HDD).

3.2.2.3. Authority to Operate (ATO) compliant wireless router.

3.2.2.4. Approved touch-screen compatible flight gloves are listed on the AFGSC EFB SharePoint site.

3.2.2.5. Approved aircraft mounting hardware will be listed on the AFGSC EFB SharePoint site. **(T-2)**

3.2.2.6. Approved battery life extenders, if required, will be listed on the AFGSC EFB SharePoint Site. **(T-2)**

3.2.3. Administrator Requirements.

3.2.3.1. EFB Program Managers. Two EFB Program Managers will be assigned at the wing, group, and squadron levels. **(T-2)** They will accomplish sufficient training to accomplish required device management tasks. **(T-2)** Wing/CCs may designate the same two individuals as the wing and group EFB Program Managers. AFGSC/A3TV will provide detailed information on training required for Program Managers. **(T-2)**

3.2.3.1.1. EFB Program Managers are responsible for all maintenance, upgrades, patching, and restoration functions on EFB devices. These are the only personnel authorized to have the administrative passcode for the EFB configuration profile or MDM administrator console, as applicable.

3.2.3.1.2. EFB Program Managers will be adequately trained prior to performing program manager duties, and will document training completion as determined by the AFGSC EFB Program Manager. **(T-2)** Training will include the following items, as applicable **(T-2)**: device configuration for initial issue and reissue; MDM management, management of the configuration profile; passcode reset procedures; device inventory and tracking; EUSA system use and maintenance; device auditing; application installation, removal, and update procedures; and management of unit Wi-Fi.

3.2.4. Exclusive Use Stand Alone System Requirements.

3.2.4.1. EUSA systems will be configured with an AF-approved Standard Federal Desktop Core Configuration (FDCC), and affixed with SF 710 stickers in accordance with AF policy. **(T-2)** EUSA systems will be kept current on all applicable upgrades/patches manually via an AF approved external hard drive as updates and patches are available. **(T-2)** If EUSAs are Apple computers, the operating system will be updated to comply with the most recent STIG. **(T-2)**

3.2.4.2. EUSA systems are not authorized to connect to any DoD or Air Force wired or wireless network once initial configuration is completed.

3.2.4.3. Only crewmembers with a need to know, as determined by the unit commander, will have an individual username and password established on the EUSA system. **(T-3)** For purposes of this instruction, need to know is defined as an individual who has been issued, configures, or maintains an EFB or the EUSA system and the data stored on either. Alternatively, units may establish a unit/shared login on the EUSA system and ensure that only personnel with a need to know have access to the login credentials.

3.2.4.4. All passwords will follow standard Air Force password requirements IAW AFMAN17-1301. **(T-2)**

3.2.4.5. If an account has become inactive for 90 days, the account will be administratively locked until the user returns. **(T-3)**

3.2.4.6. A local administrator identified by the OG/CC or SQ/CC is responsible for ensuring all patches and updates are applied to the EUSA weekly or as needed. Additionally, when patches and upgrades are accomplished on the EUSA system, administrators will check for and remove duplicate usernames.

3.2.4.7. The Client Support Administrator (CSA) or appropriately designated administrator will audit records every 30 days, at a minimum, and immediately report violations to the installation Information Assurance (IA) office. **(T-2)**

3.2.4.7.1. Audit records for the EUSA include, but are not limited to User ID, successful/unsuccessful logons, attempts to access security files, date/time/type of the event, success or failure of event, denial of access resulting from excessive number of logon attempts, blocking or denying a user ID, terminal, or access port, and the reason

for the action. Follow guidance of AFI 33-322, Records Management Program, for audit records disposition.

3.2.5. Currency of Publications.

3.2.5.1. Each individual is responsible for ensuring all publications required for flight are current, accessible, and viewable on their issued device prior to flight. Only publications required for flight IAW 11-2MDSV3 are required to be current. Outdated versions of publications required for flight will not be stored on the EFB for any reason. **(T-2)** Official publications not required for flight are permitted on the EFB for reference purposes and are not required to be current.

3.2.5.2. Units will identify publication releases that are critical and ensure off-station crewmembers receive them as soon as possible. **(T-3)** Publication releases that are non-critical can wait until the crewmember returns to home station.

3.2.5.3. EUSA Computer Updates. EFB Program Managers are responsible for keeping the ePubs and eFLIP current on their unit EUSA computer(s). As ePubs and eFLIP are changed or updated, download them to a disc or external hard drive or CD/DVD (IAW information protection directives) and then load onto the EUSA computer(s). This is the primary updating method until wireless publication updates are available. Once wireless publication updates are available, EFB Program Managers may, if desired and subject to mission need, maintain only their respective online repositories.

3.2.5.4. Wireless Publication Updates. EFB Program Managers are responsible for keeping the ePubs and eFLIP current on their respective online repositories. Host wing OGV should be the primary organization for keeping required flight publications current at each base.

3.2.6. Care and handling of the EFB devices.

3.2.6.1. Each member issued an EFB device is responsible for its proper care and handling. Users will always maintain physical control over their issued EFB device. **(T-3)**

3.2.6.2. Users will not modify the EFB device from the MAJCOM-approved configuration. **(T-2)**

3.2.6.3. Report any loss, theft, loss of functionality, display readability, or battery problems to the unit-designated EFB Program Manager. The loss will also be reported to AFGSC EFB Program Manager. **(T-2)**

3.2.6.4. Wing/Group EFB Program Managers may contact AFGSC/A3TV for specific EFB maintenance concerns, not including hardware repair. Do not seek assistance with EFB maintenance issues from Communications Squadrons. Communications Squadron personnel are not funded, manned, or trained to handle EFB maintenance issues.

3.2.6.5. Wing/Group EFB Program Managers may contact the manufacturer for EFB device warranty service. If the warranty period has lapsed, or if the devices require repair for reasons not covered by the warranty, the unit is responsible for funding a replacement device or repair at a manufacturer-authorized service provider.

3.2.7. Device Enrollment Program and Mobile Device Management. All devices procured with the intention of being utilized as an EFB must be enrolled in the AFGSC Device

Enrollment Program (DEP) and be associated with a Mobile Device Management (MDM) solution IAW SAF/CIO A6 *Enterprise Mobility Management (EMM) Solutions Baseline* memo. **(T-2)** EFB Program Managers will notify AFGSC A3TV of any lost/destroyed/damaged devices to ensure they are removed from DEP and MDM. **(T-2)** They will also notify A3TV of any additional or replacement devices purchased by units for the purpose of DEP and MDM enrollment. **(T-2)**

3.2.7.1. For additional or replacement devices, the most efficient method to enroll into DEP is through the supplying vendor. Authorized vendors have the capability to enroll all devices ordered into DEP automatically. Ensure contract language includes enrolling the devices into DEP. If this language is not included, vendors may still complete the enrollment if requested at their discretion.

3.2.7.2. Units will ensure the EFB Program Manager and a designated alternate, at a minimum, are properly trained on EFB MDM requirements, and obtain appropriate training and administrator rights through HQ AFGSC/A3TV. **(T-2)** Upon MDM implementation, instructions and information will be published on the AFGSC EFB SharePoint site. **(T-2)** MDM functions include, but are not limited to:

3.2.7.2.1. Configuration Control.

3.2.7.2.2. Operating System and Application Updates.

3.2.7.2.3. Device Provisioning.

3.2.7.2.4. Enforcement of Security Policy.

3.2.7.2.5. Device Auditing.

3.2.7.2.6. Content Management, including distribution and updating of electronic publications.

3.2.8. EFB Device Auditing. EFB Program Managers will conduct device audits on a reoccurring basis to ensure no unauthorized changes or misuse. **(T-2)** A minimum of 10% of EFB devices will be randomly audited on a quarterly basis, and the results documented using a HQ AFGSC/A3TV-provided inspection log. **(T-2)** Upon MDM implementation, most device auditing requirements can be accomplished remotely. Remote audits will still be documented on the MAJCOM approved inspection log. **(T-2)** The MAJCOM inspection log is available on the AFGSC SharePoint site. Units will determine consequences and accountability for failed device audits. **(T-3)** Device audits will include, at a minimum, the following items: **(T-2)**

3.2.8.1. Approved configuration security/MDM profiles installed, as applicable (password, device lock, etc.).

3.2.8.2. Compliance with AFGSC EFB Baseline Configuration. Only approved applications and application versions installed.

3.2.8.3. Storage of unauthorized data. (e.g., classified data or unauthorized content, etc.).

3.2.8.4. Device has not been “jail broken” or otherwise modified.

3.2.9. Reduction of Paper. Following at least 6-months of evaluations, lead units will submit a request to eliminate paper flight publications to HQ AFGSC/A3TV for processing and coordination. **(T-2)** Upon concurrence, AFGSC/A3TV will forward the request to AFGSC/A3

for approval IAW AFI11-202V3 **paragraph 4.13.2**. **(T-2)** HQ AFGSC/A3TV will notify affected units via FCIF when approval to eliminate specified paper flight publications is obtained. **(T-2)** MDS specific paperless operations approval is available on the AFGSC/A3TV SharePoint. After paperless operations have been approved, aircrews are subject to the restriction in **paragraph 3.4.4** of this instruction.

3.2.9.1. Units will establish new Initial Distribution (ID) requirements with their TODO for all applicable flight manuals in order to reduce the paper being printed and distributed to the unit. **(T-3)**

3.3. Security Policy and Use.

3.3.1. Classified Processing Areas (CPA). In order to meet mission requirements, EFBs must be permitted within certain CPAs. **(T-3)** Examples include aircrew mission planning facilities and Weapons System Trainers. Unit EFB Program Managers are responsible for identifying CPAs where EFB use is required, and coordinating the local approvals and policies necessary to enable EFB operations in these environments.

3.3.1.1. AFGSC policy on EFB use in CPAs does not apply to non-AFGSC owned facilities (e.g., Andersen AFB). Approval must be granted by the enclave owner. **(T-3)**

3.3.1.2. Do not attempt to introduce an EFB into a CPA until specific authorization for that CPA is published. Consult the responsible security manager if unsure whether this authorization has been obtained. If in doubt, do not bring the EFB into the CPA.

3.3.1.3. If EFBs are approved for entry into classified facilities, units will follow the MAJCOM security checklist when bringing EFB devices into a CPA and upon exiting the facility. **(T-2)** In the absence of additional MAJCOM procedures, the checklist located on AFGSC/A3TV SharePoint will be used as a baseline procedure. **(T-2)**

3.3.2. Configuration. EFB devices will only be imaged with the approved AFGSC EFB Baseline Configuration, available on the HQ AFGSC EFB SharePoint website. **(T-2)** Units may not deviate without AFGSC/A3TV approval. All application requests along with operational justification will be submitted through EFB functional channels to HQ AFGSC/A3TV. **(T-2)**

3.3.2.1. EFB Program Managers will ensure the most current EFB profile is installed on all EFBs. **(T-2)**

3.3.2.2. EFB Program Managers are responsible for ensuring devices are setup and configured as specified in this instruction, and will determine how to track them. **(T-2)** All devices will be provisioned and configured prior to individual issue. **(T-2)**

3.3.2.2.1. Significant hardware, operating system, or software updates may exceed the capacity of a single Wing/Group EFB Program Manager to handle without additional manpower. OG/CCs will ensure the Wing EFB Program Manager has sufficient assistance when required. **(T-3)**

3.3.2.3. Passcodes. Must be set IAW the latest iOS STIG and “simple” passcodes are not allowed. **(T-2)** Simple passcodes include repeating, ascending, and descending character sequences. The latest iOS STIG is posted on the AFGSC/A3TV SharePoint site for reference.

3.3.2.4. MDM settings will be IAW HAF, AFGSC, and applicable directives. **(T-2)**

3.3.2.5. Updates to configuration will either be pushed via the MDM or directed by AFGSC/A3TV via email, SharePoint notices, and FCIF.

3.3.2.6. Applications installed on EFB devices will be IAW this document, the AFGSC EFB Baseline Configuration, or by AFGSC/A3TV. **(T-2)**

3.3.2.7. EFB Camera and Microphone. Devices will have their camera disabled by the AFGSC MDM and/or approved AFGSC configuration profile. **(T-2)** Users will ensure no third party application has access to the microphone for any reason. Users can check this under privacy settings on the device.

3.3.3. Device Issue and User Agreement Requirements. EFB Program Managers may download the AFGSC EFB User Agreement and other documents applicable to EFB device issue from the AFGSC EFB SharePoint site.

3.3.3.1. Each crewmember will sign the AFGSC EFB User Agreement after receiving required training, and before being issued an EFB device. **(T-2)**

3.3.3.2. AFGSC EFB User Agreements will be maintained on-file for the duration of device use. **(T-2)**

3.3.3.3. An SF 710 is required on every EFB device.

3.3.4. Device Performance. During use, aircrew will verify the device is performing as expected and configured IAW the MAJCOM-approved baseline configuration. **(T-2)** This includes, but is not limited to:

3.3.4.1. Appropriate connectivity icons are displayed based on guidance in this instruction, and applicable to the environment where the devices are being operated (e.g., Airplane icon when airplane mode is required, Wi-Fi icon on when Wi-Fi connectivity is authorized and required, Bluetooth icon not on unless specifically authorized).

3.3.4.2. Verify that no device features are operating autonomously, such as the camera, or applications activating without user input.

3.3.4.3. Note and report any unapproved or unexpected application icons appearing on the home screen.

3.3.5. COMSEC Incidents. In the event of a COMSEC incident involving an EFB:

3.3.5.1. Individuals will immediately contact their Security Manager and COMSEC office. **(T-3)**

3.3.5.2. The device in question will be placed in a secure container until the Security Manager and/or COMSEC Office can take possession of the device. **(T-3)**

3.3.5.3. Standard practices for identifying a COMSEC incident and investigation will be followed per local guidance. **(T-2)**

3.3.6. Physical and Environmental Considerations. The EFB system requires the same physical and environmental conditions as those provided to standard administrative desktop/laptop resources.

3.4. Limitations.

3.4.1. Battery Limitations. Individual aircrew members are responsible for ensuring that battery charge is sufficient to meet mission requirements.

3.4.1.1. Aircraft power may only be used to power/charge EFB devices if the power supply has been certified by the applicable MDS SPO. AFGSC/A3TV will maintain a listing of any approved in-flight power supplies on the AFGSC EFB SharePoint site. **(T-2)**

3.4.2. Use of Wireless. EFBs will only be connected to secure wireless networks configured with WPA2 security. **(T-2)** Connecting to unsecure "open" wireless networks, such as those found in retail establishments and airports, is prohibited. Reference the Wi-Fi Policy on the AFGSC EFB SharePoint site for more information.

3.4.2.1. Government-owned wireless routers procured for EFB support will be configured IAW DoDI 8420.01 and the DISA Wireless STIG. **(T-2)**

3.4.2.2. When EFBs are authorized within designated CPAs, users will ensure all wireless features are disabled by placing the device in "Airplane Mode—On, Wireless—Off, Bluetooth—Off" prior to entry into the CPA. **(T-3)** Base-level Information Assurance Managers will identify any local policies applicable to EFB use in CPAs. **(T-3)**

3.4.2.2.1. If EFBs are approved for use in CPAs, users follow the AFGSC A3TV EFB CPA entry checklist prior to entering the facility or any other MAJCOM issued guidance. Upon exiting the facility the user can then follow the CPA exit checklist to return their EFB to the original configuration. In the absence of any additional MAJCOM or local guidance, the CPA checklist is located on the AFGSC/A3TV EFB SharePoint site.

3.4.2.3. Unless specifically authorized by AFGSC/A3, wireless connectivity services will be disabled by placing the device in "Airplane Mode—On, Wireless—Off, Bluetooth—Off" prior to takeoff and will remain disabled until after landing. **(T-2) Exception:** If ADS-B IN devices are authorized to be used in a particular MDS. In this case, then the EFB device may only connect to ADS-B IN devices that are equipped with encrypted Wi-Fi connections, such as the Stratus 2S/3. The AFGSC EFB Baseline Configuration lists the MDS that have been approved for ADS-B IN operations.

3.4.3. EFB Back-Up Requirements. If operating without paper back-ups, the following restrictions apply:

3.4.3.1. B-2A. Three EFBs: one per pilot and one spare EFB.

3.4.3.2. B-52H. One EFB per primary occupied crew position.

3.4.3.3. B-1B. One EFB per primary occupied crew position.

3.4.3.4. T-38A. One EFB if the entire flight is to be conducted in VMC. If any portion of the flight will be conducted in forecast or actual IMC, a spare EFB will also be carried. **(T-3)**

3.4.3.5. UH-1N. One EFB per occupied crew position. If any portion of the flight will be conducted in forecast or actual IMC with only two pilots, a spare EFB will also be carried. **(T-3)**

3.4.3.6. E-4B. For alert missions, three spare EFBs will be kept on board the aircraft. **(T-3)** For all other mission types, one extra device will be carried if paper FLIP and required manuals are not available. **(T-3)**

3.4.4. Checklists. Aircrews are authorized use of electronic checklists on the EFB. However, a minimum of one hard copy set of applicable checklists will be carried in-flight regardless of authorization obtained to eliminate other paper products. **(T-3)**

3.4.5. Nuclear Alert and Combat Operations. Aircrews conducting real-world nuclear alert duty or nuclear alert exercise operations may use EFB in accordance with existing guidance, TTPs, SOPs, checklists, etc., but will have all required TO, FLIP, and directives onboard the aircraft in paper format. **(T-2)** This paragraph does not apply to nuclear training missions. Devices that use Wi-Fi or Bluetooth wireless signals to send the data to the EFBs will not be used during real-world nuclear alert, nuclear operations exercises, actual combat, missions classified higher than SECRET, or missions with actual/training nuclear related materials. **(T-2)** Furthermore, during these missions all wireless modes (Wi-Fi, Bluetooth, etc.) on the EFB will be disabled. **(T-2) Exception:** UH-1N aircraft may use EFB wireless modes during ICBM convoy support sorties in conjunction with approved ADS-B/GPS devices.

3.4.6. Screen Auto lock Requirements. EFB screen auto lock will be set to 15 minutes or less. **(T-3)** Upon entering the aircraft, the user may set the auto lock feature to "Never" under device settings. Upon exiting the aircraft, the user will set auto lock back to 15 minutes or less. **(T-3)** Failing to do so will constitute an Information Assurance and/or STIG violation. **(T-2) Note:** When Auto-Lock is set to "Never," the device will remain "awake" with the screen ON until the user toggles the power button, which could result in excessive battery drain. **(T-3)**

3.4.7. Own-Ship Position. Aircrew will not use EFB display of own-ship position and moving map (if equipped) as a primary means of navigation. **(T-2)** These tools, if available, will be used only as an aid to situational awareness. At no time will screen captures and GPS trails be recorded on any device (to include personal devices) during flight operations.

3.4.8. Weather Display. Aircrew will not use EFB display of weather data in-flight (if equipped) as a primary means of weather avoidance. **(T-2)** Weather data obtained from off-board sources is often outdated due to delays caused by refresh rates and limitations inherent in the system transmitting the data. Experience has shown that weather depictions of this type can be up to 45 minutes old. Therefore, weather data that may be available on the EFB should be used only as an aid to situational awareness. **(T-3)**

3.4.9. Peripheral devices that provide own-ship position and/or weather display. Specifically, devices that provide ADS-B data or GPS data to the EFB(s) must be approved for use in flight by each MDS. **(T-2)** Devices that use Wi-Fi or Bluetooth wireless signals to send the data to the EFBs will not be used during real-world nuclear alert or nuclear operations exercises, actual combat, or missions classified higher than SECRET, or missions with actual/training nuclear related materials. **(T-2)** Furthermore, during these missions all wireless modes (Wi-Fi, Bluetooth, etc.) on the EFB will be disabled. **(T-2) Exception:** UH-1N aircraft may use EFB wireless modes during ICBM convoy support sorties in conjunction with approved ADS-B/GPS devices.

3.4.9.1. ADS-B/GPS Receivers are commercially-produced peripheral devices that provides GPS own-ship position and ADS-B weather information to EFBs through eFLIP

applications. Approval for use of each type of device must be granted for each AFGSC MDS aircraft. **(T-2)**

3.4.9.2. Aircrews will be vigilant during ADS-B/GPS Receiver operation to ensure sensitive and classified information is protected at all times. **(T-3)**

3.4.9.3. Approved ADS-B/GPS Receivers are listed on the AFGSC/A3TV SharePoint.

3.5. Training. Units will provide crewmember EFB training prior to initial in-flight use. **(T-3)**

3.5.1. Minimum requirements. Demonstration of ePubs access/update, navigation of device and each approved application, procedures in case of device/app failure, basic battery conservation techniques, using/updating device apps and operating system, and security practices to protect against sensitive data loss.

3.5.2. Currency. DISA DoD Mobile Devices CBT is an annual requirement.

3.5.3. Training Resources. AFGSC EFB User Training slides are available on the AFGSC EFB SharePoint site. Units may modify this training to suit local requirements and ensure compliance with **paragraph 3.5.1**. Additionally, examples of mobile device training provided by DISA are available on DISA's website.

3.6. Flight Operations.

3.6.1. Use In-Flight. Pilot EFBs will be securely mounted (which includes kneeboards) and viewable during takeoff, traffic pattern activity, approach, and landing, or positioned so as not to create a hazard during these phases of flight. **(T-3)** During all phases of flight, aircrew will ensure EFB devices are mounted, positioned, or stowed so as not to impede any required flight-related equipment, or otherwise create a hazard. **(T-3)**

3.6.1.1. Mounting locations, if applicable, will be selected so as not to impede flight controls in any way, and will not obstruct the pilots' view in front of the aircraft. **(T-3)** Other crew positions (Navigators, Electronic Warfare Officers, and Special Mission Operators) may also employ EFB mounts. A listing of approved mounting solutions will be maintained on the AFGSC EFB SharePoint site. **(T-2)**

3.6.1.2. Kneeboard-style EFB attachments may be used as desired. The attachment must secure the EFB to the knee such that it will not inadvertently shift or fall and must not impede any flight related equipment or create a hazard. **(T-3)** Aircrew sitting in an ejection seat may use the kneeboard-style attachment under the assumed risk of unknown hazards resulting from an ejection while wearing an EFB kneeboard style attachment. If time and conditions permit, aircrew wearing an EFB kneeboard style attachment, should remove and stow the device prior to ejecting. Other aircrew should not delay ejection in an uncontrolled situation while pilots or other aircrew remove kneeboards.

3.6.1.3. EFBs are approved for use during all phases of flight.

3.6.2. Currency of Content. Aircrew will ensure all required flight-related content, including Flight Manuals, Flight Information Publications (FLIP), and associated directives, are current prior to every flight. **(T-2)** Due to the length of time required to download significant publications updates and FLIP databases, aircrew should accomplish this the day prior to the flight, and update as necessary prior to takeoff.

3.6.2.1. If critical flight-related content is published while a crew is off-station, crews will obtain the current content as soon as possible. **(T-3)** Non-critical information may be updated upon return to home-station.

3.6.2.2. Applications will not be downloaded, installed, deleted, modified, or updated while off station, unless connected to a secure wireless network IAW **paragraph 3.4.2** **(T-3)**

3.6.2.3. FLIP. FLIP will be maintained in an approved FLIP application. **(T-2)** Currently, the primary application for FLIP is ForeFlight, with NGA's AERO application secondary and Jeppesen Flight Deck as tertiary.

3.6.2.4. EUSA Computers. EUSA computers will maintain currency of all publications available to the EFBs until the cloud based mobile content management system is fully implemented. **(T-2)** This is to ensure that users always have easy access to a source of current information whether required for flight or not. If a unit wants to make a file temporarily available without maintaining its currency continuously, it should place the applicable date range on the file or folder name and remove it from the EUSA computer at the end of date range. For example, a squadron wants to make the Nellis Range Guide and RED FLAG In-Flight Guide available to the EFBs prior to a RED FLAG Exercise Deployment. The squadron could make a folder "RED FLAG 1-15 Aug 2015," then remove that file from the EUSA computer upon completion of the exercise.

3.6.3. Night Operations. EFB device back lighting shall be set to have minimum impact on night vision during night operations. **(T-3)**

3.6.4. EFB Audio. EFB devices capable of audio, if applicable, shall be set at a volume that will not interfere with aircraft communications or normal crew duties. **(T-3)**

3.6.5. Screen Protectors and Protective Cases. Screen protectors and protective cases are authorized, at unit expense, as long as they do not affect the functionality of the devices or preclude use of authorized aircraft mounting solutions.

3.7. Abnormal and Emergency Procedures.

3.7.1. Egress. EFB devices will be stowed prior to ejection or ground egress if time and conditions permit. **(T-3)** Ejecting or ground egress with the EFB attached to the crewmember's body increases the risk of injury. Aircrew should not delay ejection in an uncontrolled situation while pilots or other aircrew remove/stow EFBs.

3.7.2. EFB Device Failure. In the event a crewmember's EFB device fails in flight, the aircraft commander will manage other crewmembers' EFB devices and/or spare EFB devices (as applicable) to minimize aircrew workload, maximize situational awareness and CRM, and maintain safety of flight. **(T-3)**

3.7.3. Disaster Recovery.

3.7.3.1. In the event of a complete loss of information on the EFBs and EUSA system, a restore will be accomplished using the information located on the EFB SharePoint site. **(T-2)**

3.7.3.2. In the event of a complete loss of information on the EFBs, EUSA system, and SharePoint, a system restore will be accomplished in the following manner. **(T-2)**

3.7.3.2.1. EUSA administrators will restore the EUSA system utilizing the backup as identified in **paragraph 3.7.3.3**. **(T-2)**

3.7.3.2.2. EFBs and EUSA systems will be restored using information from another location.

3.7.3.3. External HDD's must contain a current copy (within 14 days) of all software, configurations, data, and profiles required to accomplish a complete restoration of both systems EFB and EUSA. **(T-2)**

3.7.3.3.1. Regardless of information change, a backup must be completed every 14 days at a minimum. **(T-2)** Backups and the external HDD will be protected and stored to ensure data/backup integrity. **(T-2)**

3.7.3.3.2. Copy all information from any source regarding the EFB & EUSA software, configurations data, or profile to a designated folder on the external HDD. At a minimum this must include the master backup file, iTunes, iPhone Configuration Utility, Configuration Profile, and appropriate folder from Aircrew Pubs library. Ensure the folder is named with the most current date of the copied software (i.e., Backup DD Mmm YY). **(T-2)**

3.7.3.4. Each site will maintain a Primary and Alternate EUSA system in the event of catastrophic system failure, and to ensure quick system recovery. **(T-2)** Recommended alternate EUSA system is a laptop computer.

3.7.3.5. In the event of catastrophic failure of the EFB, use the External HDD backup files and the EUSA to restore the device to its original configuration.

3.7.3.6. In the event of primary system failure the alternate system will become the primary. **(T-2)** To restore the failed EUSA, first reinstall the SDC image and all patches, then follow the instructions located on the AFGSC EFB SharePoint Site, to restore associated software from the backup located on the external HDD.

3.7.4. Automatic Dependent Surveillance Broadcast-In (ADS-B IN). (If approved for use by the MDS).

3.7.4.1. ADS-B IN device firmware will not be updated until update approval is released by AFGSC/A3TV. **(T-2)**

3.7.4.2. Units will establish check-out and check-in procedures for ADS-B IN devices and include that in their unit supplement. **(T-3)**

3.7.4.3. Units will establish a standard location to mount ADS-B IN devices for their unit based off SPO and AFGSC/A3TV guidance. **(T-3)**

3.7.4.4. Units will provide guidance to their personnel on when they can utilize the devices. **(T-3)**

3.7.4.5. Units will develop egress procedures when ADS-B IN devices are installed if not already incorporated in SPO or AFGSC/A3TV guidance. **(T-3)**

3.8. Employment Instructions.

3.8.1. Publications Distribution. HQ AFGSC/A3TV maintains a process to verify all documents are approved for distribution on the EFB and are in accordance with AFI 61-201, Management of Scientific and Technical Information.

3.8.1.1. OGVs will manage updated publications and provide information on how to access the publications. **(T-2)**

3.8.1.1.1. Until an approved wireless solution is available, EFB Program Managers will download EFB-required ePubs to an approved external HDD or other media and manually transfer them to an Exclusive Use Stand Alone (EUSA) computer (non-networked, government purchased). **(T-3)**These EUSA computers may be used to transfer the library to the EFB device for updating. IAW AFMAN 17-1301, **paragraph 5.12.1**, all users must scan approved removable media devices for viruses before and after use. **(T-3)**

3.8.1.1.2. For use on nuclear alert exercises or real-world nuclear operations, OGVs will maintain or have to ability to generate an appropriate number of paper T.O. kits to meet sortie generation requirements and timelines. **(T-2)**

3.8.1.2. EFB Program Managers will ensure assigned EFBs only contain authorized documents and information, and proper authorization has been obtained from the data owners. **(T-3)** Authorized data permitted on the EFB is located on the AFGSC EFB SharePoint site.

3.8.2. EFB Device Update Procedures.

3.8.2.1. Units will follow AFGSC/A3TV guidance and procedures located on the AFGSC EFB SharePoint site tailored specifically for each EFB device approved. **(T-2)**

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Director of Operations and Communications

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

DAFI 33-360, Publications and Forms Management, 1 December 2015

FAA Advisory Circular AC 120-76B, *Guidelines For The Certification, Airworthiness, and Operational Approval of Electronic Flight Bag Computing Devices*, 27 October 2017

DoDI 8420.01, *Commercial Wireless Local-Area Network (WLAN) Devices, Systems, and Technologies*, 3 November 2017

DoD 8570.01-M, *Information Assurance Workforce Improvement Program*, 24 January 2012

SAF CIO Memorandum, *Enterprise Mobility Management (EMM) Solutions Baseline*, 9 April 2018

TO 00-5-1, *AF Technical Order System*, 14 June 2016

AFI 11-202 Volume 3, *General Flight Rules*, 10 August 2016

AFI 11-215, *USAF Flight Manuals Program (FMP)*, 25 March 2019

AFI 33-360, Publications and Forms Management, 1 December 2015

AFI 61-201, *Management of Scientific and Technical Information (STINFO)*, 29 January 2016

AFI 90-201, *The Air Force Inspection System*, 20 November 2018

AFMAN 17-1203, *Air Force Information Technology (IT) Asset Management (ITAM)*, 18 May 2018

AFMAN 17-1301, *Computer Security (COMPUSEC)*, 10 February 2017

AFMAN 17-1303, *Cybersecurity Workforce Improvement Program*, 20 March 2015

AFMAN 33-363, *Management of Records*, 1 March 2008

Prescribed Forms

None

Adopted Forms

SF 710 *Unclassified* (Label),

AF Form 847 *Recommendation for Change of Publication*

AF Form 4169 *Request For Waiver From Information Assurance Criteria*

Abbreviations and Acronyms

AFI—Air Force Instruction

AFGSC—Air Force Global Strike Command

AFICA—Air Force Installation Contracting Agency

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFRIMS—Air Force Records Information Management System

AFIS—Air Force Inspection System

ANG—Air National Guard

ATO—Authority to Operate

ADS-B—Automatic Dependent Surveillance Broadcast

CCB—Configuration Control Board

CISSP—Certified Information Systems Security Professional

COMSEC—Communication Security

COTS—Commercial Off-The-Shelf

CPA—Classified Processing Area

CRM—Crew Resource Management

CSA—Client Support Administrator

DAA—Designated Approval Authority

DAFI—Department of the Air Force Instruction

DEP—Device Enrollment Program

DISA—Defense Information Systems Agency

DoD—Department of Defense

ECO—Equipment Custodian Officer

EFB—Electronic Flight Bag

EFLIP—Electronic Flight Information Publications

EMM—Enterprise Mobility Management

EPUBS—Electronic Publications

eTO—Electronic Technical Order

EUSA—Exclusive Use Stand Alone

FCIF—Flight Crew Information File

FDCC—Federal Desktop Core Configuration

FLIP—Flight Information Publications

GiG—DoD Global Information Grid

HDD—Hard Disk Drive

IA—Information Assurance

IAT—Information Assurance Trained

ID—Initial Distribution

IT—Information Technology

ITAM/AIM—Air Force Information Technology Asset Management

MAM—Mobile Application Management

MCM—Mobile Content Management

MDM—Mobile Device Management

MDS—Mission Design Series

OGV—Operations Group Standardization and Evaluation

OPR—Office of Primary Responsibility

PED—Portable Electronic Device

PUB—Publication

RDS—Records Disposition Schedule

SPO—System Program Office

STAN/EVAL—Standardization and Evaluation

STIG—Security Technical Information Guide

TFI—Total Force Integration

T.O.—Technical Order

TODA—Technical Order Distribution Account

TODO—Technical Order Distribution Officer

TOLD—Takeoff and Landing Data

TTP—Tactics, Techniques and Procedures

UCNI—Unclassified Controlled Nuclear Information

VMC—Visual Meteorological Conditions

Terms

Class 1 EFB Hardware—Portable commercial off-the-shelf (COTS)-based computers, considered to be portable electronic devices (PED) with no aircraft manufacturer and/or SPO design, production, or installation approval for the device and its internal components. Class 1 EFBs are not mounted to the aircraft, connected to aircraft systems for data, or connected to a dedicated aircraft power supply. Class 1 EFBs can be temporarily connected to an existing aircraft power supply for battery recharging. Class 1 EFBs that have Type B applications for aeronautical charts, approach charts, or an electronic checklist must be appropriately secured and viewable during critical phases of flight and must not interfere with flight control movement. (Portable Class

1 EFB components are not considered to be part of aircraft type design; i.e., not in the aircraft type certificate (TC) or Supplemental Type Certificate (STC).

Class 2 EFB Hardware—Portable COTS-based computers, considered to be personal electronic devices with no aircraft manufacturer and/or SPO design, production, or installation approval for the device and its internal components. Class 2 EFBs are typically mounted. They must be capable of being easily removed from or attached to their mounts by flight-crew personnel. Class 2 EFBs can be temporarily connected to an existing aircraft power supply for battery recharging. They may connect to aircraft power, data ports (wired or wireless), or installed antennas, provided those connections are installed in accordance with aircraft manufacturer or system program office guidelines. (Portable Class 2 EFB components are not considered to be part of aircraft design.)

Class 3 EFB Hardware—EFBs permanently installed in the aircraft in accordance with applicable airworthiness regulations.

Electronic Flight Bag (EFB)—An electronic display system intended primarily for flight deck use that includes the hardware and software necessary to support an intended function. EFB devices can display a variety of aviation data or perform basic calculations (e.g., performance data, fuel calculations, etc.). In the past, some of these functions were traditionally accomplished using paper references, or were based on data provided to the flight-crew by a flight dispatch function. The scope of the EFB functionality may include various other hosted databases and applications. Physical EFB displays may use various technologies, formats, and forms of communication. An EFB must be able to host Type A and/or Type B software applications.

Type A Software Applications—Type A applications are those paper replacement applications primarily intended for use during flight planning, on the ground, or during noncritical phases of flight.

Type B Software Applications—Type B applications are those paper replacement applications that provide the aeronautical information required to be accessible for each flight at the pilot station, and are primarily intended for use during flight planning and all phases of flight. Type B applications include miscellaneous, non-required applications (e.g., aircraft cabin and exterior surveillance video displays, maintenance applications).

Type C Software Applications—Software approved using RTCA/DO-178B compliance or another acceptable means. These are non-EFB software applications found in avionics and include intended functions for communications, navigation, and surveillance that require aircraft manufacturer and/or SPO design, production, and installation approval. Type C applications are for airborne functions with a failure condition classification considered to be a major hazard or higher.