



EUROPEAN AVIATION SAFETY AGENCY
AGENCE EUROPÉENNE DE LA SÉCURITÉ AÉRIENNE
EUROPÄISCHE AGENTUR FÜR FLUGSICHERHEIT

Electronic Flight Bag Workshop

Aircraft Manufacturers' Viewpoint

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Overview

- Incorporating information systems into the aircraft is a key element to improving airline operational efficiency
- Electronic Flight Bags (EFBs) are a common tool used to achieve this objective
- Historically, installation of EFBs throughout a fleet is limited, mainly due to the system and retrofit costs
- Portable consumer electronic devices, however, are resulting in greater EFB adoption and operational approval demand
- AMC 20-25 addresses the important role of EFBs and attempts to provide the flexibility to support emerging technology trends





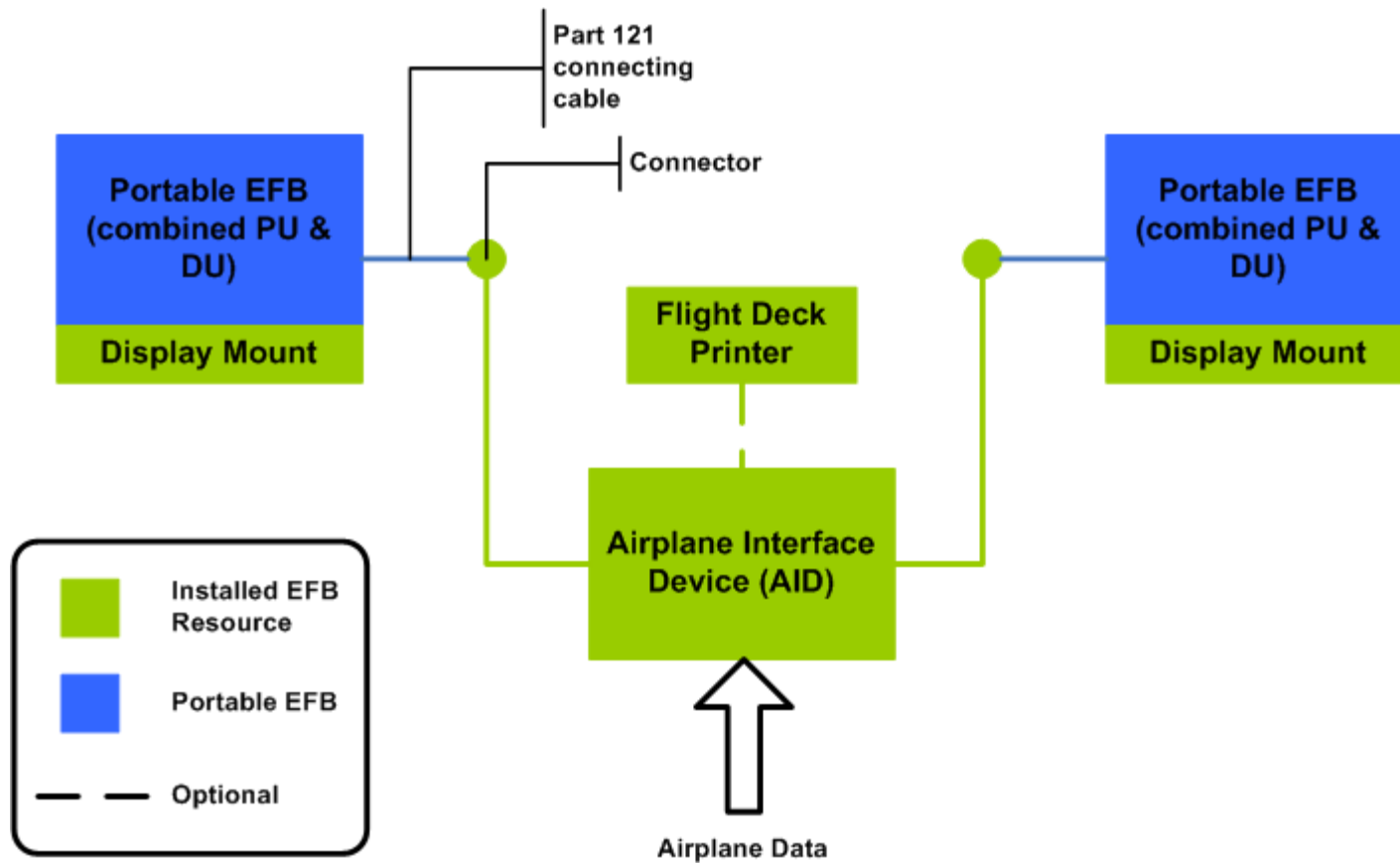
Classification of EFB Systems

- AMC 20-25 reclassifies EFB systems as either “portable” or “installed”
- Previous EFB system classification often resulted in confusion when both portable and installed resources were included
 - New terms of art were introduced in industry forums in an attempt to explain which parts of the definition applied to the EFB system
 - Examples: Class 2 heavy; Class 3 light
 - “Class 2.5 devices, which have a full STC but with uncertified software, is treated generally as Class 3 in this publication.” – Hong Kong Civil Aviation Department (CAD) Document No. 562
- AMC 20-25 reduces this confusion by including the definition of portable EFB systems and defining installed resources



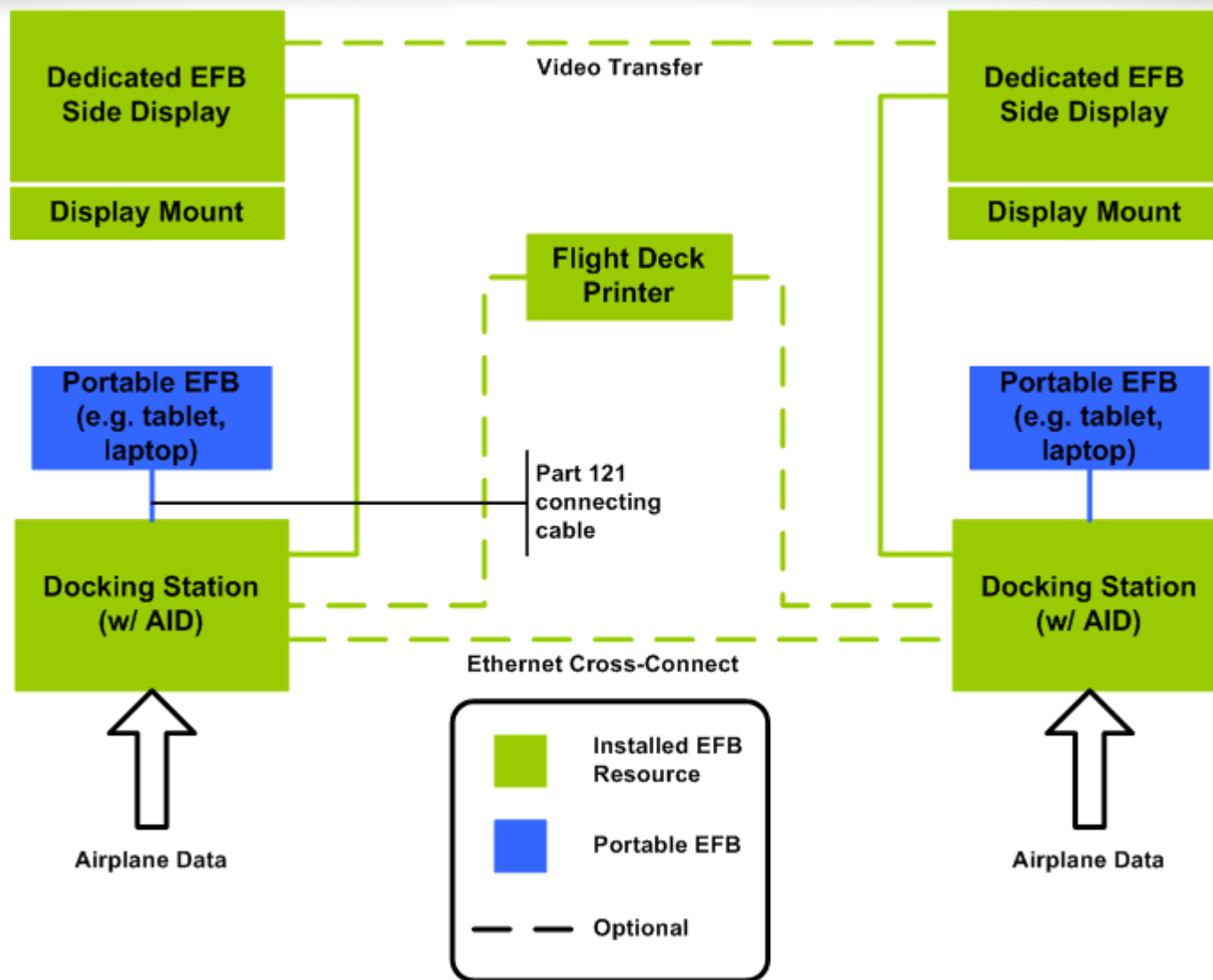


Example EFB System: Portable Tablet Device

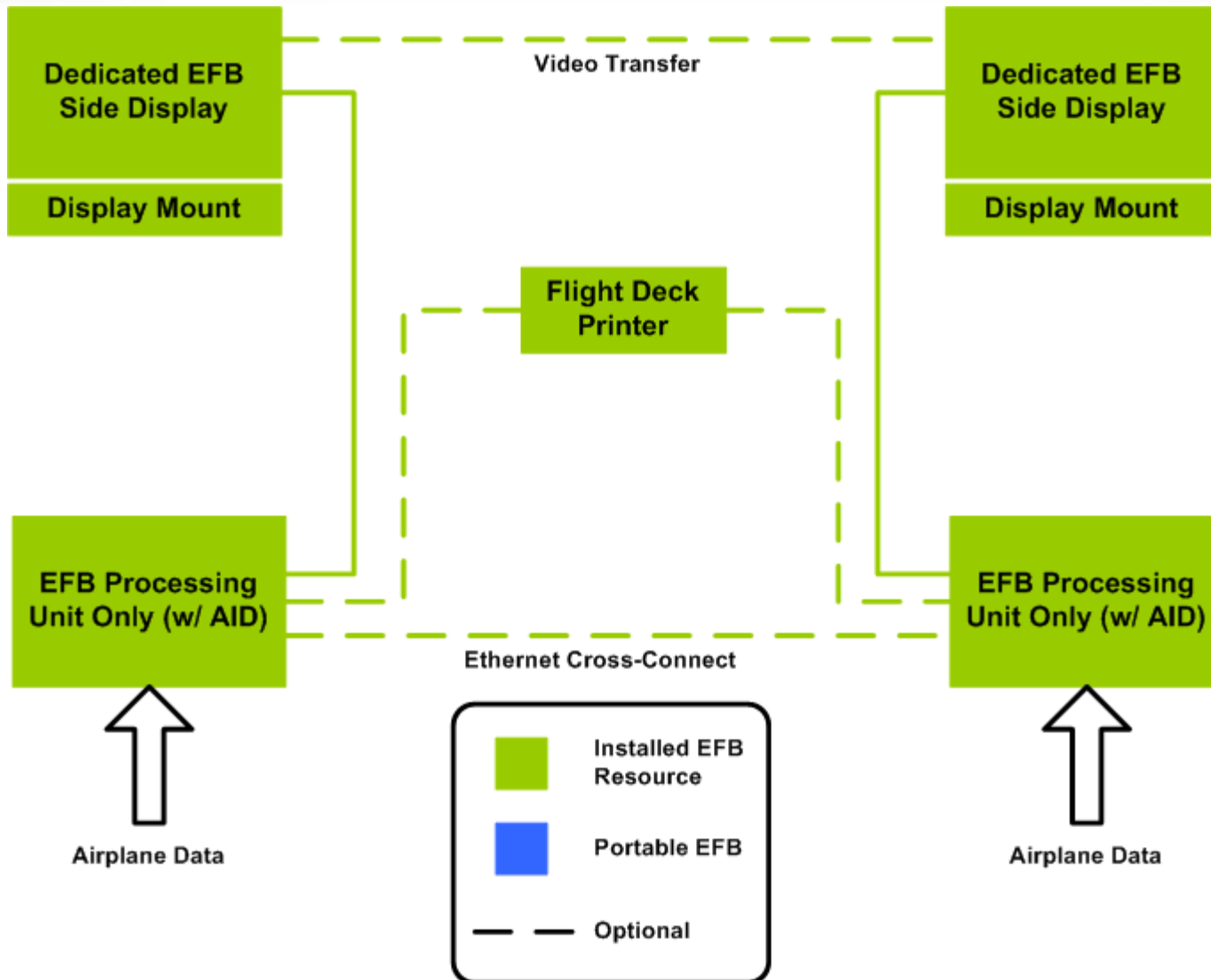




Example EFB System: Laptop Docking Station



Example EFB System: All EFB System Resources are Installed



Hardware Operational Assessment: Viewable Stowage

- ▶ Viewable Stowage classification permits the use of non-certified mounting devices for portable EFBs
 - ▶ EFB is usable in all phases of flight
 - ▶ Promotes cost-effective EFB retrofit
 - ▶ Harmonized with the FAA EFB guidance (AC 120-76B)
- ▶ The use of Suction Cup Mounting device for portable devices is very popular retrofit choice among airlines



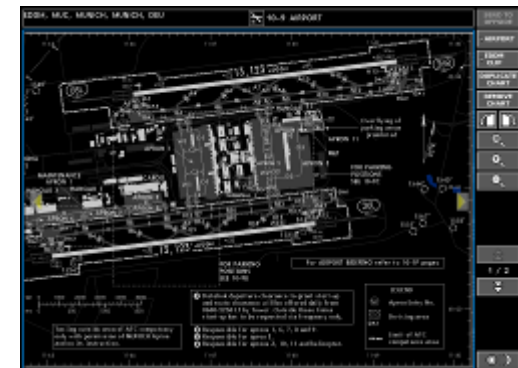
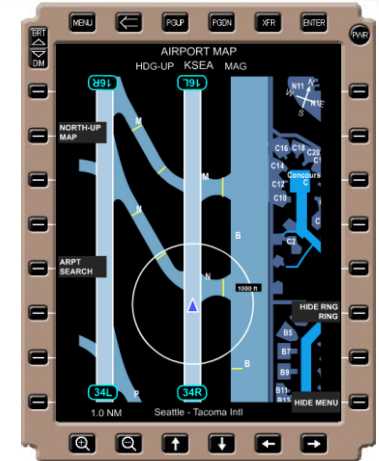
Kneeboard



Suction Cup Mount

Software Operational Assessment: EFB Applications

- AMC 20-25 includes Miscellaneous, Type A and Type B EFB software classifications
 - Type C software is not included
 - The majority of EFB systems only support Type A or B software
- Exclusion of Type C software from EFB guidance is aided by reclassification of the Airport Moving Map Display (AMMD) with own-ship position to Type B
 - Harmonization with FAA EFB guidance (AC 120-76B)
 - Future harmonization with AC 120-76B Change 1 possible by incorporating ETSO-2C165a into AMC 20-25





Operational Assessment Processes

- EFB Resources are often selected during the airplane production process
- Airlines may integrate EFB Systems to those installed resources after aircraft delivery
- Manufacturer installed system resources must be evaluated when airline EFBs may be connected to the airplane network
- Network security is a rapidly growing segment of the Certification process and portable EFB Systems pose an evolving challenge
- The new “EFB System Security” section and the revised and expanded “Role of EFB Administrator” section are key to supporting this evaluation



Summary

- AMC 20-25 is a significant and necessary improvement over existing EFB guidance
- Harmonization with current FAA EFB guidance is greatly appreciated
- New hardware and software classifications will reduce industry confusion when referring to a specific EFB System
- AMC 20-25 is positioned for the future and provides an adequate means of compliance for manufacturer developed EFB Systems



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Thank You

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