



## **FUTURE-PROOF TABLET BASED ELECTRONIC FLIGHT BAG SOLUTION**

- Flexible, modular and future-proof onboard infrastructure
- Tablet device independent – MS Windows / iOS
- USB-A, USB-C and various tablet dedicated power supply options
- AID – Aircraft Interface Device

# MODERN TODAY – READY FOR TOMORROW

The modular tablet based Electronic Flight Bag (EFB) concept from Scandinavian Avionics (SA) is a state-of-the-art future proof solution. The system provides the functionality to meet today's operational requirements of airlines and aircraft operators, and at the same time is simple to upgrade in the future, to meet new requirements and needs.

The flexible infrastructure of the EFB concept means that basically any current and future tablet, easily can be certified for installation in the aircraft. This enables the airline or aircraft operator to upgrade the tablets concurrently with the rapid development of consumer tablets and their functionality, making the SA EFB solution truly future-proof.

## THE CONCEPT

**The SA EFB solution is a modular, tablet based EFB concept:**

### MS WINDOWS OR IOS TABLETS

Installed in the cockpit to provide the pilots with all possible required information in the best quality available. Tablet mounting possible in several different ways to fit operator standards.

The mount design allows for easy upgrades when new tablets are available – without tools with the QuickLock™ feature – just replace the display cradle and associated charging cable. Optional SA provides certified mounting with Pivot adapter.

### CONTROL PANEL CLASSIC

The Control Panels provide an avionics grade installation enabling Power supply to EFB devices and wired communication interface. All Control Panels come with the auxiliary USB 2A Power outlet designated for PED (Personal Electronic Device) charging.

### CONTROL PANEL USB-C – CPV2 AID

The Control Panels provide an avionics grade installation enabling Power supply to EFB devices and wired communication interface. Dual USB-C outlets provides each 60W power. The EFB outlet is data enabled to utilize onboard Ethernet and ARINC 439 and 717 data. All Control Panels come with the auxiliary (no data) Power outlet designated for PED (Personal Electronic Device) charging. The unit comes in two versions – with or without Aircraft interface.

### CWAP – COCKPIT WIRELESS ACCESS POINT

The Cockpit Wireless Access Point (CWAP) enables swift and easy access to a currently installed onboard EFB network but as well serves as the aircraft connection point for on board data buses in new installations.

# CPV2 - DUAL 60W POWER SUPPLY AND AID

Rapid evolution from component based, purposely built EFB equipment, to emerging tablet-based solutions, require new versatile and generic components.

New technologies must be supported by installed infrastructure now as in the future situation of required upgrades. To be in pace with the technology evolution The SA Group has developed tailored and versatile functions to support new tablet based Electronic Flight Bag systems.

The Tablet Control Panel provides an avionics style implementation with the same look and feel as onboard OEM equipment and it supports Commercial Off The Shelf Tablets of any kind.

Easy mounting and maintenance through standard DZUS size form factors enables effortless maintenance and a single box installation that eliminates additional cost driving provisions such as DC-converters, Kill switches and chargers.

The Control Panel (CP) has an integrated power supply intended to provide charging to EFB tablet devices. The integrated power supply provides conditioned power to both an attached Tablet device as well as to the Pilots Portable Devices (PED) such as Cell-Phones. Power can easily be disabled by a push button switch. The function is required by certification rules and is in regulatory text denoted as a "Kill Switch".

The CP also provides USB to Ethernet conversion to enable the tablet to communicate over the Ethernet (1000BaseT) with other networked devices or the opposite CP for crosslink functionality.

Support for position configuration is provided through discrete pins to enable automatic EFB shell configuration and adapt software settings for operation for Captains and First Officers position.

Up to four positions can be configured. A dedicated API can be used to read the position from the tablet device.

Retro-mode is available for existing customer having Classic Scandinavian Avionics CP installed to avoid changes to existing Aircraft installation.

With AID option enabled the Control Panel has four ARINC 429 and one ARINC 717 input ports to pick up various aircraft system data for usage in Tablet applications.



## Functional Interface

- USB-C 3.1 Gen 1
- USB-C PD 3.0
- 4 ea ARINC 429 input ports (AID version only)
- 1 ARINC 717 port (AID version only)
- Position Discrete (4 pos.)
- Ethernet 1000Base.T
- ERC Indicator

## Physical Interface

- Weight: 0.6kg
- Size (WxHxD) 146x48x95 mm [5.75x1.89x3.74] (acc. MS-25212)
- Mounting Locking DZUS (acc. MIL-F-25173)

## Electrical Interface

- DC input: 20-32VDC (28V nom.)
- Max Current usage: 6A at 28V nom.
- "EFB" USB-C DC Output 5-21VDC (automatic adjustable)
- "CHG" USB-C Charging DC Output 5-21VDC (automatic adjustable)
- Max. Load for "EFB" Output 60W
- Max. Load "CHG" PD Output 60W\*

(\*10W in retro mode)

# TABLET CONTROL PANEL

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The Control Panel (CP) has an integrated power supply intended to provide charging to EFB tablet devices. The integrated power

supply provides conditioned power to both an attached Tablet device as well as to the Pilots Portable Devices (PED) such as Cell-Phones. Power can easily be disabled by a rotary switch. Tablet power or tablet- and PED power can be disabled separately to avoid hot-plugging. The function is required by certification rules and is in regulatory text denoted as a "Kill Switch".

The CP also provides USB to Ethernet conversion to enable the tablet to communicate over the Ethernet (1000BaseT) with other networked devices or the opposite CP for crosslink functionality.

Support for position configuration is provided through discretes to enable automatic EFB shell configuration and adapt software settings for operation for Captains and First Officers position. Up to four positions can be configured. A dedicated API can be used to read the position from the tablet device.



## SPECIFICATIONS P/N 70-12005-00012

### Functional Interface

- ETHERNET 1000Base-T
- USB 2.0
- Position Discrete (4 positions)
- Radio Indicator
- USB Charger  
(Supports 2A CHG for i-Devices)

### Physical Interface

- Weight: 0.4kg
- Size (WxHxD)  
146x48x10.7mm  
[5.75x1.89x4.21]  
(acc. MS-25212)
- Mounting  
Locking DZUS  
(acc. MIL-F-25173)

### Electrical Interface

- DC input: 20-32VDC  
(28V nom.)
- Max Current: 3.3A at 28V nom.
- Tablet DC Output  
5-21VDC (adjustable)
- USB Charging DC Output  
5VDC
- Maximum Load Power Tablet Output  
60W
- Maximum Load Power USB Output  
10W

# COCKPIT WIRELESS ACCESS POINT – CWAP

The requirement for operators flexibility in the cockpit has emerged both as a cost saver as well as a requirement to be in pace in the evolution of Electronic Flight Bag (EFB) Tablets. So far legacy wired solutions for charging and data have been utilized. With increased operating times for battery powered devices the charging requirements are reduced for many airlines. Elimination of charging will also implicate eliminating the wired connection to the Electronic Flight Bag device and thus the possibility of utilizing aircraft data.

The Cockpit Wireless Access Point (CWAP) enables swift and easy access to a currently installed onboard EFB network but as well serves as the aircraft connection point for on board data buses in new installations. This concentration of function reduces the need of a separate Aircraft Interface Device and significantly reduces weight and complexity of the installation. Integration CWAP in the cockpit is made in the overhead panel or center pedestal with a

real OEM look and feel. The single Electronic Flight Bag interface point utilizes ARINC standard protocols to serve the current as well as future Electronic Flight Bag devices without changing the installed provisions in the aircraft – a future proof solution for real.

Maintaining and cross checking of data is made easy through the wireless crosslink capability. Built-in shared in-aircraft storage can be used to host aircraft persistent data such as e-tech logs and maintenance records swiftly accessible to onboard crew or maintenance personnel.

This is an extension of Scandinavian Avionics path for a true future proof solution for the modern airline – as a new component or as a complement to currently installed systems, independently of make or model.



## SPECIFICATIONS P/N 70-12008-[ ]

### Functional Interface

- WiFi 802.11b/g/n
- Ethernet 100BaseT
- Dimming bus

### Software:

- A834 STAP

### Optional:

- 64Gb FLASH Storage

### Physical Interface

- Weight 0.3kg
- Size (WxHxD)  
146x88x107mm  
(acc MS-25212)

### Mounting

- Locking DZUZ (acc. MIL-F-25173)

### Electrical Interface

- DC Input 12-32V (28V nom.)
- Max Current: 0.5A
- 4x A429RX (Base model 2x)
- 2xA429RX (Base model 1x)
- 1x A717/571(Optional)
- 6x Discrete (ADB -100, OPEN / GND, Base model 2x)
- 2x 100BaseT

# CERTIFIED EFB MOUNTS

EASA and FAA Approvals ensure safe and secure Tablet mounting. Tablets and cradles are a combined PED unit, removable without tools enabling future Tablet upgrades. The STC states a weight and size envelope.

Two options are available, SA QuickLock or Pivot adapter. Both options are mounted on the SA Swivel to gain easy adjustability of viewing angle and switch between landscape and portrait mode.

Collaboration with:

**PIVOT**  
Better Connection. Better Protection.



# CERTIFIED EFB MOUNTS

Lined area for text entry.

# A COMPLETE TURN-KEY EFB SOLUTION

## ELECTRONIC FLIGHT BAG - EFB

The EFB solution serves as a good example of the product development capabilities offered by The SA Group. The SA Group offers a complete turn-key EFB solution including all equipment, certification, installation, training and other support. At the moment the solution is certified for A320, B737MAX, B737NG, B757, B767, ATP, ATR Q200 and Q400 aircraft and more aircraft types will follow.

### The Scandinavian Avionics modular EFB solution consists of:

- Tablet device independent - MS Windows / iOS
- Certified mounting provisions
- Cockpit Wireless Accesspoint - CWAP
- Control panels providing power and network capability as well as auxiliary power for pilot personal devices. Optional Aircraft Interface Device (AID).

The modular tablet based EFB solution from Scandinavian Avionics is a state-of-the-art future proof EFB solution which provides the functionality to meet today's operational requirements of airlines and aircraft operators and at the same time is simple to upgrade in the future to meet new requirements and needs.

## THE SA GROUP

The SA Group provides complete turn-key solutions within avionics, electronics, training and interiors, for the international aviation and defense community. Including sales, avionics maintenance (MRO), certification (STC), design & engineering, installation, product development, production, training and consultancy services.

The SA Group is represented in 9 countries, on 14 locations in Europe, the Middle East, India and Southeast Asia. Scandinavian Avionics A/S serves as HQ of The SA Group. It was established in 1978, and is located in Billund, Denmark.

### APPROVALS

EASA Part-145 | EASA Part-21J | EASA Part-21G | EASA Part-147  
FAA Part-145 | TCCA Part-145 | BCAA Part-145 | GAR Part-145 | DOT RIN N083

