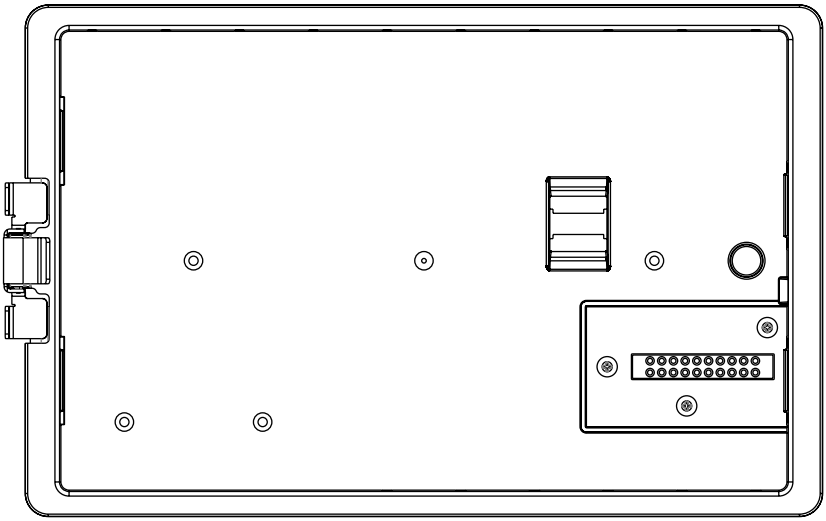
Aeronautical Navigator

EKPV

COCKPIT DOCKING STATION INSTALLATION GUIDE

Standard and OEM Versions



AVMAP SATELLITE NAVIGATION

Your Journey, Our Technology

DISCLAIMER & WARNINGS

This product is not TSO-certified and have received no EASA or FAA approval. This product is not intended for installation in type-certificated aircraft.

Avoid installing the product near heat sources or ensure adequate cooling is provided. Avoid routing of the wiring near sources of heat, RF or EMI interference.

The included USB GPS antenna is not suitable for external use. Install and securely fix the antenna inside the cockpit with the dome pointing towards the sky. For better performance ensure the antenna has a clear view of the sky.

The Docking Station is designed to operate when docked into the cockpit. Handle the device with care when it is not installed and do not attempt to lock the EKP V unit.

OVERVIEW

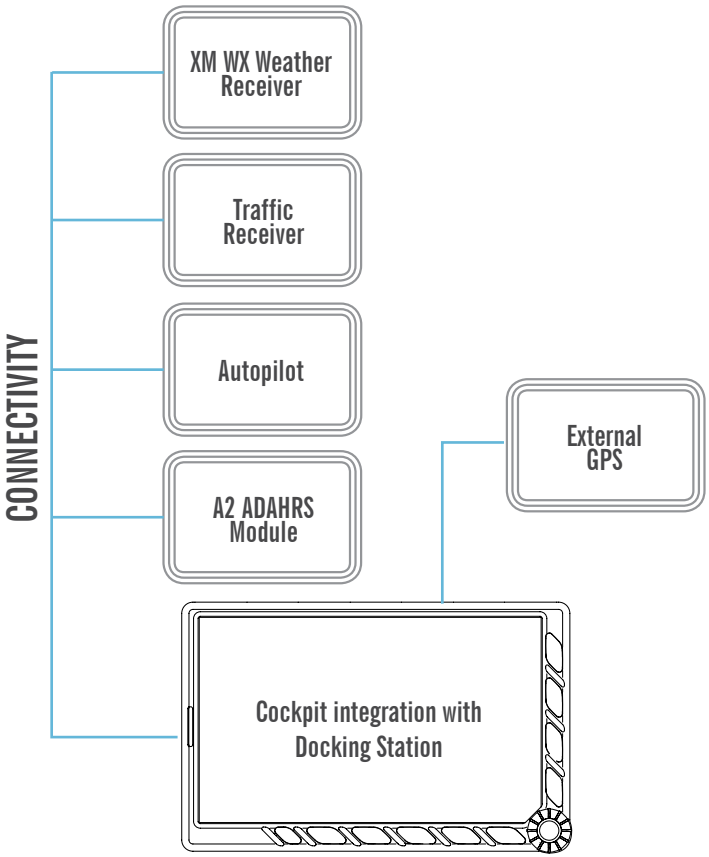
This document provides basic instructions for the installation and use of the EKP V Docking Station. The Docking Station package contains:

- EKP V Docking Station
- USB GPS antenna (“Mouse GPS antenna”)
- Flush Mount Kit
- Plastic Protective Cover
- Manual, screws and cutting template

General Description

The EKP V Cockpit Docking Station (CDS) allows the installation of AvMap EKP V Aeronautical Navigator into the cockpit, and enables the unit to interface to multiple external devices at the same time.

When docked the EKP V is powered/charged by the aircraft electrical system.



Dimensions and Specifications

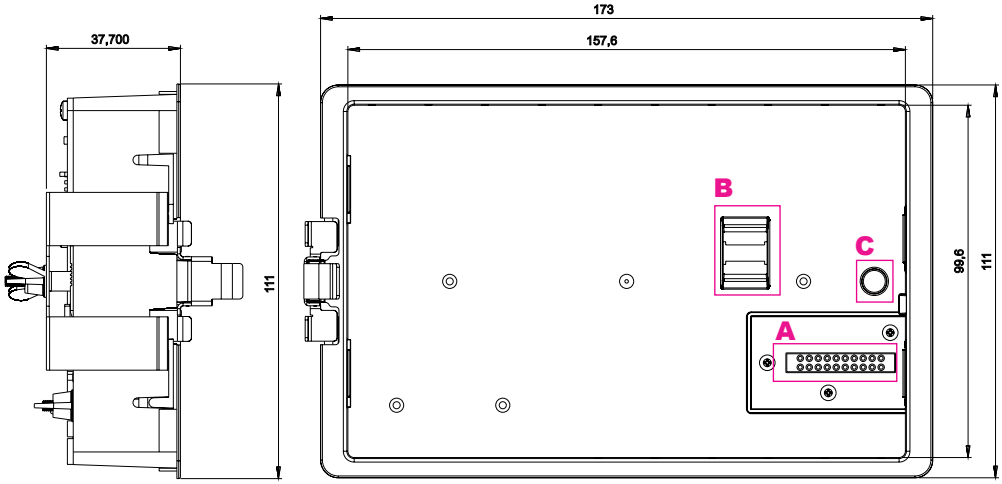
Versions:

- **Standard** (UX0DS100AM) : including the wire clamp board adapter.
- **OEM** (UX0DS200AM): including a DB15 adapter for direct wire soldering

Interfaces:

• 4 x USB 2.0 ports
(1 x battery powered by EKP V internal),
• 2x Serials ports
(1 x RS-232, 1 x TTL levels),
• Audio IN,
• Audio OUT,
• Video IN
(video composite signal PAL or NTSC),
• Push-To-Talk

• Power input voltage:
10-35 VDC (28 W max.),
• Temperature range -20, + 70 °C.

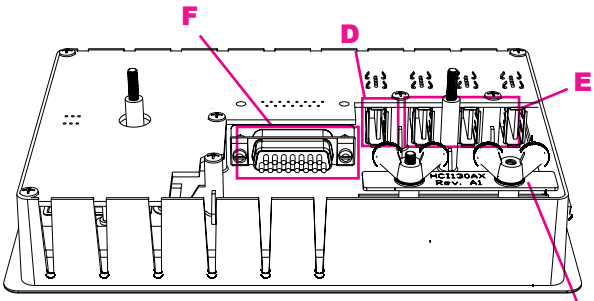


Front Side

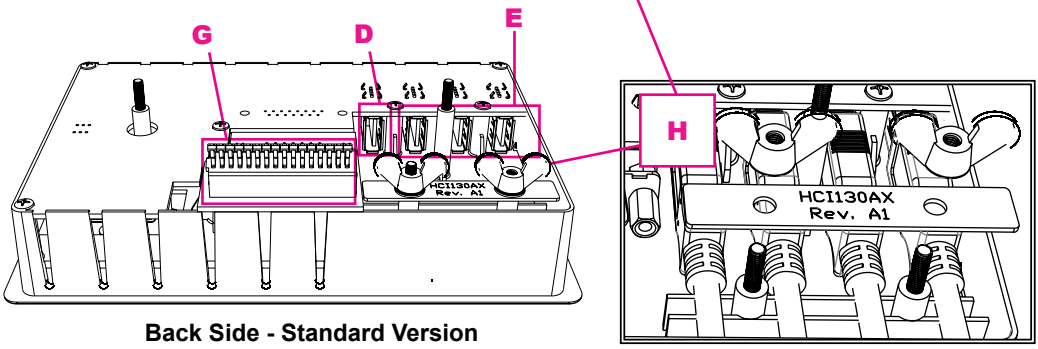
A Male Pogo Pin connector, to be coupled with the female connector on the back side of the EKPV.
B Fuse: Socket for the 3A fuse.
C Safety switch to disable the power supply to the connector (A) when the device is not docked.

Back Side

- **D** Battery powered USB Port: backup power provided by the EKP V internal battery.
- **E** Normal USB Ports: powered by the aircraft electrical system.
- **F** DB 15 direct soldering connector (OEM version only).
- **G** Wire clamp connector (Standard version only).
- **H** Cable locking bar.



Back Side - OEM Version



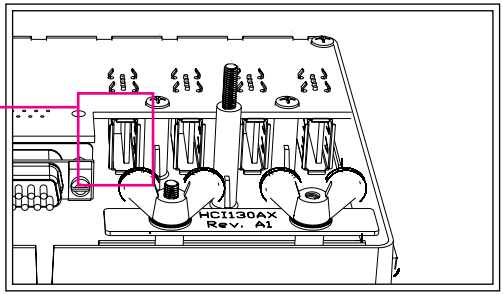
Back Side - Standard Version

Wiring and connections

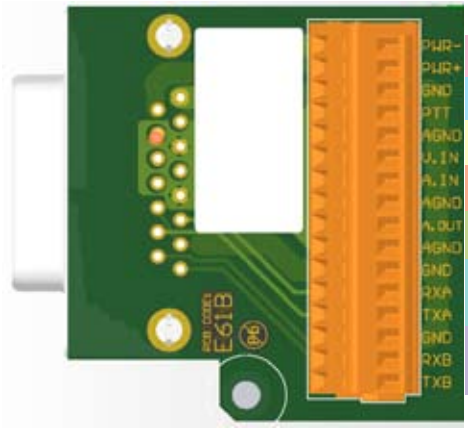
USB Ports

The CDS includes four USB ports to connect AvMap's or approved third-party modules to the EKP V. One of the ports (D) is powered by the EKP V internal battery to ensure functionality even in case of aircraft electrical power failure.

Battery powered USB Port: backup power provided by the EKP V internal battery.



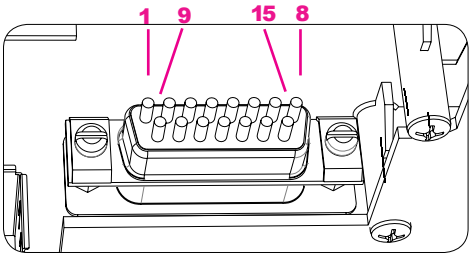
Standard Version DB-15 Connections



PWR-	External Power Supply Input (10-35Vdc)
PWR+	
GND	
PTT	Push to Talk
AGND	Video Input
V. IN	
A. IN	Audio Input
AGND	
A. OUT	Audio Output
AGND	
GND	Serial Interface “A” (Note: RS232 polarity and levels)
RXA	
TXA	
GND	Serial Interface “B” (Note: 0-5v levels and RS232 polarity)
RXB	
TXB	

OEM Version DB-15 Connections

DB-15 electrical pin-out

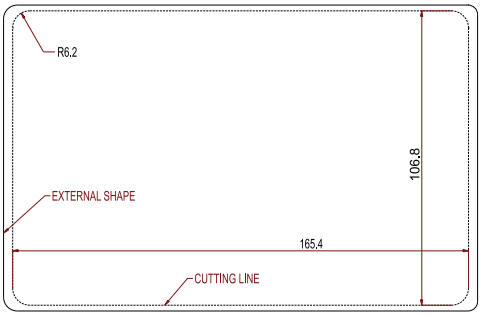


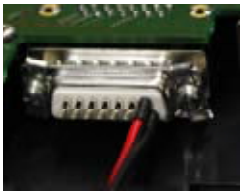
Pin #	Signal
1	GND - EXT
2	GND
3	AUDIO-VIDEO GND
4	AUDIO IN
5	AUDIO VIDEO GND
6	RXA
7	GND
8	TXB
9	EXT+
10	PUSH TO TALK
11	VID-IN
12	AUDIO OUT
13	GND
14	TXA
15	RXB

DB-15 Connections

External Power Supply Input (10-35Vdc)	
1	GND - EXT
9	EXT+
Video Input	
11	VID-IN
3	AUDIO-VIDEO GND
Audio Input	
5	AUDIO VIDEO GND
4	AUDIO IN
Audio Output	
12	AUDIO OUT
5	AUDIO VIDEO GND
Serial Interface “A” (Note: RS232 polarity and levels)	
14	TXA
6	RXA
13	GND
Serial Interface “B” (Note: 0-5v levels and RS232 polarity)	
8	TXB
15	RXB
7	GND
Push to Talk	
10	PUSH TO TALK
2	GND

CDS Installation

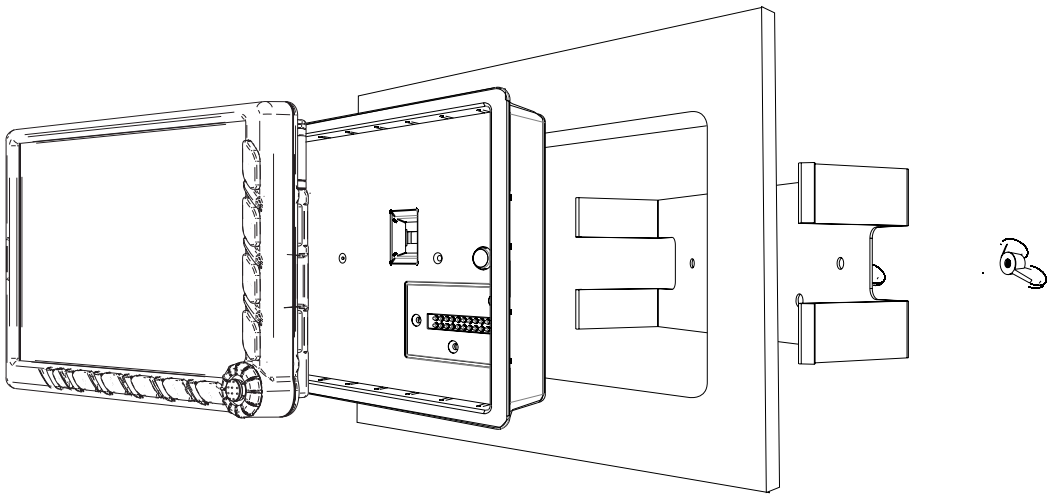




OEM Version

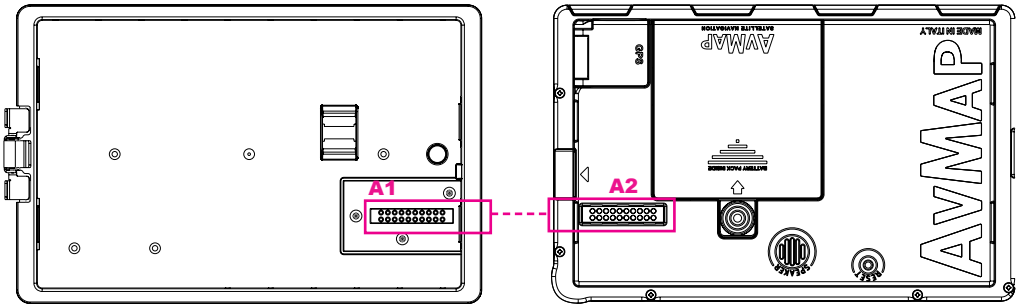
Standard Version

1. Cut the cockpit using the cutting template provided in the box.
2. Connect and secure the included DB-15 interface (direct soldering or clamp board, depending on the CDS version) on the back of the CDS.
3. Connect required wires to DB-15 connection, as explained in the previous chapter.
4. Connect USB cables and secure them with the included safety lock bar.
5. Install the docking station in the cockpit hole and secure it with the flush mount braked. Push the bracket in the center and flex it until it is possible to lock it with the provided nuts.
6. Fasten and secure the wires to the back of the CDS, to avoid vibrations or mechanical stress on the connections.

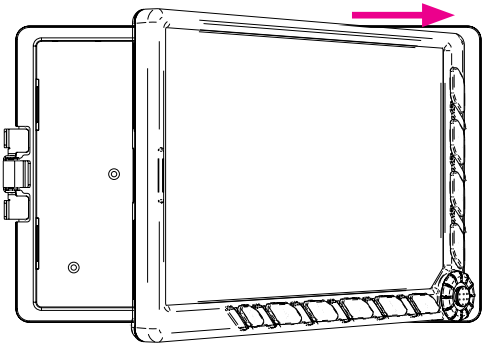


NOTE: after installing the CDS make sure that all on-board instruments and systems perform as expected. Verify the on-board compass calibration.

Docking the EKP V



1



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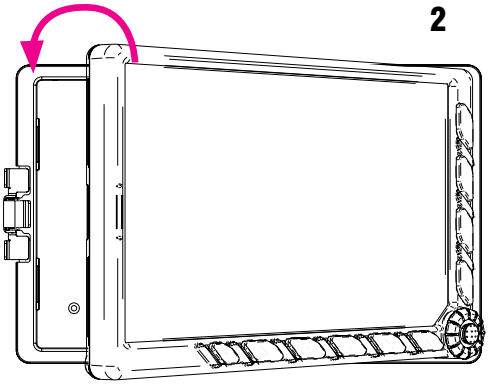

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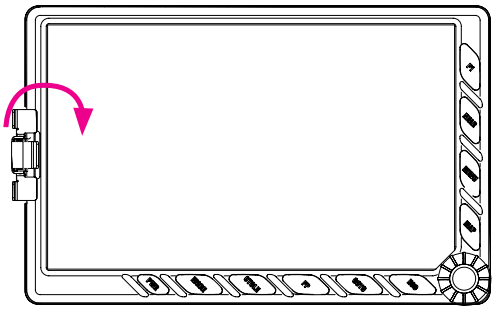

NOTE: when the EKP V is not docked the CDS can be protected by installing its plastic protective cover.

EKPV

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