

Installation and Operation Manual

FDAIP-CVH VER HSDI

Auxiliary Input Panel – Composite, VGA, HDMI





FDAIP-CVH VER HSDI

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www.FlightDisplay.com

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<http://support.FlightDisplay.com/>





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General Information

The FDAIP-CVH VER HSDI allows the connection of auxiliary input and carry-on devices (specifically: Composite Video, VGA, HDMI and L/R audio input signals) to the cabins entertainment system. Users can plug in laptops, gaming systems, high-definition equipment, audio devices and more. The signals can be carried to individual monitors and headsets as well as audio and video switching equipment such as the FDACS-D, and the FSDIVCS.

Front View



Shown: FDAIP-CVH VER HSDI

Additional Information

The three switches on the front panel are used to select from among the three video inputs. The three switches enable and disable their corresponding video input. In the case where two or more video inputs are enabled, then the order of priority is; HDMI will take priority over VGA, VGA will take priority over Composite.

For applications when the FDAIP-CVH VER HSDI is used in conjunction with a cabin management system, the switch states are available on the 14 pin connector on the back panel as Outputs 1 thru 6. They can be used by a CMS to Hide and reveal the three video channels on the user interfaces.

The audio that is output from the product is line level (1.7 Volts peak to peak). Its source can be from the Red and White RCA jacks on the front panel, or from the HDMI digital audio channel. The selection between RCA jack analog audio input and HDMI digital audio is made by the switch adjacent to the HDMI connector. When the switch is in "Audio Analog" or "hide" then the selected audio is from the RCA jacks. When the switch is set to "Audio Digital" then the selected audio is from the HDMI digital audio channel.

Additional Information (Cont.)

For example, the FDAIP-CVH is connected to one of the inputs on the FDSDIVCS. The user may not want the icon on the Cabin Control Module to display unless an input device is actually plugged in. The user plugs in a laptop to the VGA connector on the FDAIP-CVH and moves the switch from the hide position to the show position. The icon for the auxiliary input device will now show up on the cabin control modules installed on the Cabin Management System.

The HDMI audio is similarly controlled by a switch on the front of the FDAIP-CVH. When using an HDMI source, audio input can be switched between either the RCA component connections using analog audio, or the HDMI cable connections using digital audio. These changes are only needed when using the FDAIP-CVH with a Cabin Management System.

Specifications

| | |
|---|--|
| Dimensions | 1.34" (H) x 5.340" (W) x 1.400" (D) |
| Materials | 5052-H32 Aluminum Sheet |
| Weight | 8 oz |
| Power | 28 V DC @ .5 AMPs |
| Inputs | 1 x VGA (female) 3 x RCA (Composite Video & L/R Audio) 1 x HDMI (female) |
| Composite Resolution Supported | NTSC or PAL (auto switch) |
| VGA Resolutions Supported | 640x480, 800x600, 1024x768 |
| HDMI Resolutions Supported | 480i, 576i, 720p60, 1080i60, 1080p30 |
| Output | HSDI |
| SDI Video Output (when HMDI1080p30 is input) | SMPTE292M; 1080p30 |
| SDI Video Output | 720p60 in all other cases |
| Testing Certification | RTCA/DO-160G (Section 21) Category B RTCA/DO-160F (Section 21) Category M |



Installation Instructions

The installation process for the FDAIP-CVH VER HDSDI is accomplished with minimal hardware, including these installation steps:

1. Cut a rectangular mounting hole appropriate for the unit in the mounting surface.
*See “FDAIP-CVH Assembly Drawing” for panel orientation
** FDS highly recommends receiving the product first to ensure the best possible fit during installation.
2. Attach the SDI plug connection & the Harwin Datamate Plug on the rear of the unit to the aircraft’s a/v equipment and insert the FDAIP-CVH into the mounting surface.
3. Insert four (4) #6 82° flat head screws into the mounting holes.



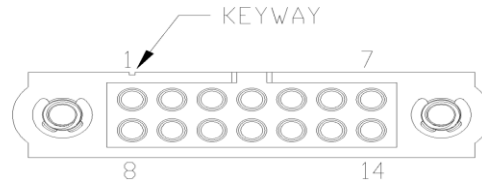
Power/Video

P1 (Power/Audio)

Harwin Datamate Plug (supplied w/ contacts and hood)

Connector
 Crimp Contacts

P/N: M80-9411442
 P/N: M80-0110001



MATING FACE OF FEMALE PLUG

| Pin Number | Description |
|------------|---------------------|
| 1 | +28V Power IN |
| 2 | Switch output #4 |
| 3 | Audio Output Left |
| 4 | Audio Output Right |
| 5 | Audio Output Return |
| 6 | Audio Output Return |
| 7 | Switch output #1 |
| 8 | +28V Power IN |
| 9 | Switch output #2 |
| 10 | Power Return |
| 11 | Power Return |
| 12 | Switch output #5 |
| 13 | Switch output #3 |
| 14 | Switch output #6 |



“Switch Output” Signals for CMS use.
Same switch pattern as the older version FDAIPCVH.

Switch Out #1 H Switch Output #2 L = HDMI Hide
Switch Out #1 L Switch Output #2 L = HDMI Enabled Digital Audio
Switch Out #1 L Switch Output #2 H = HDMI Enabled Analog Audio

Switch Output #3 H Switch Output #4 L = Composite Hide
Switch Output #3 L Switch Output #4 H = Composite Enable

Switch Output #5 H Switch Output #6 L = VGA Hide
Switch Output # 5 L Switch Output #6 H = VGA Enable

Do not confuse power return pins with audio return (ground) connection. Power return is for the 28V power return only.

There is no real need to use both power pins and both power return pins.

Don't confuse Audio Ground with a the power return (ground) connection. Audio Ground pins are to be used with the audio signals only.

P2 (HSDI Video Out)
75Ω Mini-SMB Plug (RG179 connector supplied)

Connector

P/N: 5415487-1

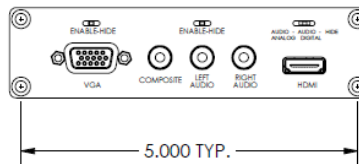
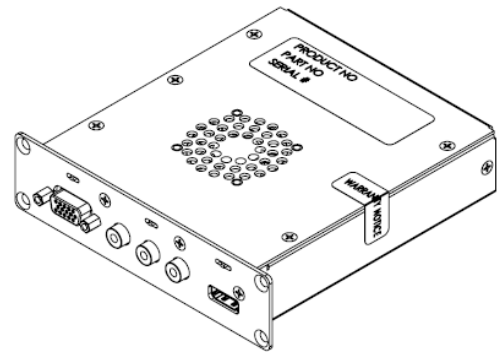
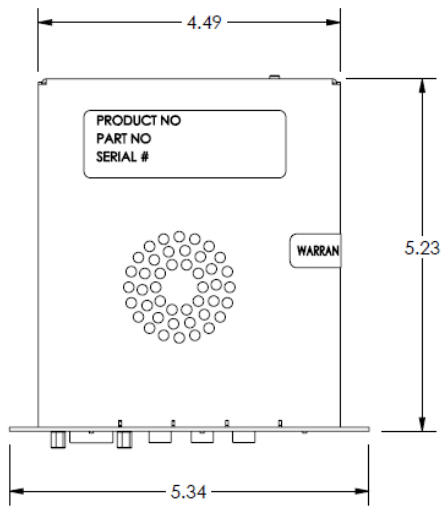
| Pin | Description |
|--------|--------------|
| Center | Video Signal |
| Shell | Video Return |



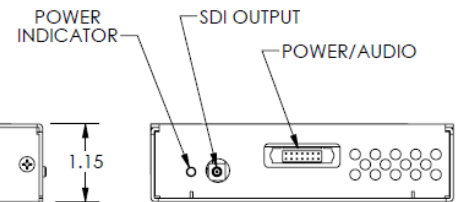
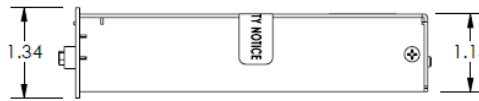
Installation Drawing

NOTES:

| REV | DESCRIPTION | DATE | BY | APD |
|------|--|----------|-----|-----|
| O.I. | ORIGINAL ISSUE | 11-15-12 | DMC | ELH |
| A | UPDATED TITLE BLOCK & PRODUCT NOMENCLATURE | 06-27-13 | DMC | ELH |



MOUNTING HOLE FOR 6-32 X 82" HARDWARE 4 PLACES



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| | | |
|--|------------------|--|
| DWN D.M.C. | DATE 11-15-12 | FLIGHT DISPLAY SYSTEMS 6435 SHILOH ROAD • ALPHARETTA, GA 30005 678.867.8717 • WWW.FLIGHTDISPLAY.COM |
| APD E.L.H. | DATE 11-15-12 | |
| TOLERANCES: 3 PLACE DECIMAL ± .010 2 PLACE DECIMAL ± .020 1 PLACE DECIMAL ± .030 | | MOUNTING SPECIFICATION FDAIP-CVH VER HSDI |
| FRACTIONAL ± ANGLES ±30' FINISH BLACK POWDER PAINT & NICKEL | | |
| MATERIAL: ALUMINUM | | DRAWING NO. MSD-234 |
| SCALE: 1/2 | | SHEET 1 OF 1 |
| | | REVISION A |

Troubleshooting

1. If no composite video is displayed, ensure that the wiring is to the Yellow RCA jack.
2. If left and right audio are swapped, ensure that the Right Audio is wired to the Red RCA jack, and the Left Audio is wired to the White RCA jack.
3. If no audio or video is present, check the source (DVD player, MP3 player, etc), and check all connections including the FDAIP-CVH Harwin 14 pin connector.
4. If there is no audio during HDMI playback, ensure the audio switch is set to the correct position (audio analog for RCA component audio-in and audio digital for HDMI cable audio-in).
5. If CMS does not recognize the FDAIP-CVH Inputs, ensure the switches on face of unit are set to “enabled”.

Technical Support

Should you have any questions concerning this product or other Flight Display Systems products, please contact our Product Support representatives at (470) 239-7421.

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Email: sales@FlightDisplay.com

For further product information, technical data and sample wiring diagrams, please click on the **Dealers** section of our web site at www.FlightDisplay.com

Instructions for Continued Airworthiness

The FDAIP-CVH VER HDSDI is designed not to require regular general maintenance.



Warranty Information

All Flight Display Systems (FDS) products are warranted to be free from material or manufacturing defects for a period of 24 months from the date of shipment for General Aviation customers or 12 months from the date of shipment for Government/Special Mission customers. Any material or repair workmanship for in warranty repair service will be specifically warranted for 90 days or the remainder of the original warranty period, whichever is longer. If the original warranty period has expired, the 90 day repair warranty is limited to the material and workmanship specific to the repair activity completed.

The following conditions are exclusions to warranty coverage:

1. Labor costs associated with installation, removal or reinstallation of any product.
2. Damage to or malfunction caused by any unauthorized alteration made to the product.
3. Resolving signal quality issues caused by externally generated noise introduced by aircraft electrical systems or other components connected to any FDS product.
4. Any malfunction caused by improper installation or connection to aircraft wiring, industry standard cabin management/ inflight entertainment systems, or third party commercial equipment not specifically identified as compatible with FDS products.
5. Any malfunction caused by installation that does not conform to precautions associated with operating environments listed in the operating manual or consistent with industry best practices such as; high temperature, adequate ventilation, high humidity, high dust, or power surges.
6. Cosmetic damage or damage to internal components caused by installation or removal, failure to follow installation or operating instructions, or any neglect or misuse of the product.
7. Any product that is returned for service with a broken tamper evident seal, indicating tampering or improper handling of the product by an unauthorized person. Violation of product tamper evident seals or modification of factory installed serial and PMA labels voids any warranty, either expressed or implied.

The FDS technical support team is available to provide distance troubleshooting support during business hours (8:00am to 5:00pm EST) Monday through Friday at (470) 239-7421.

Many repair requests can be resolved through distance support and may not require return of merchandise to the factory. If a product must be returned to the factory for repair, an RMA number will be issued as directed by the technical support team and communicated by the repair coordinator.

Upon request by the customer, FDS may send a service technician onsite to repair any non-PMA products. The travel expenses incurred to include transportation, lodging and meals along with the technician's hourly rate shall be payable by the customer in accordance with FDS' applicable rates and procedures.

Flight Display Systems will, upon receipt of returned merchandise, remanufacture or replace the unit at our discretion and return the product by Ground Return Shipping. Express return shipment will be the responsibility of the sender.

This warranty is not transferable.

Any implied warranties expire at the express limited warranty expiration date. FDS shall not be held liable for any indirect, special, punitive, incidental or consequential damages.

Some states do not allow limitation on the length of an implied warranty. In such states, the exclusions or limitations of this limited warranty may not apply.





Log of Revisions

| Rev | Date | Page | Description |
|-----|------------|------|---|
| A | 06/07/2010 | | Initial Release |
| B | 07/30/2013 | 7, 9 | Pin out changed, MSD updated, Warranty Info |
| | | | |
| | | | |

