



Apps for flight simulation.

## **aviaServer**

for aviaFlightMonitor, aviaCDU, aviaEFB and aviaOverhead

### **Welcome**

aviaServer is the main server application that allows you to connect your tablet / phone for different services (such as a remote CDU or a remote Overhead) supporting many different mobile devices (Android, iPhone / iPad, Windows tablet / phone).

All services can be tested before deciding to purchase a license:

aviaFlightMonitor is limited to approaches to LOWS (Salzburg, Austria).

aviaCDU, aviaEFB and aviaOverhead are limited to 'View Only' mode – meaning you can see the current status of the aircraft but not make any inputs.

This solution doesn't have any limitation as to running FlightSim in windowed or full-screen mode and has a minimal impact on system performance. It also supports multiple devices at the same time, so you can use your tablet in your home cockpit while using your phone to monitor your flight.

## Requirements:

- Microsoft Flight Simulator X with SP2, Microsoft Flight Simulator X :SE or Lockheed Martin Prepar3D v2, v3, v4.2 or v5
- .NET Runtime 4.5.2
- If you run Prepar3D, make sure FSX-SP2-XPACK SimConnect is installed. You'll find it in **[P3D folder]\redist\Interface\FSX-SP2-XPACK\retail\lib\SimConnect.msi**

## Disclaimer:

Private entertainment use only! Do not use in commercial environments without written approval. You may not alter, reverse engineer or otherwise modify any portion of this software. The software is provided as is, without warranty of any kind including but not excluding loss of data, loss of revenue or lost profits. Use at your own risk. PMDG's EULA needs to be adhered to as well, regardless of this disclaimer.

## Licenses & Credits:

- B737, B777 and B747 CDU images provided by Thomas Stilner
- B777 and B747 Overhead graphics provided by PMDG, © PMDG
- EFB image for the B747-8 provided by PMDG, © PMDG
- MD-82 CDU images and font provided by Leonardo SH, © Leonardo SH
- CRJ CDU images and fonts provided by Hans Hartmann
- B717 CDU images and fonts provided by TFDi Design, © TFDi Design
- B787 images provided by QualityWings, © QualityWings
- Q400 CDU images and fonts provided by Majestic Software, © Majestic Software
- QR-Code Generation Library: <https://github.com/Alxandr/QrCode.Net>
- Signus Digital Font, downloaded from <http://www.myfontfree.com/signus-digital-nbp-myfontfreecom55f48051.htm>. Licensed under Attribution-ShareAlike 3.0 Generic (CC BY-SA 3.0), <http://creativecommons.org/licenses/by-sa/3.0/>
- 737 Overhead graphics based on the original work of Paulo de Angelis with permission to use
- SharpZipLib Library: <https://github.com/icsharpcode/SharpZipLib>

# Instructions

## 1. Running the server

Run the aviaServer.exe application. It will ask for administrator credentials (required) and will display the EULA. If you agree, go ahead and click on the 'I Accept' button to start the server and it will add the necessary exceptions to your firewall (you might need to restart the server after this step),

After the initialization is completed, you will see a small **aviaworx** icon in your task tray:



If you don't see the icon, you might need to press the arrow button to show all icons.

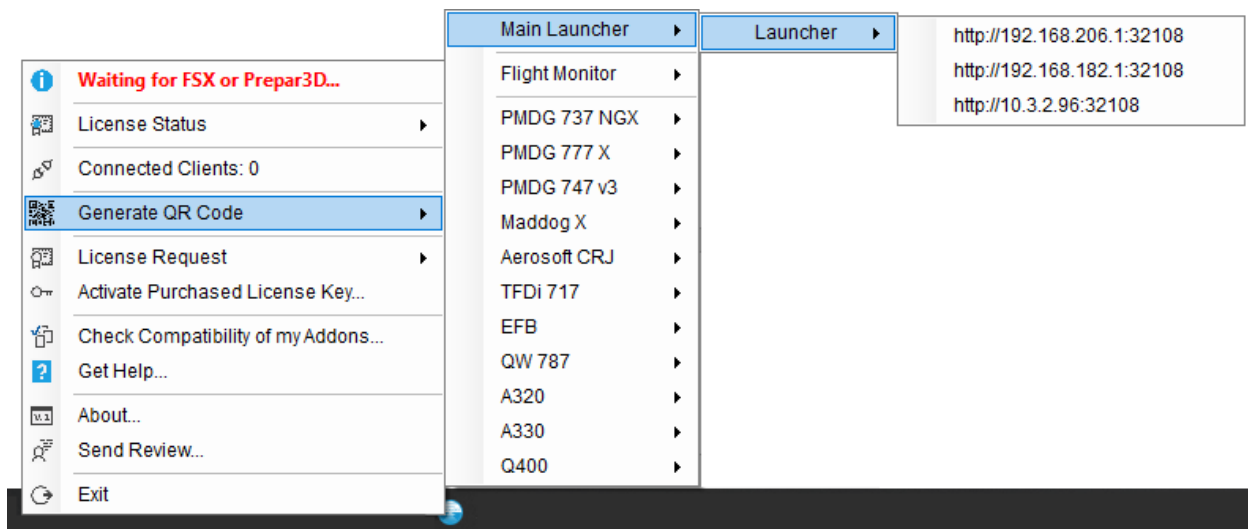
## 2. Establishing Connection

Now you are ready to connect your mobile device to the server. The easiest method is to access the 'Main Launcher', which by default runs on port 32108.

You can either input the appropriate URL manually:

`http://<your IP>:32108`

Or, alternatively, if you have a QR app, you can simply right-click the tray icon, select 'Generate QR Code' for your correct network connection and scan the logo with your device's camera.





# aviaServer Launcher

Connect to your desired Service

## Flight Monitor

 Flight Monitor License

[View Last Report](#)

## Aerosoft A320 Professional

 MCDU License

[Connect to MCDU L](#)

[Connect to MCDU R](#)

## Aerosoft A330 Professional

 MCDU License

[Connect to MCDU L](#)

[Connect to MCDU R](#)

## Aerosoft CRJ & CRJ Professional

 MCDU License

 EFB License

[Fly the Maddog X](#)

[Majestic MJC Dash 8 Q400](#)

You can then add the app to your home screen, so that it behaves like a native app on your device. See these links for more details:

For Android: <http://mobile-pixels.com/pin-webapp-website-android-homescreen/>

For Apple: <https://www.maketecheasier.com/save-web-page-as-home-screen-app-ios/>

You can follow the same steps to connect to one of the services directly without first opening the Main Launcher.

### **3. Purchasing Licenses and Enabling Full-Control**

Purchasing licenses can be done through aviaServer or through one of the partner stores (such as SimMarket or Aerosoft).

If you purchase a license through one of the partner stores, you will receive a license key that you need to activate through aviaServer. See the next chapter for details.

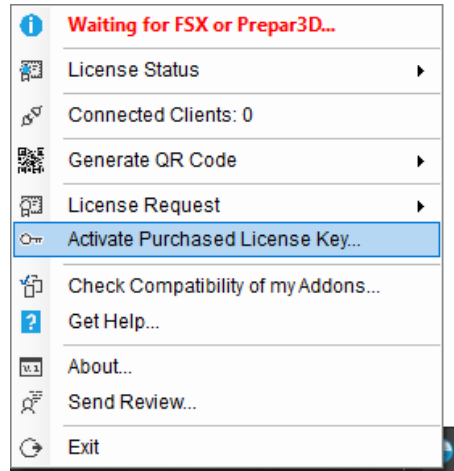
If you purchase through aviaServer, you will receive your licenses via email. Please note, this might take a while since it needs to be processed manually. See chapter 5 for details.

In both cases, you will receive a license that is bound to the hardware of your computer that is running aviaServer.

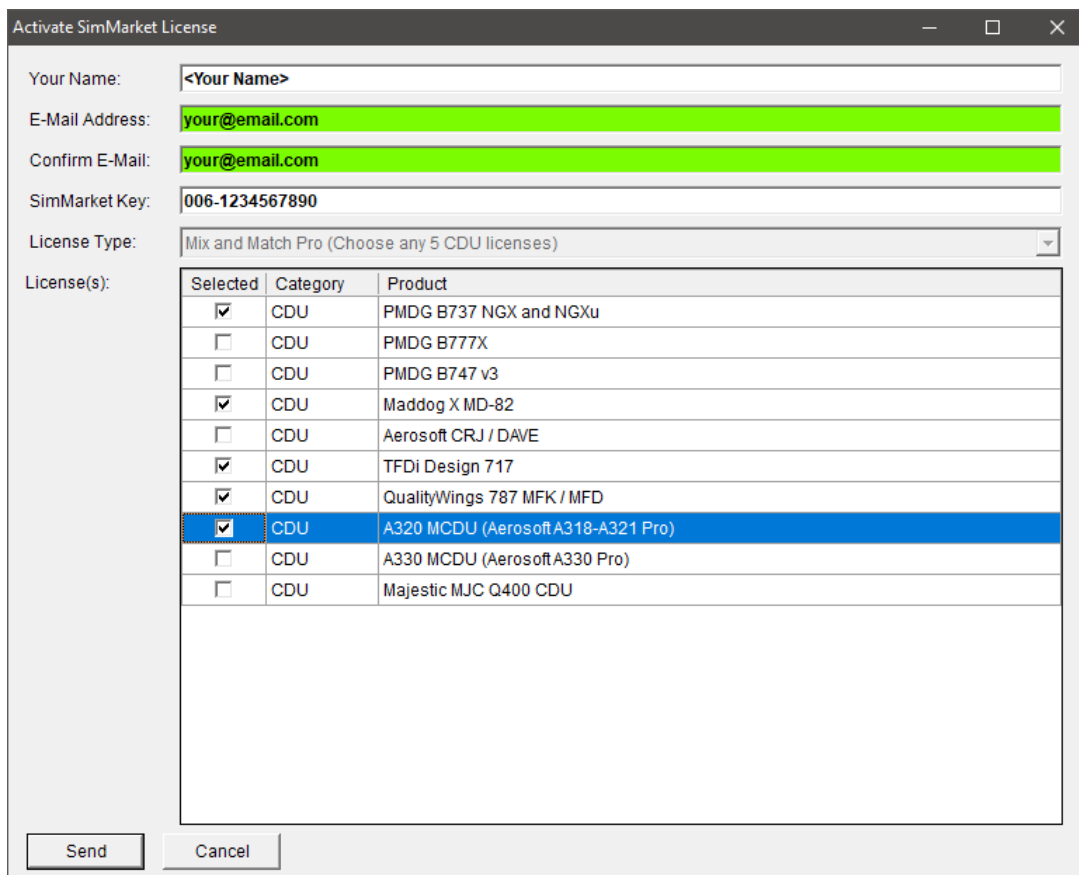
## 4. Purchasing through Partner Stores

After purchasing, you should have received a license key from the partner store.

You now need to activate this key in aviaServer:



Enter your details and, depending on the license key, you can choose the products that you would like to purchase:



A screenshot of the 'Activate SimMarket License' dialog box. The dialog box contains the following fields and options:

- Your Name: <Your Name>
- E-Mail Address: your@email.com
- Confirm E-Mail: your@email.com
- SimMarket Key: 006-1234567890
- License Type: Mix and Match Pro (Choose any 5 CDU licenses)
- License(s):

Selected	Category	Product
<input checked="" type="checkbox"/>	CDU	PMDG B737 NGX and NGXu
<input type="checkbox"/>	CDU	PMDG B777X
<input type="checkbox"/>	CDU	PMDG B747 v3
<input checked="" type="checkbox"/>	CDU	Maddog X MD-82
<input type="checkbox"/>	CDU	Aerosoft CRJ / DAVE
<input checked="" type="checkbox"/>	CDU	TFDi Design 717
<input checked="" type="checkbox"/>	CDU	QualityWings 787 MFK / MFD
<input checked="" type="checkbox"/>	CDU	A320 MCDU (Aerosoft A318-A321 Pro)
<input type="checkbox"/>	CDU	A330 MCDU (Aerosoft A330 Pro)
<input type="checkbox"/>	CDU	Majestic MJC Q400 CDU

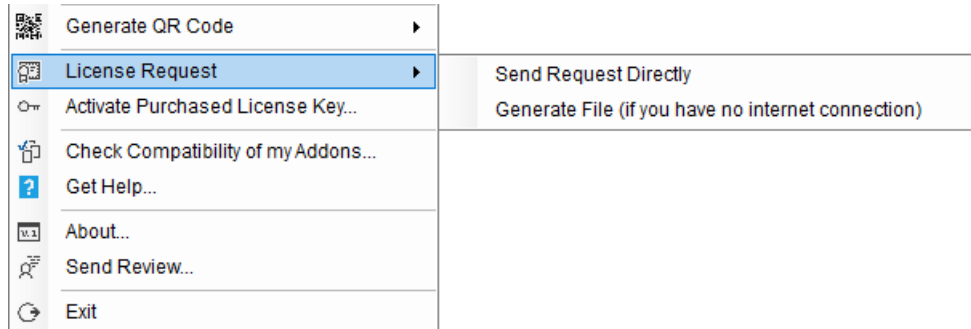
Buttons: Send, Cancel



After pressing Send, aviaServer will contact the licensing server and will activate your licenses automatically. You will receive a confirmation e-mail with additional information, in case the automatic activation didn't complete successfully. Note – all licenses are bound to the hardware of your computer.

## 5. Requesting licenses through aviaServer

You have two options if you would like to get access to the full-control version.



1. Send a license request from the server: **'Send Request Directly'** (requires internet connectivity)  
A window will pop-up asking for your name, e-mail address and the license you would like to purchase. Once you press the Send button, a confirmation e-mail will be sent to your address as well, such you can verify the e-mail has been sent.

Send License Request

Your Name:

E-Mail Address:

Confirm E-Mail:

Bundles:

License(s):

Selected	Category	Product
<input checked="" type="checkbox"/>	CDU	PMDG B737 NGX and NGXu
<input type="checkbox"/>	CDU	PMDG B777X
<input type="checkbox"/>	CDU	PMDG B747 v3
<input type="checkbox"/>	CDU	Maddog X MD-82
<input type="checkbox"/>	CDU	Aerosoft CRJ & CRJ Professional
<input type="checkbox"/>	CDU	TFDi Design 717
<input type="checkbox"/>	CDU	QualityWings 787 MFK / MFD
<input type="checkbox"/>	CDU	A320 MCDU (Aerosoft A318-A321 Pro)
<input type="checkbox"/>	CDU	A330 MCDU (Aerosoft A330 Pro)
<input type="checkbox"/>	CDU	Majestic MJC Q400 CDU
<input type="checkbox"/>	EFB	Electronic Flight Bag (PMDG 747-8, QW 787 & Aerosoft CRJ Pro)
<input type="checkbox"/>	Overhead	PMDG B737 NGX
<input type="checkbox"/>	Overhead	PMDG B777X
<input type="checkbox"/>	Overhead	PMDG B747
<input type="checkbox"/>	Monitoring	Flight Monitor

Price: **0.00 EUR / 0.00 USD**  
(estimate)

- In case your computer isn't connected to the internet, choose the second option: **'Generate File'**  
Select the product to purchase and E-Mail me the 'LicenseRequest.req' file (see contact information below).

Generate License Request

Bundles:

License(s):

Selected	Category	Product
<input type="checkbox"/>	CDU	PMDG B737 NGX and NGXu
<input type="checkbox"/>	CDU	PMDG B777X
<input type="checkbox"/>	CDU	PMDG B747 v3
<input type="checkbox"/>	CDU	Maddog X MD-82
<input type="checkbox"/>	CDU	Aerosoft CRJ & CRJ Professional
<input type="checkbox"/>	CDU	TFDi Design 717
<input type="checkbox"/>	CDU	QualityWings 787 MFK / MFD
<input type="checkbox"/>	CDU	A320 MCDU (Aerosoft A318-A321 Pro)
<input type="checkbox"/>	CDU	A330 MCDU (Aerosoft A330 Pro)
<input type="checkbox"/>	CDU	Majestic MJC Q400 CDU
<input type="checkbox"/>	EFB	Electronic Flight Bag (PMDG 747-8, QW 787 & Aerosoft CRJ Pro)
<input type="checkbox"/>	Overhead	PMDG B737 NGX
<input type="checkbox"/>	Overhead	PMDG B777X
<input type="checkbox"/>	Overhead	PMDG B747
<input type="checkbox"/>	Monitoring	Flight Monitor

Price: **0.00 EUR / 0.00 USD**  
(estimate)

In both cases, you also have the option of choosing 'bundles', giving you a discount based on the number of licenses you are buying:

Send License Request

Your Name:

E-Mail Address:

Confirm E-Mail:

Bundles:

License(s):

- None
- PMDG® Light - All 3 CDUs for PMDG 737, 747 and 777
- PMDG® Professional - All 3 CDUs and Remote Overheads for PMDG 737, 747 and 777
- PMDG® Ultimate - All CDUs, EFB and Remote Overheads for PMDG 737, 747 and 777
- Overhead King - All Remote Overheads for PMDG 737, 747 and 777
- Mix and Match Light - Choose any 3 CDU licenses
- Mix and Match Pro - Choose any 5 CDU licenses
- CDU King - All CDUs**

The following bundles are available:

- PMDG® Light – Includes all 3 CDUs for the PMDG 737, 747 and 777
- PMDG® Professional – Includes all 3 CDUs and the 3 Remote Overheads for the 737, 747 and 777
- PMDG® Ultimate – Includes all 3 CDUs, the 3 Remote Overheads for the 737, 747 and 777 as well as the EFB license
- Overhead King – Includes all 3 Remote Overheads for the 737, 747 and 777
- Mix and Match Light – Choose any 3 CDU licenses
- Mix and Match Pro – Choose any 5 CDU licenses
- CDU King – Includes all CDU licenses

Note – bundles might not be available if you already own licenses from the chosen group. In this case, you can still purchase licenses individually.

After sending the request, you will receive a link to pay through PayPal. PayPal will automatically inform me once the payment has been completed. If you have a different e-mail registered at PayPal than the one you used to generate the LicenseRequest, please indicate so during the payment process – this allows me to pair the payment with the associated license request.

After payment has been confirmed, you will receive a license file. This is encrypted and will only run on your system. Just place the '.lic' file in the same directory where the server is running, and after restarting it, you will have full-control. If you have purchased multiple licenses, you will end up with multiple '.lic' files, each activating a specific set of functionalities.

Should your hardware configuration change significantly, you could end up losing 'Full Control' and you would be back in 'View Only' mode. In this case, simply generate a new license request and send it to me. You will then receive a new license file.

## 6. aviaFlightMonitor

aviaFlightMonitor monitors your approaches and automatically generates a detailed risk assessment report 15 seconds after landing. The approach segment is automatically tracked (the last 4000 feet) and then subsequently analyzed to give you direct feedback of your performance during the approach.

aviaFlightMonitor supports all aircraft but is optimized for fixed wing transports.

To view the report, either connect via the Main Launcher or use this URL:

`http://<your IP>:32109/flightmonitor/report.html`

Each report is additionally saved locally so that you can review it at any point.

See <https://www.aviaworx.com/aviaflightmonitor> for more details.

## 7. aviaCDU

aviaCDU allows you to connect your mobile device with the CDU of the supported aircraft.

These are:

- Aerosoft A318-A321 Pro Package (latest Service Packs required)
- Aerosoft A330 Pro Package
- Aerosoft CRJ SP1
- Aerosoft CRJ Professional 2.2.0.1
- Fly the Maddog X MD-82 with SP 1.10
- Majestic Software's Q400 version 1.020b
- PMDG B737 NGX with SP1c
- PMDG B737 NGXu
- PMDG B777X
- PMDG 747 QOTS II
- QualityWings 787 version 1.1.3
- TFDi Design 717

Notes:

- For the Q400 to work correctly, the 'mjc84.ini' file needs to be setup correctly: Under the category '[UDP\_CONNECTOR\_3]' the following setting needs to be enabled as follows: 'UDP\_ENABLED=1'.  
Note – this is activated by default and only needs to be modified if this has been changed by you.
- For the PMDG aircraft to function correctly, the 'PMDG\_Options.ini' file needs to contact the Databroadcasting flags. This is configured **automatically** by aviaServer.

It is also possible to cycle through the screens for a given addon without having to leave the full screen view. This means, as an example, that you can cycle through the 3 CDUs for the 777 (Left, Right, Center) or the 2 CDUs and DAVE for the Aerosoft CRJ. A pop-up will indicate which screen is currently active.

There are 2 ways to achieve this:

- 1) By touching on the top-most left/right CDU mounting screw (DAVE: edges of the title bar):



Exception for the B747-8:



CDU:

- a. Previous CDU (Left->Center->Right->Left)
- b. Next CDU (Left->Right->Center->Left)
- c. Left EFB
- d. Right EFB

EFB:

- Lower Left Screw: Other EFB (Left->Right->Left)
- Lower Right Screw: Left CDU

- 2) Or by touching the screen with 2 fingers simultaneously. The way this works: You touch (anywhere) on the screen with FINGER 1. You keep FINGER 1 held down while touching with FINGER 2 – the moment both fingers are detected, the CDU screen will cycle. Note – if the second finger touches to the RIGHT of your first finger, then the next CDU screen will show. If the second finger is to the LEFT of your first finger, the previous screen will show. Please also note – this doesn't work with the EFB since two-finger gestures are used for panning and zooming.

Each CDU has a dedicated port. Following ports can be used:

- B737 NGX & NGXu – Left CDU: **32111**
- B737 NGX & NGXu – Right CDU: **32112**
- B777X – Left CDU: **32113**
- B777X – Right CDU: **32114**
- B777X – Center CDU: **32115**
- B747 QOTS II – Left CDU: **32116**
- B747 QOTS II – Right CDU: **32117**
- B747 QOTS II – Center CDU: **32118**
- Fly the Maddog X MD-82 – Left CDU: **32119**
- Fly the Maddog X MD-82 – Right CDU: **32120**
- Aerosoft CRJ – Left CDU: **32121**
- Aerosoft CRJ – Right CDU: **32122**
- Aerosoft CRJ – DAVE: **32125**
- TFDi Design 717 – Left CDU: **32123**
- TFDi Design 717 – Right CDU: **32124**
- QualityWings 787 – Left MFK: **32126**
- QualityWings 787 – Right MFK: **32127**
- EFB – Left: **32128**
- EFB – Right: **32129**
- A320 – Left MCDU: **32130**
- A320 – Right MCDU: **32131**
- A330 – Left MCDU: **32134**
- A330 – Right MCDU: **32135**
- Q400 – Left CDU: **32132**
- Q400 – Right CDU: **32133**

The URL for the NGX Left CDU would look something like this:

`http://<your IP>:32111`

Likewise, the URL to connect to the 777X Right CDU would be:

`http://<your IP>:32114`



## 8. aviaEFB

Similar to aviaCDU, aviaEFB allows you to use your mobile device to access the EFB of the following aircraft:

- Aerosoft CRJ Professional 2.2.0.1
- PMDG 747-8 QOTS II
- QualityWings 787

## 9. aviaOverhead

With aviaOverhead, you can run a replica overhead panel of one of the PMDG Boeing aircraft either on a networked PC or on a mobile device.

There are 2 ways to use aviaOverhead:

1. Run aviaOverhead on your mobile device:
  - a. The easy way: right-click the aviaServer tray icon and click on Generate QR code. You will see appropriate options for the 737 and 777.
  - b. The URL for the Remote Overhead is:
    - 737: `http://<your IP>:32109/ovhd/737/737.html`
    - 747: `http://<your IP>:32109/ovhd/747/747.html`
    - 777 Passenger: `http://<your IP>:32109/ovhd/777/777_pax.html`
    - 777 Freighter: `http://<your IP>:32109/ovhd/777/777_freighter.html`
2. Run aviaOverhead as a separate application on a networked PC. The aviaOverhead Client communicates with aviaServer through port **32110**. This port is automatically added to the Windows firewall. Run the aviaOverhead Client application. At first run, it will ask you to input the server address. Type in the hostname or IP address of the PC running aviaServer. Example: 'localhost'. No need to add any port information here. You can also choose which aircraft's overhead panel you would like to see, including passenger and freighter variants. After this, the **Main Overhead** should be visible. The connection to the server is established automatically and it will silently try to reconnect should the connection drop. As such, it doesn't matter if the aviaOverhead Client is started before or after starting aviaServer.

## Notes for aviaOverhead for mobile devices

You can zoom in/out by double tapping on an empty area. When zoomed in, tap once in an empty area to be able to pan around the overhead panel. Zoom out by double tapping on an empty area once again.

There are also hidden click spots to cycle between daylight and night modes:

These are:

- For the 737:



- For the 777:



- For the 747:



You can then use the lighting controls to adjust dome light and panel backlights.

## Notes for aviaOverhead for Windows ®

For the 737 NGX: Use the space-key to cycle between the **Main Overhead** and **Aft Overhead**. Alternatively, you can press the button on the top-right corner.

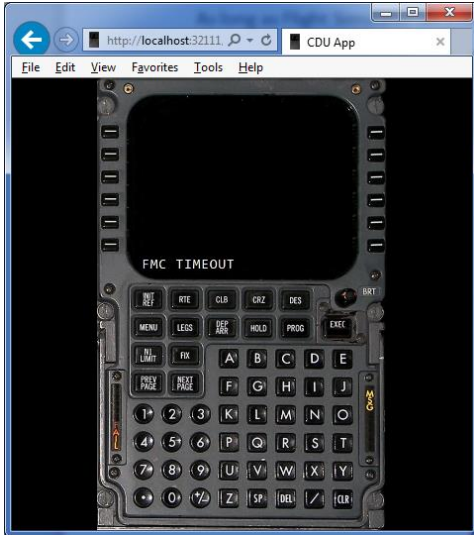


↑ Space ↓



## 10. Troubleshooting

If you are having trouble connecting with your mobile device, try your desktop's browser. Any modern browser should work. Use 'http://localhost:32111' if the server is running on the same system.



Displaying the CDU using **Internet Explorer**



Displaying the CDU using **Firefox**

The aviaServer application has a built-in function to send a logfile if you need help. Simply right click the tray icon and choose 'Get Help'. Alternatively, you can also send me the 'LogFile.cdulog' logfile via e-mail. See contact details at the bottom on how to reach me.

A screenshot of a 'Get Help' dialog box. It contains the following fields and text:

- 'Your Name:' followed by a text input field.
- 'E-Mail Address:' followed by a text input field.
- 'Confirm E-Mail:' followed by a text input field.
- 'Describe your problem:' followed by a large text area.
- A '(Required)' label below the text area.
- Instructions: 'Please enter your contact details so support can contact you directly.' and 'After you click 'Send', an e-mail will be sent to support@flightsimapps.com along with the logfile. You will be CC'd as well.'
- 'Send' and 'Cancel' buttons at the bottom.

If you have trouble with the Remote Overhead Client, try and run it on the same PC as aviaServer and use 'localhost' as the connection address. If this works but it doesn't work on a networked PC, chances are high you might be running some 3<sup>rd</sup> party antivirus / firewall application that is blocking one or multiple required ports.

## Advanced Settings

These settings can be changed by modifying the 'aviaServer.exe.config' file in a text editor. Make sure you create a backup before making any changes. A valid .config file is needed for aviaServer to work correctly!

- You can disable the two-touch port switch by changing this value from 'False' to 'True'. Default is 'False':

```
<setting name="DisableTwoClickPortChange" serializeAs="String">  
  <value>False</value>  
</setting>
```

- You can disable the gray click effect by changing this value from 'False' to 'True'. Default is 'False':

```
<setting name="GlobalDisableCircleDrawing" serializeAs="String">  
  <value>False</value>  
</setting>
```

## Data Protection

When sending a License Request, aviaServer will embed and encrypt hardware & installation specific data which is used to generate a system specific key.

Additionally, when sending a License Request directly through aviaServer, the email address entered will be stored to identify purchases for future reference.

When sending a cdulog – Logfile, additional data is embedded within the logfile to help troubleshooting, including file paths and hardware identifiers. No further personal data is transmitted or stored by aviaServer, either locally or remotely.

## Automatic Update

aviaServer will check for a new version each time it is run. If a new version is available, it will be downloaded automatically and the next time you run aviaServer, it will be automatically updated to the latest version.

You can always check this page for the newest version:

<https://www.aviaworx.com/download/>

## Frequently Asked Questions

Please visit the FAQ section of the forum. You can find it here:

<http://www.avsim.com/topic/475080-faq/>

## Support & Contact:

If you have any questions / concerns / ideas, visit the dedicated support forum at AVSIM:

<http://www.avsim.com/forum/742-remote-cdu-for-phone-tablet-official-support-forum>

Alternatively, you can also contact me directly:

Mark Foti  
mark@aviaworx.com

## Changelog

See <https://www.aviaworx.com/remote-server#changelog> for details