



CityScene

Orlando

USER GUIDE JANUARY 2019



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Thank you!

Orbx would like to thank you for purchasing **CityScene Orlando**!

Allen Kriesman is a legend of the Flightsim community; a master of his craft for several decades, you will know from his company Scenery Solutions, and highly popular products such as Ultimate Terrain X (UTX). We are delighted to have him on the team; not only will you see new scenery projects from Allen, but his technology will be making its way into many of our other product lines over the coming months.

CityScene Orlando is Allen's third project and the biggest CityScene project to date. This scenery package covers 1,115km² of coverage and includes two major airports - KMCO Orlando International Airport and KORL Orlando Executive Airport. Also included is the Lockheed Martin HQ east of the main coverage area.

Whilst KMCO and KORL aren't as heavily detailed as a commercial airport add-on, they are included in order to provide the full Orlando experience without compromising performance and provide much more detail over the default airports.



Orbx CityScene is a new line of scenery products that will recreate urban centres and cityscapes around the world in incredible detail. Building upon thousands of hours of R&D over several years, Allen's ground-breaking new technology enables highly-detailed scenery, coupled with highly improved performance and optimisation compared to default city centres. Bypassing traditional autogen methods, buildings correctly replicate unusual footprints, improve on building height and type accuracy, and even add more details for an immersive experience. Vegetation, lighting, terrain, traffic, are all fully integrated.

Orbx CityScene Features:

- Highly detailed, accurate representation of Orlando, Florida
- Nearly 3.9 million accurately placed regional trees
- Over 200k accurately sized, shaped and positioned custom buildings including high rise, commercial, and residential buildings
- 135.7k lights, 6.3k container objects, and 3.4k individual water features
- 40 points of interest
- Expertly optimised using ground-breaking techniques for best performance

What does CityScene mean?

- Highly detailed city and urban landscapes brought to life
- Accurate and detailed buildings that go far beyond the limitations of the P3D autogen system
- Realistic photoreal/satellite orthoimagery base
- Dense and highly-accurate vegetation placement
- Road traffic, vector, mesh (DEM) and landclass where required
- Full 5 seasons (where applicable) and complete night lighting
- Important POI, landmarks and features modeled
- Optimized for the best balance between performance and detail

Major POIs:

- Magic Kingdom Entrance
- Astro Orbiter
- Haunted Mansion
- Swan and Dolphin
- Tower of Terror
- MGM Giant Mickey Hat
- Disney Contemporary Resort
- Epcot the Land
- Epcot World of Energy
- Mission Space
- Orlando Amway Center
- Orlando Renaissance Seaworld - site of the 2019 FlightSimExpo!

Product requirements

This scenery airport addon is designed to work in the following simulators: **Microsoft Flight Simulator X, Lockheed Martin Prepar3D v1, Lockheed Martin Prepar3D v2, Lockheed Martin Prepar3D v3** and **Lockheed Martin Prepar3D v4**.

Global Base Pack is also required for full functionality.

What will you miss out on if you don't have Global installed?

- Blending of the photoreal into the surrounding terrain

Please visit <https://orbxdirect.com/product/global-base> to purchase your copy of Global if you haven't already done so.

Quick Installation Guide

Installing Orbx CityScene Orlando is all managed by our FTX Central application. This app is responsible for many aspects in maintaining your Orbx installation. Please visit the support forums to learn more.

Once you have added CityScene Orlando it will be added to your account and you can have FTX Central download and install it for you. The appropriate scenery library entries will also be managed by FTX Central.

You may also manually download CityScene Orlando and then have FTX Central manage the installation for you once downloaded.

An internet connection is required for FTX Central to validate your license.

Product tips

Improving Flight Load Times

As scenery areas for FSX/P3D become more detailed and cover larger areas, flight loading times have also increased.

Some of these load times can be quite excessive.

Scenery objects that are local to a particular area are only loaded by the simulator when the aircraft is approaching or has been placed within that scenery area upon startup. Even though CityScene regions can have over 100,000 of these custom objects, the simulator loads them pretty quickly.

However, many scenery packages use what are called Library Objects. Library Objects are custom objects that can be shared by any scenery package in the simulator. They are very efficient when it comes to disk storage, because the objects stored in a library can be used by many different areas and/or scenery packages.

While library objects are very efficient from a disk storage standpoint, they can really slow down some scenery product load times due to the way the simulator loads scenery. Large, extensive scenery areas with lots of custom objects are usually affected by this the most. CityScene products, which are unique in that they can provide over 100k custom objects over a large scenery area can be really impacted from a load time standpoint.

If you are bothered by exceptionally long load times, there are some things you can do that can really shorten them.

Pre-Flight Scenery Library Modifications

To prevent the simulator from unnecessary loading of unused library objects by the simulator, you can disable 3rd party scenery products in the simulators "Scenery Library" that are not relevant to the area you are flying. For example, if you have purchased the CityScene Orlando product and are only flying around this region, you don't need scenery products to be active that are outside of this region.

You can disable scenery products in the sim by pulling up the "Scenery Library" within the simulator itself (FSX/P3D). Also, there are several 3rd party software packages available that will allow you to do this process outside the simulator. Note that disabling (unchecking) a scenery product in the Scenery Library will not uninstall the product, it will just keep it from being loaded. To reenable a scenery area later on, all you have to do is recheck it in the Scenery Library.

For CityScene Orlando, you can significantly reduce your load times by disabling the Orbx Libraries. The Orbx libraries contain a lot of really useful objects for many of our scenery areas. However, they are not used by CityScene Orlando and can be deactivated when flying in this area.

Enable	Scenery Area	Scenery Location
<input checked="" type="checkbox"/>	FTXAA_ORBXLIBS	ORBX\FTX_AU\FTXAA_ORBXLIBS

Just uncheck the box next to the “FTXAA_ORBXLIBS” Scenery Area.

We also recommend unchecking any other CityScene regions that are not in your flight path (i.e. Barcelona)

<input type="checkbox"/>	FTX_AA_Barcelona	ORBX\FTX_EU\FTX_AA_Barcelona
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For more assistance with this subject, please visit our support forum as this is an ongoing topic that we will continually strive for improvements.



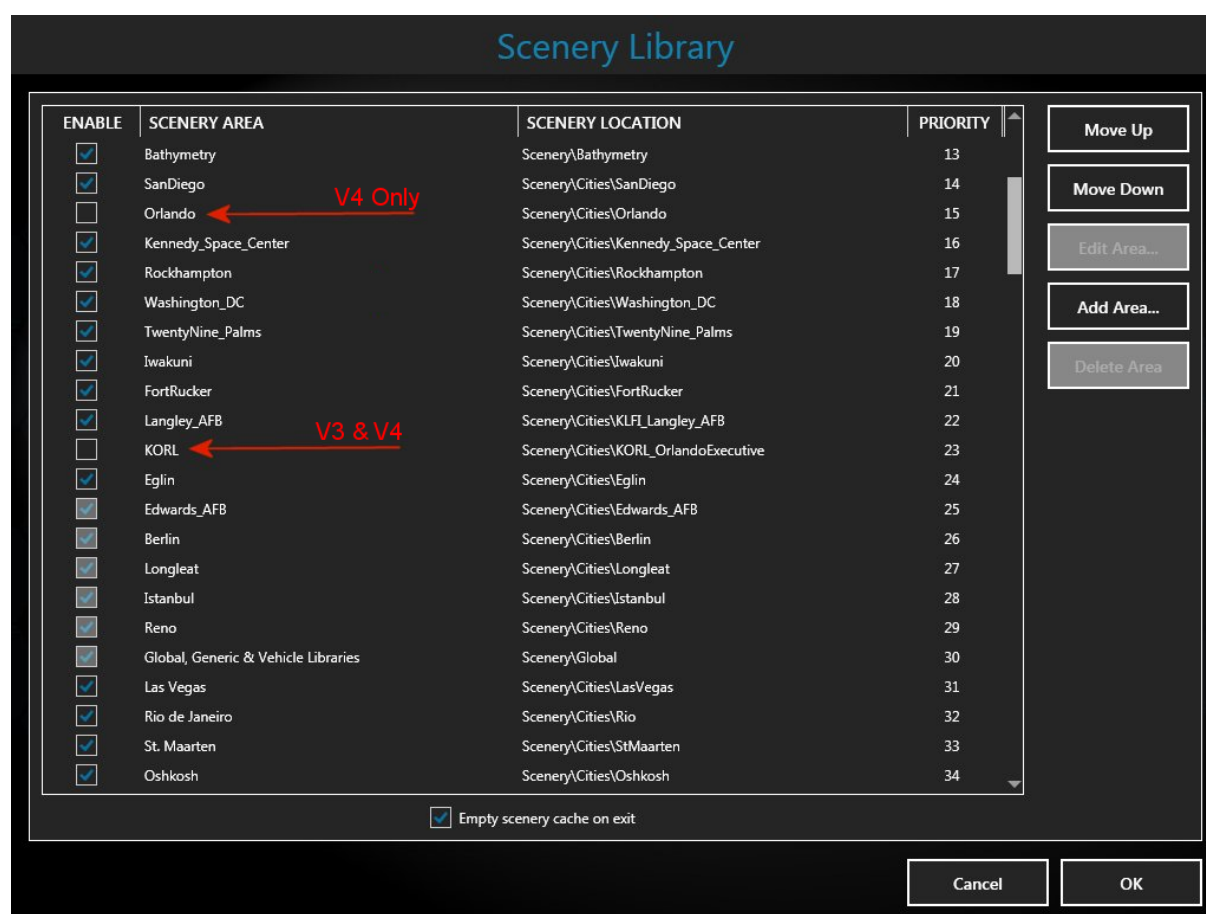
Compatibility with other addons

Disabling the Default KORL Airport (P3D Users Only)

For P3D, Lockheed Martin has provided some satellite imagery for the KORL airport. This imagery could conflict with the CityScene Orlando imagery and should be disabled. This layer will appear in the scenery library for both Prepar3D V3 & V4.

In addition, for P3D V4 only, there is an “Orlando” scenery layer that should be disabled.

Both of these Scenery Area layers are shown below.



Using 3rd Party KMCO and KORL Airports with CityScene Orlando

If you would like to replace the bonus KMCO and KORL airports included in CityScene Orlando with more detailed commercial airport, we have some recommendations for you. However, if you are running a 32-bit simulator, keep in mind that you are more likely to run out of memory with a combination of Orlando Cityscene, a detailed 3rd party airport and a detailed aircraft.

User options for supporting a 3rd party airport with Cityscene Orlando (using KMCO as an example)

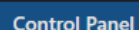
For all options below it is assumed that you have layered the 3rd party KMCO airport above Orlando CityScene in the simulator's Scenery Library (to give the 3rd party airport priority).

Option 1

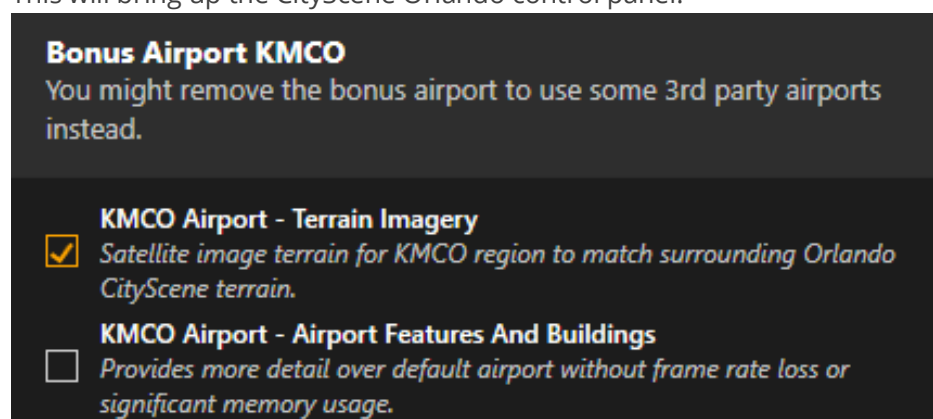
Do nothing. You might try this first. If the 3rd party airport product has exclusions that will take out the underlying Orlando CityScene features than this should work well.

Option 2 (method preferred by our beta testers)

Start your Orbx Central (formally FTX Central) interface. Then, locate and select the CityScene Orlando product and press the "Control Panel" button.



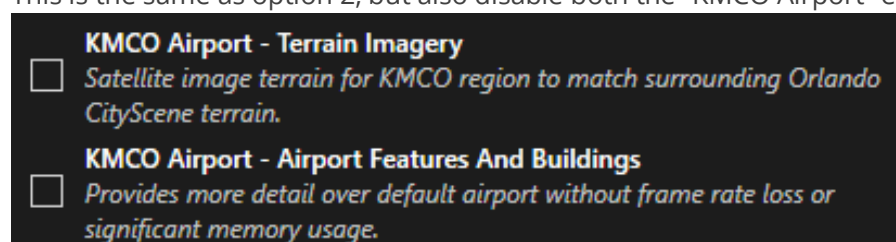
This will bring up the CityScene Orlando control panel.



Uncheck only the box labeled "KMCO Airport – Airport Features And Buildings". This will remove all CityScene Orlando object and airport features from the KMCO airport region. But, it will leave the CityScene Orlando imagery and autogen vegetation active.

Option 3:

This is the same as option 2, but also disable both the "KMCO Airport" entries.



We do not normally recommend this option as the imagery provided by the 3rd party product may not blend well with CityScene Orlando imagery.

CityScene Building Model Details

Most terrain scenery products consist of a handful of very detailed POI buildings (Points Of Interest) along with generic autogen buildings filling in the rest of the scenery region.

CityScene products are unique in that the level of building detail is raised across the entire scenery area using proprietary technology. This added detail is done in a very efficient manner that still allows for terrific frame rates and smooth performance.

In the past, when talking about "POIs", developers and users were talking about very detailed buildings that were created using commercial 3D modeling packages. Each one of these POI's can take hours, days or even weeks to develop. Extremely detailed POI's also can reduce performance if too many of them are provided. Detailed POI's are most often used in airport scenery products, where the aircraft (point of view) is close to the buildings and either not moving or moving very slowly. For CityScene products, POI's are also important. However, the POI's are only seen as the aircraft is moving at a much higher speed. So, the goal of CityScene developers is to make the object look as realistic as possible, without sacrificing performance too much. Small building details are not as important, as you won't see them while flying.

For CityScene products, we use the term POI a bit differently, because there are different levels of POI building details. In fact, we have broken down all building models into 4 categories:

- POI Level 0 - Autogen buildings
- POI Level 1 - Automated, extruded building footprints
- POI Level 2 - Custom buildings created from complex building footprint structures
- POI Level 3 - Detailed buildings constructed with commercial 3D modeling package

Each level of POI provides different characteristics that are important

- Positional Accuracy - How accurate is the building location ?
- Size/Shape Accuracy - How accurate is the building shape ?
- Texture Accuracy - Accuracy of the building texture
- Building Details - How many details are in the building model?
- Performance - How much drain does the model put on the system.
- Object Draw Distance - How far in the distance does the object appear ?

The following chart compares the different POI levels that we are discussing. You should note that Autogen buildings (POI Level 0) are generally not used in our CityScene products.

	POI Level 0 (autogen)	POI Level 1	POI Level2	POI Level 3
Positional Accuracy	Usually not accurate	Accurate	Accurate	Accurate
Size/Shape Accuracy	Not Accurate	Somewhat Accurate	Mostly Accurate	Accurate
Texture Accuracy	Regionally Appropriate	Regionally Appropriate	Generic, but hand selected for accuracy	Real world texture
Building Detail	Not Detailed	Not detailed	Some Detail	Semi to Very Detailed
Performance Impact	Very Efficient	Very Efficient	Very Efficient	Not Efficient (too many draw calls)
Visible Draw Distance	Near	Far	Far	Far

POI Level Examples

POI Level 0 – Autogen

Autogen objects are very efficient, but low detailed objects that only popup within a fairly close range. The object textures are regionally appropriate, but are randomly chosen by the simulator. Autogen objects are typically not used in CityScene products.

Autogen House And Building Example



POI Level 1

POI Level 1 CityScene buildings are created from extruded building footprints, in a semi-automated fashion. Because the building footprints can represent an actual building foundation, the building shapes are generally an accurate representation of the real thing. The wall textures for these buildings are generic, but regionally appropriate. The roof texture colors in most cases represent the actual roof colors as our software chooses the closest available roof texture to the roof in the satellite imagery.

POI Level 1 Building Example



Most buildings (sometimes 100,000+) in CityScene products are of this type.

POI Level 2

POI Level 1 and POI Level 2 CityScene objects are very efficiently rendered due to object clustering and shared textures. POI Level 2 objects are more detailed because they are semi-automated, with some manual touches added. These objects also have a far draw distance and will typically appear on the distant horizon due to their larger size. While the textures are not the actual building textures in real life, the actual texture used is carefully selected from the nearly 100 shared building textures that are unique to a regional CityScene product. The end result is still a very accurate version of the building, without sacrificing performance. CityScene products typically contain hundreds of these types of objects.

POI Level 2 Building Examples



POI Level 3

POI Level 3 objects are very detailed objects that are hand-created with a 3D object editor. These objects have textures that are unique to that object only. Sometimes these objects have a high polygon count. Because of the high polygon count and unique textures, detailed objects are typically not very efficient and can use up a lot of the simulator resources if too many of these objects are used. Detailed POI Level 3 models are most often used in detailed airport scenery packages, where they are viewed at close up on the ground. Since CityScene objects are typically only seen from the air, these detailed objects are usually kept to a minimum and only used for very important points of interest.

POI Level 3 Building Example



Scenery Coverage Area

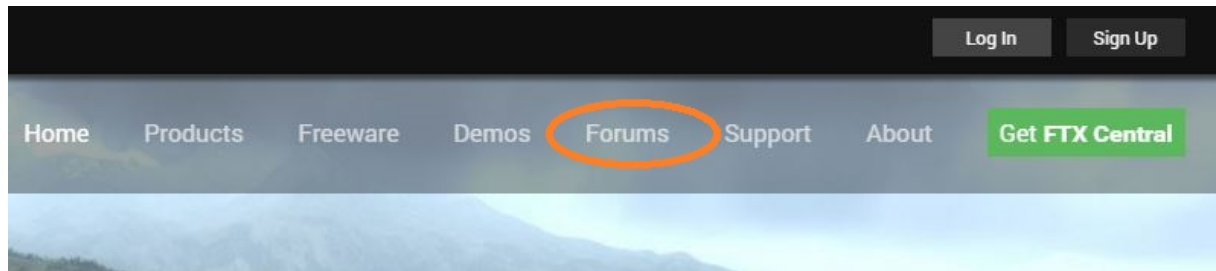


The red border indicates the entire coverage area. There is a small additional coverage area (upper right) which contains the Lockheed Martin Headquarters. This area has been blended in with the default scenery.

The two yellow areas cover the KORL and KMCO airports. There is also a third Orlando airport (KISM – Kissimmee) just outside the scenery area to the south.

Product Technical Support

Orbx has a very simple support policy: no question unanswered. That means, should you have any questions about CityScene Orlando or its use, please feel free to register on the forums at orbxdirect.com and then log a support question in the Orbx Payware Support Forum section. Orbx experts will be available to review your support questions and you will usually get a reply on the forums within 12 hours, often much sooner than that.



To visit our support forums, click on the “Forums” button shown on the homepage of orbxdirect.com.

Please do NOT email support requests

Orbx provides world-class support on our forums, and it’s the only way in which you can receive support for CityScene Orlando. Provided you adhere to the forum terms of use and have a legitimate copy of CityScene Orlando, you will always be offered our support at no cost as we work toward a resolution to your problem each time.

Use the forum search function

Before you post a question, please try searching for the answer first, using the forum’s built in search function located on the forum menu bar.

What to include in your support requests

If at all possible, this is what we’d like to see provided for each request you log:

- A separate post on the Orbx support forums for each issue (don’t tag new issue reports onto existing threads).
- Include your TRANSACTION ID from your CityScene Orlando purchase in your post or forum signature section.
- A screenshot to highlight what you are talking about.
- A descriptive post title which clearly states what the issue is.
- Detailed comments in your post about what you are reporting on.

The Orbx support team is always on standby to assist you with any problems you may have, or will comment on your issue reports. Please remember, our priority is fixing any urgent issues first, and addressing bug reports second. Clearly though, any “show stopper” bugs will be given top priority though.

Orbx Community Forum

Orbx already has quite a thriving and active user community on the forums, with over 84,000 members as of January 2019. To visit the forums, just point your web browser to orbxdirect.com and from the front page click the “Forums” menu item.

You don’t need a user account to view other people’s posts and information posted by Orbx staff, but if you’d like to join in on the discussion there, simply create an account. It’s instant and no validation email is required. We like to keep things simple 😊.

We hope to see you there soon!

Thanks for reading!

You’ve stuck with us through all these pages of information, and we appreciate you taking the time to read the user guide. We hope it gave you some tips and insights. See you on the forums!



The CityScene Orlando Team

Lead Developer

- **Allen Kriesman (Scenery Solutions)**

Specialist Roles

- **John Venema:** Business management
- **Ed Correia:** Production Management
- **Ben McClintock:** FTX Central and website

Beta Testing Team

Scott Harmes, Friedi Gulder, John Dow, Daniel Fürnkäb, Rob Abernathy, HiFlyer, Matt McGee and Nick Cooper



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For the most recent version of the EULA, see orbxdirect.com/eula.

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