

PI5008KSvmMap3dCarTool User Guide

ver. 0.50.00



- **PI5008KSvmMap3dCarTool Overview**
- **How to use PI5008KSvmMap3dCarTool**

PI5008KSvmMap3dCarTool Overview

PI5008KSvmMap3dCarTool Overview

➤ Main functions

- (1) Support 3D Car Model file (.obj)
- (2) Adjust rotation, position and size of 3D Car Model
- (3) Convert 3D Car Mode to 2D image which is fit for the virtual view point.

➤ Specification

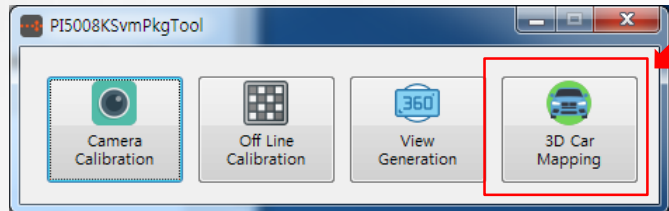
Item	Description
Inputs	3D Car Configuration (.cnf) 3D Car Model (.obj) View LUT Configuration (.cnf) View Image (.bmp) Shadow Image (.bmp)
Outputs	2D Image File (.bmp) 3D Car Configuration (.cnf) 3D Car Binary (.bin)
Supported OS	Windows7 or above

How to use PI5008KSvmMap3dCarTool

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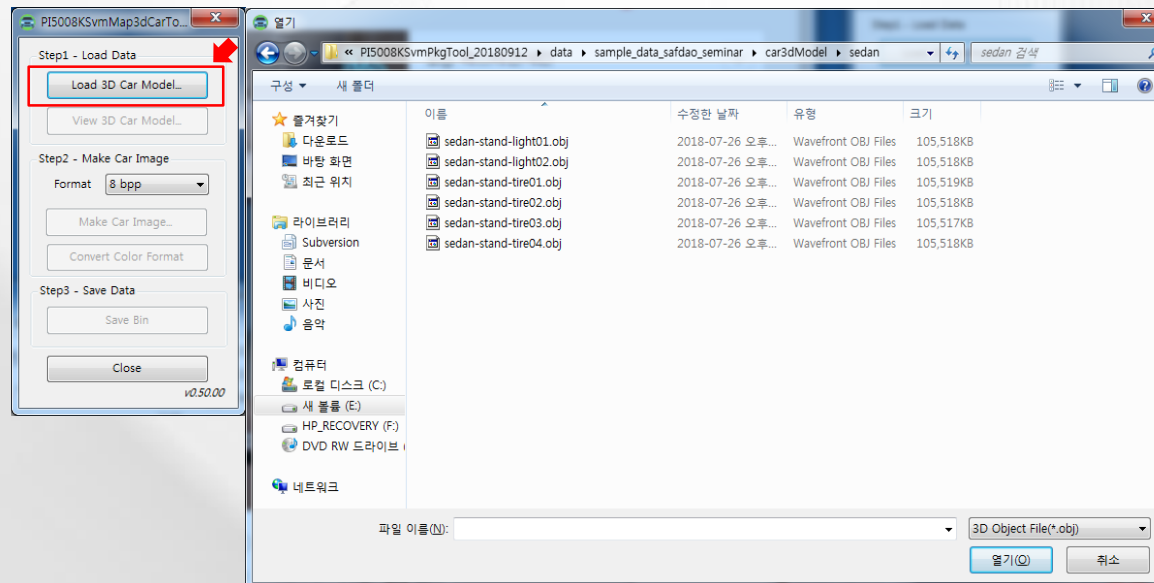
(1) Start program

Press <3D Car Mapping> button in PI5008KSvmPkgTool.



(2) Load 3D Car Model

Press <Load 3D Car Model...> button and load 3D car model file(.obj). After 3D car model is completely loaded, <View 3D Car Model> button is enabled.

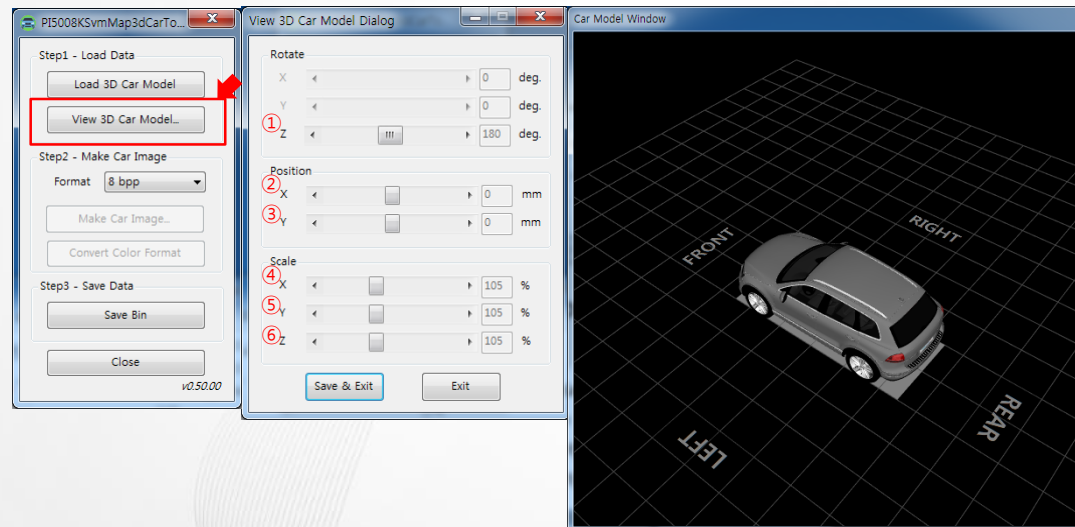


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(3) Checking 3D Car Model and adjusting direction / size / position

Press <View 3D Car Mode...> button and check if there is any problem in the loaded 3D car model.

If there is no problem, adjust direction, size and position of car model considering the direction sign and the size information(gray rectangle area in the floor). After finishing adjustment, please press <Save & Exit>.



You can rotate 3D space by moving mouse while pressing the left button or zoom it in/out by scrolling the mouse wheel on Car Model Window.

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- ① **Rotate → Z** : Rotate the direction of 3D car model about z-axis. Adjust 3D car model so as to be aligned with Front/Left/Right/Rear direction sign on the floor. (unit : deg.)
- ② **Position → X** : Move x-axis position of 3D car model considering the car size information in the floor. (unit : mm)
- ③ **Position → Y** : Move y-axis position of 3D car model considering the car size information in the floor. (unit : mm)
- ④ **Scale → X** : Adjust x-axis scale of 3D car model. (unit : %)
- ⑤ **Scale → y** : Adjust y-axis scale of 3D car model. (unit : %)
- ⑥ **Scale → Z** : Adjust z-axis scale of 3D car model. (unit : %)
- ⑦ **Save & Exit** : Save setting values and exit.
- ⑧ **Exit** : Exit without saving setting values.

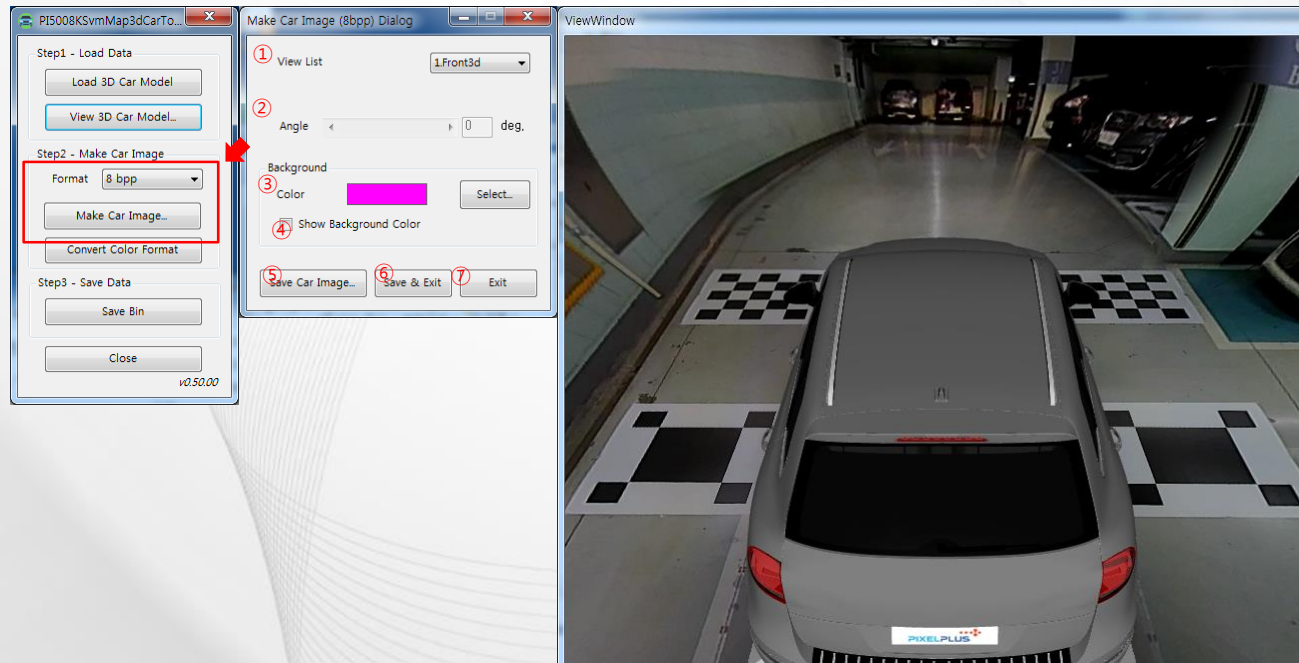
How to use PI5008KSvmMap3dCarTool

(4) Generate 3D car image for View

Press <Make Car Image...> button and select view in View List. 3D car mode will be converted to 2D car image which is fit for the view according to the virtual viewpoint. If the direction, size or position is not correct, go back to the previous stage to adjust 3D car model and do it again.

- 8bpp (256 color) Format

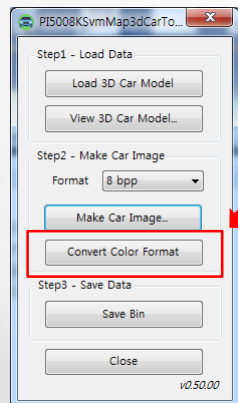
Select 8 bpp as Format and press <Make Car Image...> button.



How to use PI5008KSvmMap3dCarTool

- ① **View List** : Select view to make 3D car image.
- ② **Angle** : Select the angle for view 360 preview.
- ③ **Color** : Show the background color of car image.
- ④ **Show Background Color** : Select whether to show the background color.
- ⑤ **Save Car Image...** : Save 3D car image to 24 bit bitmap image.
- ⑥ **Save & Exit** : Save setting values and exit.
- ⑦ **Exit** : Exit without saving setting values.

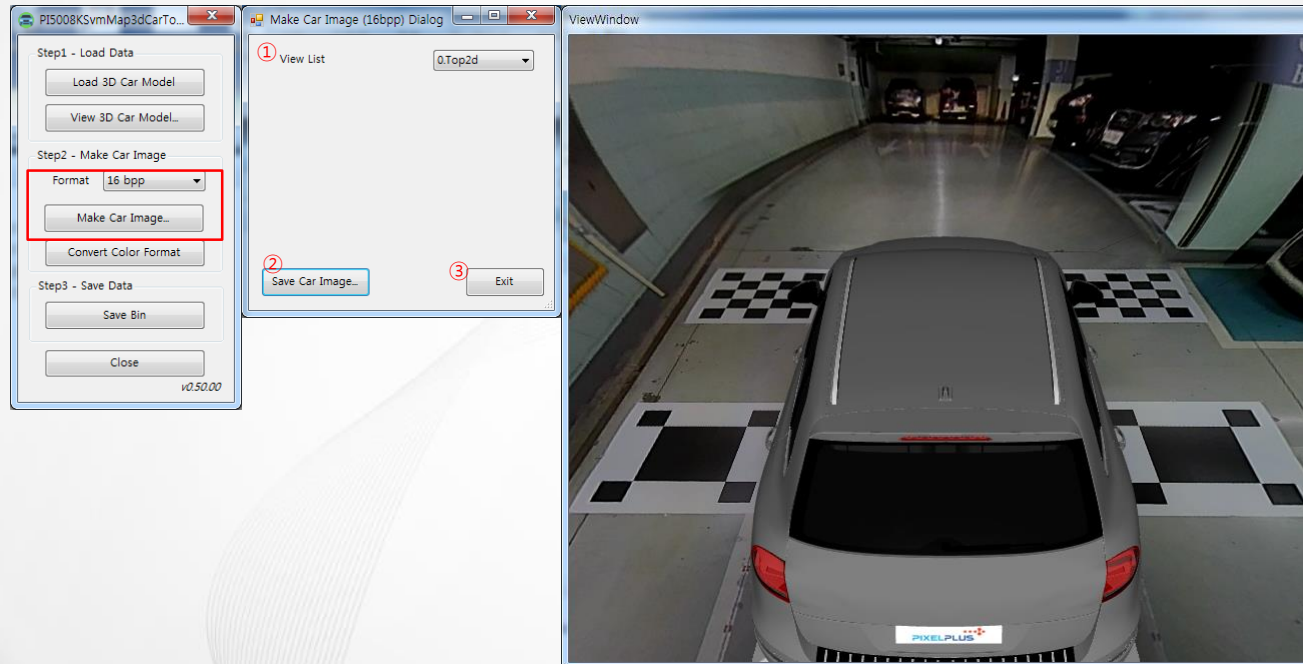
Convert the image saved in the previous stage to 8bpp format.



How to use PI5008KSvmMap3dCarTool

- 16bpp (RGBA4444) Format

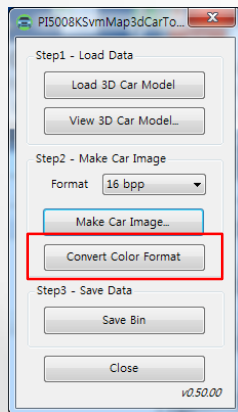
Select 16 bpp as Format and press <Make Car Image...> button.



How to use PI5008KSvmMap3dCarTool

- ① **View List** : Select view to make 2D car image.
- ② **Save Car Image...** : Save 2D car image.
- ③ **Exit** : Exit.

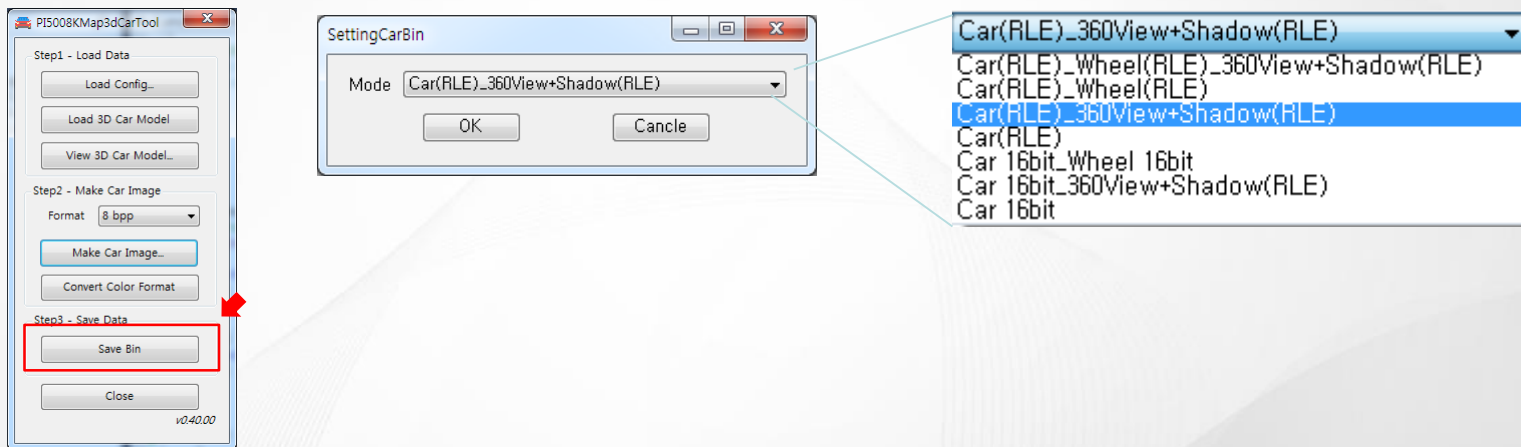
Convert the image saved in the previous stage to 16bpp format.



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(5) Save 3D Car Binary

Press <Save Bin...> button and pop up window will be displayed. Save 3D car binary file(Car_img.bin*) by clicking . <OK> button after choosing a mode.



Note1> PI5008 uses this file to display following images.

- car image for each view.
- car images for swing
- wheel image for moving effect.

Note2> There must be MakeCarBin.cnf to use Save Bin. (Refer to Appendix B)

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① **Mode** : selects combination of images which will be included in binary file.

Image list :

- Car : Car image is always included in binary image.
- Wheel : Used to give wheel rotation effect. (Optional).
- 360View(Shadow) : Used to show 360 degree surrounding view of a vehicle . Only RLE format is available (Optional)

Mode	Car Image Binary			16Bit BMP 부		
	Car	Wheel	360View (Shadow)	Car	Wheel	360View (Shadow)
Car(RLE)_Wheel(RLE)_360View+Shadow(RLE)	O	O	O	X	X	X
Car(RLE)_Wheel(RLE)	O	O	X	X	X	X
Car(RLE)_360View+Shadow(RLE)	O	X	O	X	X	X
Car(RLE)	O	X	X	X	X	X
Car 16bit_Wheel 16bit	O	O	X	O	O	X
Car 16bit_360View+Shadow(RLE)	O	X	O	O	X	X
Car 16bit	O	X	X	O	X	X

Appendix A

❖ 3D Car Configuration File (.cnf) Information

[Information]

name=PI5008KSvmMap3dCarTool Configuration> File Information (3D Car Configuration)

version=1.2> File Version

[Car Model]

✓ posX=0.0> X position of the center of 3D car model (unit: mm)

✓ posY=0.0> Y position of the center of 3D car mode (unit : mm)

posZ=0.0> Z position of the center of 3D car model (unit : mm)

rotateX=0.0> X-axis rotation angle of 3D car model (unit : deg)

rotateY=0.0> Y-axis rotation angle of 3D car model (unit : deg)

✓ rotateZ=0.0> Z-axis rotation angle of 3D car model (unit : deg)

✓ scaleX=1.05> X-axis size scale of 3D car model (unit : %)

✓ scaleY=1.05> Y-axis size scale of 3D car model (unit : %)

✓ scaleZ=1.05> Z-axis size scale of 3D car model (unit : %)

[Image]

backgroundColor=0x00FF00FF> Background color of shadow and 2D car image

Appendix B – MakeCarBin.cnf(1/4)

❖ Make Car Bin Configuration File (.cnf) 정보

[Information]

name=Car Bin Configuration> File information (Make Car Binary Configuration)
 version=1.0> File version

[Contents]

✓ includeCount=3> Number of items used to make car binary
 ✓ carBinViewCount=8> Number of view used to make car binary

[Include0]

✓ carBinMode=0> Item Identifier
 ✓ carBinName=car> Item name
 ✓ bits=16> Image type : 16->16bit, 8-> 8bit RLE
 ✓ include=1> Decide whether to be included in Car Binary(YES = 1, NO = 0)
 ✓ multImage=0> Fixed to 0
 ✓ addImageSet=-1> Fixed to -1
 ✓ dependance=0> Fixed to 0
 ✓ fileNameFlag=carImage.....> Fixed name

[Include1]

carBinMode=1
 carBinName=wheel
 bits=8
 include=0
 multImage=1> Fixed to 1
 addImageSet=-1> Fixed to -1
 ✓ dependance=1> Fixed to 1
 ✓ dependentName=Include0> Fixed to Include0
 fileNameFlag=tire> Fixed name

Appendix B – MakeCarBin.cnf(2/4)

❖ Make Car Bin Configuration File (.cnf) 정보

```
[Include2]
carBinMode=2
carBinName=view360
bits=8
include=1
multiImage=0
addImageSet=0
dependent=0
dependanceName=Include0
fileNameFlag=carImage
```

Fixed to 0

```
[CarBinview0]
✓ viewName=0.Top2d
✓ multiImageCnt=1
✓ hasLUT=1
✓ layoutNum=0
✓ viewId=0
```

View name used to make Car Binary

Whether to support animation effect (Wheel rotation)

Fixed to 1

Layout number in viewLayout.cnf

ViewID in viewLayout.cnf

```
[CarBinview1]
viewName=1.Front3d
multiImageCnt=1
hasLUT=0
layoutNum=0
viewId=1
```

Fixed to 0

Appendix B – MakeCarBin.cnf(3/4)

❖ Make Car Bin Configuration File (.cnf) 정보

```
[CarBinview2]  
viewName=2.Left3d
```

✓ multImageCnt=4 → Number of image to make animation effect(Wheel)

```
hasLUT=0  
layoutNum=1  
viewId=2
```

```
[CarBinview3]  
viewName=3.Rear3d  
multImageCnt=1  
hasLUT=0  
layoutNum=3  
viewId=3
```

```
[CarBinview4]  
viewName=4.Right3d  
multImageCnt=4  
hasLUT=0  
layoutNum=2  
viewId=4
```

```
[CarBinview5]  
viewName=5.LeftFront3d  
multImageCnt=4  
hasLUT=0  
layoutNum=4  
viewId=5
```

Appendix B – MakeCarBin.cnf(4/4)

❖ Make Car Bin Configuration File (.cnf) 정보

```
[CarBinview6]
viewName=6.RightFront3d
multilImageCnt=4
hasLUT=0
layoutNum=5
viewId=6
```

```
[CarBinview7]
viewName=9.View360
multilImageCnt=1
✓hasLUT=1
layoutNum=8
viewId=7
```

Fixed to 1

```
[ImageName]
nameCnt=2
```

Fixed to 2

✓imageName0=carImage

Fixed name

imageName1=tire

Has to be same with last part of OBJ file (ex: X-X-tire01.obj -> tire)

✓excludeName = shadow

Fixed name

```
[addImageSet]
nameCnt=1
```

Fixed to 1

✓addImageSetName0=shadow

Fixed name

Notes> The maximum number of include is 3.