





Standard

quality for presentation

Shade3D is a comprehensive 3D CG software developed in Japan with a wide spectrum of features from high-precision modeling, rendering, and animation to multi-functional layout workspace, camera, and light source, and many more features required for high-precision architectural perspectives modeling, interior design, and product design. Certified as the software recommended for the Certification of CAD engineer Grade-1 (Japan).

# Available in 5 grades for many different applications

To know 3DCG

Basic

Create 3DCG with

Fully compatible with 3DCAD

Professional

With useful features for



Supports development

**Main Features** 

**BIM/CIM** 

Civil

of additional features

# **S** : standard **P** : professional **WETA** : Metaverse function

# Modeling / Editing

Supports curved surface modeling, NURBS based modeling **P**, polygon modeling, and swept surface, parametric modeling **P**. Zoom, rotation, shear, move, and size setting.A dedicated tool (polygon mesh) for vertex, edge line, and surface. Real-time Boolean operation, floating-type fillet, surface chamfering tool, shape arrangement by assembly, and measurement of surface area, volume, and center of gravity. Supports the standard bone.





nodelina P

Parametric Modeling P (NETA) NEW

### Input/Output road alignment to LandXML P, supports longitudinal profile P NEW

Corresponds to LandXML input/output of road alignment. Road alignment information and terrain data (polygon mesh) can be imported from UCwin/Road through LandXML, and horizontal alignment information of road alignment can be exported from Shade3D to LandXML.Allows more detailed and generic definition of the longitudinal profile (vertical curves) of road alignment curves.



Supports road alignments and vertical curves

## Polygon mesh in Boolean operation part **P**

Real-time reflection of hierarchical parts assembly allows guick adjustment of positions and modification of the original shape. Modeling by combining basic shapes and trial-and-error and redoing in the final process of 3D printing such as integration can also be done efficiently.



Types of shapes to be generated by the Sweep tool can be selected



The types of shape created by "Sweep" can now be selected between "Swept

## Standard bone WETA

Support the creation of highly compatible joint structures by adding restrictions to conventional bones.



Human body structure made with standard bone

## Box model converter **P**

It converts near-landscape high polygon models into billboard and box models for far-landscape to quickly create light models for the metaverse.



## Polygon Reduction MERSE

Added the function to turn on/off "Triangulate" and "Use UV Boundary"



(from the left) Original, Triangulate: On, Triangulate: Off

# 2D drawing

Supports creation and display of independent views for 2D drawings. Multiple 2D drawings can be created and displayed within parts. "Drawing" display mode has also been supported from the Ver.22.



"Drawing" display mode

# Cutting

Supports the cutting position with numerical input of coordinates.



# Layout function

Split View on the right displays views from 4 different camera angles: Top View, Front View, Perspective View, and Side View. Drafting hidden lines can also be displayed from Ver.22.

### Collision avoidance in surface replicator

In the surface replicator, it is possible to arrange objects without overlaying. It is useful for avoiding unnatural overlaying when arranging objects randomly.



Arrangement so far

Collision avoidance

# Camera function

The same settings as those of real camera such as zoom, pan, dolly, angle of view, tilt. Possible to be reflected to animation

# Rendering

Expresses atmosphere by using ray tracing, path tracing, and global illumination photon mapping. Physically Based Rendering (PBR, rendering method that uses bidirectional reflectance distribution function and rendering equation to accurately render the flow of light and materials in the real world) approach is used to take rendering to the next level.



HDR Display\*OS, GPU, and monitor supporting HDR display are required

HDR (High Dynamic Range). (Real-time display of drawings, rendering image display) High-brightness image can be edited and previewed in real time-



### **Global illumination**

Light coming directly from its source but also light rays from the same source that are reflected by other surfaces generate a natural atmosphere



Path tracing + Photon mapping 🗴 P

## Ambient Occlusion **S P** WEAR NEW

This is a rendering function that provides a simple representation of an effect like global lighting. Ambient occlusion can be used from texture baking to add realistic shading to models for the Metaverse.

This function is useful for fine-tuning the final image even if it is not used for Metaverse applications.



### Light source

Spotlight, surface light source, line light source, parallel light source, point light source, ambient light, light distribution by IES data, infinite light source such as sunshine. Sunshine simulation (animation) by setting date, latitude, and longitude.



#### Linear workflow

Color management method that treats colors in the linear color space so that all image materials in work in progress can be displayed same as that in the real world. It contributes to an increase in work efficiency at every stage of 3D CG creation or digital compositing to produce photorealistic results.



## GPU ray tracing **P**

GPU Ray tracing enables high-speed and high-quality image generation by performing ray tracing on the GPU, unlike the conventional real-time rendering using the CPU.



## Al Denoiser **S P**

Equipped with a noise reduction library developed by Intel, and is capable of efficiently removing high-frequency noise through Al-based deep learning filter. High quality, noise-free results can be easily obtained in a short time without the need for complicated settings. Greatly effective for Global Illumination Path Tracing (without Irradiances Caching), shadow softness of light sources, Area Light, Linear Light, and roughness of surface materials.



# Animation function

A variety functions including shifting by joint, rotation, zoom in & out, camera work, move along path, organic deformation by skin, BVH import, walkthrough. These movement and deformation functions can also be used as modeling functions.

## Physical Assistant / Physical Animation **S P NEW**

You can set things such as moving and stopping for each shape, and perform

simple physical simulation such as free fall, landing, covering with cloth. Supports animation of physical scenes set up with the Physics Assistant. The feature allows for the preview of animations in real-time and animation rendering.



### **Particle physics**

It visualizes movements that have undergone physical calculation processing such as flames, bubbles, smoke, tornadoes, smoke movement due to air flow, billboard scattering, and collision between shapes.



### Morph target

Deformation and merge of polygon mesh by morph target is now supported. Multiple facial expressions can be created for a single facial model, and each can be composited by percentage. This improves the expression of character animation such as creation of motions which are difficult with skin deformation.



### **Multi-timeline**

A series of multiple motions can be set up in a single scene. Motions such as 'walk', 'run', etc. can be held together in one scene file.



### Enhanced gITF input/output for animation

It uses the settings of "Transparency", "IOR", "Specular", "Emissive", "Sheen", "Clear coat" in the PBR material, and "Smooth" and "Tiling" in the texture mapping. "KTX2 format" images can be used for texture. "Standard bone" and "Legacy bone" can be selected when importing.

### gITF Converter function enhanced

Input/output of Morph Target's animation settings, linear movement, scaling, animation settings for equal scaling of joint, ability to export animation stepby-step are now supported.



### **FBX Converter function enhanced**

Morph Target's animation settings can now be imported/exported. "Blender" has been added to a choice of pre-set exporters.



# Surface material

Materials such as basic colors set by parameters and texture, reflection, transparency, refraction index, texture wrapping, projection, and UV mapping, texture of cloud and transparent texture like ivory can be set and edited to multiple shapes at once, and can be reused for other scenes.



## PBR material

PBR materials are physics-based calculations and require fewer parameters than Shade3D materials. Shade3D materials and PBR materials can be set per geometry and can be mixed in a scene.

In addition to parameters for defining Roughness and Metalness that express the real world texture of objects, rendering function that uses "Principled BRDF" described by Disney as a guideline has been added.



Various expressions such as basic colors, reflection, transparency, projection, UV mapping, transparent texture like iory.



Clear coat

## Texture Baking **P** WERE NEW

Supports texture generation from model and material information. It can be used for various applications required for enhancing the Metaverse to a high-quality Metaverse, such as texturing of lighting, shadows, and global lighting shadows, normal map generation to reproduce unevenness of a high-poly models with a low-poly models, and image mapping of a procedural map.



# File import/exact (Integration)

Input/output to/from the main file formats used in 3DCG.

### Supported import/export files

For file import/export, it is possible to handle 3D data such as IGES, gITF, STEP, COLLADA, Wavefront OBJ, EPix, DXF, FBX, and STL, vector data such as AI and EPSF, images such as PSD, JPG, and PNG, video and sound data including MP4, AVI, MOV, WAV and AIFF, and BVH motion data.

### Linkage with Adobe products

Shade3D data can be output in Adobe Illustrator format **S P** and used as vector data. It is also possible to import Adobe Illustrator data in Shade3D to create 3D models.

Also, image data of which each light source is rendered in Shade3D can be imported into Adobe Photoshop to efficiently adjust the color and brightness of light sources.

## IFC data import (Optional)

Reads IFC (Industry Foundation Classes) files that define the representation of building elements such as doors, windows, walls, etc., and displays this information.



## SketchUp Import/Export

Supports the import/export of SketchUp used in the newest version of SketchUp. Import/Export P

Formats used in "SketchUp 2021" and newer versions are supported.

# 3D printing

Create shapes for 3D printing and perform necessary error checks. The program corresponds to STL file and OBJ file supported by many 3D printers, and data can be exchanged smoothly with 3D printers.

### **3D printing assistant**

Semi-automatically checks and corrects Shade3D scenes or external 3D data for items that are necessary to satisfy the conditions for a shape to be output for 3D printing, whether it has no holes, enough thickness, unified face normals to the outside, and is made of a single polygon mesh.

### Wrapping mesh

Create a single holeless manifold that wraps multiple shapes together in a skin while keeping the surface textures. It is possible to create a shape that supports 3D printing even from a combination of complicated shapes that are usually difficult to integrate.



Semi-auto check and modification

Modeling for 3D printing

# 3DCAD function **P**

Supports the plan view creation. Compatible with thick, non-perforated surfaces, primitive shapes, free-form surfaces, extruded bodies, revolved bodies, polygon meshes, and interference check for NURBS shapes.

# Linkage with UC-win/Road P

Models can be exported in 3ds, FBX, and COLLADA format and used in UC-win/ Road. It is possible to edit models on the Shade3D 3D space. \* Supported only on Windows



## Certification of Space Designer **P**



It corresponds to an examination that evaluates and certifies experts in CG interior perspective.

## **Certification of CAD engineer Grade-1**

Certified as the software recommended for the Certification of CAD engineer Grade-1 that is one of the largest 3D CAD test in Japan established in 2003.



# **Expanded Functions (Option)**

# **Block UI Programming Tool**

The "block interface," a technology employed in the field of academy programming education, can be used. By combining blocks (elements) like a jigsaw puzzle with mouse operation, users can build their programming proficiency and develop creative and logical thinking skills.

## BIM/CIM Design Check Tool

### Price: USD500

Allows you to input and output files in the IFC (Industry Foundation Classes) format, which is an international standard in the building and construction industry. IFC files define the specifications for the systematic representation of all the elements that make up a building, and it is possible to display and edit the information with this tool.Ver.25 introduces the support for "Bridge Substructures".

A plugin SDK for developing functions by using C++ language. You can create high-performance additional functions that are tightly integrated with Shade3D from simple solutions to advanced features.

IFC input, linkage with 3D bar arrangement CAD, design check information

Price: USD130

Supports reading of design verification information files attached as external references to IFC files output by 3D Reinforcement CAD. The information assigned during design can now be viewed in Shade3D, improving the efficiency of the design verification process.

Corresponds to the MLIT's BIM/CIM guideline (March 2023)

Example of a function created with the plugin



## **3D Parametric Tool**

Shade3D SDK

Price: USD800

Price: USD800

Structures such as bridge substructures can be easily created by inputting the necessary design information.

The created 3D model is added to the Shade3D scene as a shape, allowing for a wide variety of expressions and streamlining of the design process.

# Collection of ShadeD Practical Data Forest Series

Price: 250

Users who contract subscription service for Shade3D Standard or Professional can use some model data for free.





## Published Literature Shade3D Official Guidebook

Price: USD250 (excludes shipping fee) From beginners to intermediate users, this one book has it all! From basic operations to practical and applied techniques for intermediate users, this book covers all the functions and tips necessary for the production process.



hed in 2024

#### Shade3D Examination Guidebook

This is a guidebook for learning the contents of the CG certification exam using Shade3D. It covers the basics of CG (history, fields of use, and terminology), modeling and scene creation such as lighting using Shade3D, and techniques for using Shade3D for the Metaverse. The contents of the book go one step beyond what can be covered in the certification course and include scenes from application examples.



eated with the plugin





# **User Report**



# DXA Co., Ltd

## CEO/ Producer, Mr. Seiji Okuyama

Making full use of their expertise in the TV industry, DXA has utilized Shade3D to create high quality CG content for medical dramas, documentaries, commercials, and more.





(Up&Coming '21 Summer issue)

## **KAMITOPEN** Architecture-Design Office Co., Ltd. CEO and President, Mr. Masahiro Yoshida

Centered on commercial architecture, he is solving lots of his clients' problems through designing. Shade3D is used to create CG perspectives to express lively and bright spaces.



(Up&Coming '22 Spring issue)

# 6-dimension



Produces various 3D perspectives such as store and house interior, exhibition booth, events, etc. by using Shade3D. Ease of use and various expressions help to create event perspectives that "convey excitement"



(Up&Coming '23 New Year issue)

## Sohatsu Systems Laboratory Inc. **Development Department**



Reproduces realistic smoke movement based on FDS for tunnel fire hazard training. Express the road tunnel space and moving vehicles with Shade3D and integrate it with the movement of smoke.



(Up&Coming '23 Fall issue)

# **OKINO Builders Co., Ltd**

### Representative Director, Mr. Okino

Aiming to pass on the traditional beauty and techniques unique to Japan through the architecture of shrines and temples. Promoting "T&I Modeling", the conversion of shrine and temple architecture to 3D by using Shade3D



(Up&Coming '21 Fall issue)

# TAKARA SPACE DESIGN CORP.



Propose "space for beauty and health" including barbershops, beauty salons, and medical clinics. Shade3D is used in all aspects of presentation, design, and construction image confirmation.



(Up&Coming '22 Fall issue)

## **MuuN** CEO Mr. Hideki Torita



Having used Shade3D for many years for visualization and verification in various product development. Introduced UC-win/Road to effectively test and promote understanding of the new mobility concept 'TTS'



(Up&Coming '23 Summer issue)

# System Communications Inc.



Provides advertising and sales promotion proposals and high-quality creativity that captures the hearts and minds of clients by utilizing Shade3D. High-quality creative design produced using Shade3D is

highly evaluated by many clients.



(Up&Coming '24 Summer issue)

File formats supported	Basic	Standard	Professional	Civil	Ultimate
dobe Illustrator Al output	-	0	0	0	0
Adobe Illustrator Al			0	0	0
3-sides drawing can all be exported simultaneously		-	0	0	0
IGES input/output (Supports NURBS based modeling)	-	-	0	0	0
STEP input/output	-	-	0	0	0
DXF 3-sides drawing can all be exported simultaneously	-	-	0	0	0
Photoshop(PSD) output	-	0	0	0	0
FBX input/output	0	0	0	0	0
2D • 3D DXF input/output	0	0	0	0	0
Wavefront OBJ(OBJ) input/output	0	0	0	0	0
STL input/output	0	0	0	0	0
Adobe Flash SWF(Toon Renderer) output	-	-	0	0	0
Adobe Illustrator AI(Toon Renderer) output	-	-	0	0	0
MPO output	0	0	0	0	0
SketchUp input	0	0	0	0	0
HDR/OpenEXR/PFM input/output	0	0	0	0	0
COLLADA input	-	-	0	0	0
COLLADA output	0	0	0	0	0
PoserFusion 2(pz3, pzz input)	0	0	0	0	0
BVH motion file input	-	0	0	0	0
EPix output	-	-	0	0	0
3ds max(3DS) input/output	-	-	0	0	0
JPEG/BMP/TARGA/TIFF/PNG/GIF input/output	0	0	0	0	0
WAV/AU/AIF/AIFF input/output	0	0	0	0	0
AVI (Win/Mac) / MOV (Mac) / MP4 (Win/Mac) input/output	0	0	0	0	0

### **Product price**

Subscribers can always get free upgrades to the latest versions. As our subscription service is based on an annual contract, you can manage your budget more easily.

Product name	1st year (product price)	Subsequent years (annual cost of subscription service)	
Shade3D Basic Ver.25	USD250	USD100	
Shade3D Standard Ver.25	USD600	USD240	
Shade3D Professional Ver.25	USD1,200	USD480	
Shade3D Professional Civil Ver.25	USD2,200	USD880	
Shade3D Professional Ultimate Ver.25	USD3,000	USD1,200	

### **Option price**

Product name	Price	Academy Price
Block UI programming tool	USD130	USD104
BIM/CIM Design Check Tool (Professional only)	USD500	USD400
Shade3D SDK	USD800	USD640
3D Parametric Tool	USD800	USD640

### **Rental license**

Short term licenses available at a low price

Product name	Price
Shade3D Professional Rental license (2 month)	USD594
Shade3D Professional Rental license (3 month)	USD700
Shade3D Professional Rental license (6 month)	USD858

### **Floating license**

After web activation, anyone can use the products on any PC anywhere in the wo			
Product name	Price		
Shade3D Professional Rental license (2 month)	USD990		
Shade3D Professional Rental license (3 month)	USD1,175		
Shade3D Professional Rental license (6 month)	USD1,452		

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	-				





Fun	iction comparison chart	Basic	Standard	Professional	Civil	Ultimate
Mo	Sweep surface uppder side setting /"Surface" setting of linear shape and circle	0	0	0	0	0
	Polygon modeling / Curved surface modeling	0	0	0	0	0
	NURBS modeling / The assembly, Interference, and Measurement of a NURBS surface	-	-	0	0	0
delin	NURBS Boolean operations (floating type)	-	-	0	0	0
Ū.	Voxelization Mesh / Polygon Reduction / Mesh editing tool	0	0	0	0	0
	Boolean Modeling / Primitives / Line Offset / Mirroring /Bevel Vertex / Bevel Edge / Merge / Bridge	0	0	0	0	0
	Supports 3D Annotations	-	-	0	0	0
	Maximum rendering size (pixels)	2K	4K	8K and more	8K and more	8K and more
	Global Lighting: Radiosity	0	0	0	0	0
	Global Lighting: Radiosity Pro	-	-	0	0	0
	Stereoscopic rendering (Panorama VR Rendering)	0	0	0	0	0
Rende	Multipass rendering / Glow effector / Illumination Adjustment / endering history	-	0	0	0	0
ing	Number of ShadeGrid network rendering servers	1	1	No limit	No limit	No limit
	Linear workflow	0	0	0	0	0
	Ability to preset rendering resolution has been enhanced	0	0	0	0	0
	GPU ray tracing	-	-	0	0	0
	Al denoiser (Intel(R) Open Image Denoise)	-	0	0	0	0
UI	Dark mode support for Windows 10, macOS Mojave	0	0	0	0	0
	Humanoid bone / Standard bone	0	0	0	0	0
	Box model converter	-	-	0	0	0
	Flat expansion / UV replacement	-	0	0	0	0
	UV map editing / direct/indirect lighting / light map / normal mapping	0	0	0	0	0
	Material parameter: Volume (Volume rendering)	-	0	0	0	0
~	Material parameter: Subsurface scattering	-	-	0	0	0
/letav	PBR material	-	-	0	0	0
erse	Linear movement / rotation / scaling / uniform scaling /deformation animation using ball joints	0	0	0	0	0
	Animation setting using inverse kinematics	-	0	0	0	0
	Motion effect	-	0	0	0	0
	Addition of walk camera	0	0	0	0	0
	Physical sky / Volume light	-	0	0	0	0
	Shadow softness in ray tracing / distributed light source (IES data)	-	-	0	0	0
	Block UI programming tool	-	-	-	0	0
Opt	BIM/CIM Design Check Tool (Professional only)	-	-	-	-	0
ion	Shade3D SDK	-	-	-	-	0
ŀ	3D Parametric Tool	-			0	0

#### Hardware requirement

	Windows	Mac OS (Intel processor) Mac OS (Apple silicon)			
OS	Windows 10/11 (64bit only)	Monterey 12/Ventura 13/Sonoma 14			
CPU	Intel <sup>®</sup> Core <sup>™</sup> 2 Duo, AMD Athlon 64 X2 or newer *SSE3 is mandatory	Intel® Core™ 2 Duo or greater Apple M1 or greater			
Memory	4GB o	r greater (8GB or greater is recommended.)			
HDD	At least 5GB	8 of free space (20GB or greater is recommen	ded.)		
Monitor	1024x768 pixel or	greater (1280x1024 pixel or greater is recor 24 bit color or more is required.	nmended.),		
	PC with specifi cation	ns matching that of hardware and OS specifi	ed in the table		
PC model		iMac (2015 or newer) iMac Pro (2017 or newer) Mac mini (2018 or newer) Mac Pro (2019 or newer) MacBook (2016 or newer) MacBook (2016 or newer) MacBook Air (2016 or newer)	iMac (M1,2021 or newer) MacBook Air (M1, 2020 or newer) MacBook Pro (M1, 2020 or newer) Mac mini (M1, 2020 or newer) Mac Studio (2022 or newer) Mac Pro (2023 or newer)		
Video card	Required graphics card: Graphics cards corresponding to DirectX 12 Recommended graphics card: MVIDIA* GeForce* 1000 series or greater OMD Padeon TWK 400 series or greater OIntel* UHD Graphics 600 series or greater	Required graphics card: Ographics cards equipped on required models Recommended graphics card: Ographics cards equipped on recommended models	• Required graphics card: OGraphics cards equipped on required models		
HDR display	Monitor corresponding to HDR10 (DisplayHDR600 or greater is recommended) Video card: ONDDA* CaForce* 1000 series or greater OAMD Radeon <sup>W</sup> RX 400 series or greater	Monitor corresponding to HDR10 (DisplayHDR600 or greater is recommended) Hardware satisfying recommended models	Monitor corresponding to HDR10 (DisplayHDR600 or greater is recommended) OHardware satisfying required models		
Others		Internet connection is required.			



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CG input

. support

service

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