



INTRODUCING THE WORLD'S FIRST VOLUMETRIC ARCADE MACHINE.

After a successful debut at the Tokyo Game Show 2018, the world will now be able to purchase the Voxon Z3D. The Z3D's unique and captivating visual appearance (*think holograms from science fiction*) has added a whole new dimension to gaming.

Technical Description

The Z3D is a swept surface volumetric display, and is powered by the Voxon Photonics Engine. This engine comprises an ultra-high-speed digital projection system, CPU, volumetric graphics engine and reciprocating light diffuser. Volumetric images are created by projecting slices of light at 4,000 frames per second onto a moving screen. The images diffuse at precisely the right position in physical space, and through persistence of vision, the human eye blends them together, resulting in true three-dimensional digital objects that can be viewed in the same way as one would view a real object, from any angle, and without special goggles or glasses. The Z3D supports multi-user interactivity for gaming and other interactive applications.

Z3D Features

- All the functionality of the Voxon VX1 with the addition of a removable arcade table top & custom made games
- Genuine Sanwa arcade components
- LED strip lighting effects
- Compatible with plug-in-play game controllers (such as Xbox 360 controllers)
- Easy to use menu and games launcher
- Windows 10 architecture
- Includes Voxatron and other games.
- Unity Software Development Kit included for making your own games & projects
- C based SDK for low-level programming.

Software and Content Creation

All software on the Z3D is driven by our proprietary Core Graphics Engine (CGE), which is provided to developers free (on a single user license basis). In addition to the CGE, Z3D units will be shipped with the following;
Games included Snaketrón Z, Super Turrets, Balls For Dinner (Again)
Voxatron Game Engine which includes a number of preloaded games as well
Voxiedemo – a suite of volumetric graphics demos with source code
VoxieOS to view sample 3D models and animations
Sample applications and games



SNAKETRON Z

A 4-player arcade Eat-em-up. In Adventure Mode, weave your Snaketron through over 30 stages collecting pellets and growing your Snaketron to new lengths. Each stage presents new obstacles and visually striking hazards in true colorful volumetric 3D. Get competitive in Battle Mode and see who is at the top of their game, featuring special power-ups and customizable options.

FEATURES

- 30 + Levels
- Up to 4 simultaneous players
- Savable high scores
- Adjustable options



SUPER TURRETS

Aim your turret, power up your shot and fire! Super Turrets is a charming artillery tank blaster with big explosions and fully destructible worlds. 2-7 players can battle it out in a miniature 3D world for highly competitive play or 1-4 players can take the Tower Challenge, a unique puzzle based variant. In Tower Challenge; players work together to eliminate enemy towers and drones. Destroy three of the same colour and receive a special power up. A game of dexterity and strategy.

FEATURES

- 30 + Destructible worlds
- Turret upgrades and power ups
- Puzzle like tower challenge for 1-4 players.
- Competitive Battle mode for 2-7 players.
- Unique asynchronous play style for quick play.
- Savable high scores
- Adjustable options



BALLS FOR DINNER (AGAIN)

It's all you can eat at this (twisted) family dinner table. Here gluttonous players are rewarded. The more you eat, the bigger you grow. Prevent other players from eating by spitting your own food at them. Conspire with other family members in a team play or put yourself and your fork first, in a battle to be the fullest. The player who can eat the most food within the time limit wins.

FEATURES

- Simple gameplay.
- scalable 1 - 4 players.
- Soundtrack by DJ TR!P
- Artwork by Luku Kukuku



VOXATRON

Lexaloffle's fantasy voxel based game engine comes to life with the Z3D. Play, develop and discover hundreds of Voxatron's cartridges in true 3D. The premium and, arguably, the only true way to indulge within the Voxatron universe. This special version of Voxatron is compatible with all Voxatron cartridges and includes all the core functionality of the standard version.

FEATURES

- 1 - 4 players.
- Fully customizable Voxel based game engine.
- Scriptable (using Lua language) or drag and drop cart designer.
- Officially licensed from Lexaloffle with hundreds of user made carts available to play.

Z3D Information

VoxieOS

This program provides the functionality to view user-generated 3D models, maps, animations and games out of the box. A number of 3D files are supplied for demonstrating volumetric objects.

Voxiedemo

Source code for 'Voxiedemo', together with several applications and games, has been provided to help developers gain an understanding of the numerous volumetric function calls available in the API. The CGE is compatible with many existing 3D file formats and workflows, enabling users to test and interact with their own content.

Hardware Specifications

Display Volume size: 18cm x 18cm x 8cm

Display Resolution: Approximately 1,000 x 1,000 x 200 (hundreds of millions of voxels per second)

Display Refresh Rate: 30 volumes per second

Peak Fill Rate 500M Vox/s

Ports USB 3.0 x 7

3D Controller: 3Dconnexion SpaceNavigator included

Multi-User Capability

Supplied demo software supports up to 4 XBOX Controllers

Peripheral Support: Native support for XBOX Controllers, 3Dconnexion SpaceNavigator, keyboard and mouse. Compatible with any windows supported peripheral such as Leap motion, Intel RealSense, Microsoft Connect and Emotive.

Product Dimensions: Floor to Dome Top: 1200mm, Floor to Controller Surface: 1035mm,

Control Surface Footprint: 710x710mm, Base Footprint: 420x420mm

Operating Voltage: 110- 240V 50/60Hz. External 12V DC power supply supplied.

Brightness: Light projection at 650 lumens

Shipping Dimensions: TBC Shipping Weight: TBC

Warranty: 12 Months limited warranty from the date of delivery



Software Specifications

3D Media types: Static 3D models, animations, dynamic content & interactivity (games)

File Type Support: Native support for STL, OBJ, DICOM and KV6, Height maps, MOL

Volumetric Functions: volumetric function calls using 64-bit DLL

(voxel, sphere, cone, sprite, line, polygon, mesh, plane, cube, elevation map, text etc.)

Rendering High resolution monochrome R, G, B, C, M, Y, W

Colour support through spatial and temporal dithering

3D workflow support: 3DS Max, Maya, Blender, Solidworks, Fusion 360, Inventor, RealFlow, Sketchup, 123D Catch, Meshlab, Unity (via plugin) and many others

Software Development Kit (SDK) and Voxon Simulator

For advanced technical users, we have created a Voxon Simulator within the SDK that allows users to test example volumetric content without requiring the hardware. Whether you run the example programs, or write your own, the results will be rendered to your screen and will be visually similar to the real hardware, but in 2D as opposed to being fully volumetric 3D. Any software that you write for the simulator will work on the real hardware without any modification.

Unity Plugin

Unity support for Voxon is provided via the Voxon Unity Plugin. Using the Unity plugin, users can develop games and experiences that take advantage of Unity's mesh integration, animations, physics engine, and particle systems. A range of example scenes are provided to assist users in developing their own content with further documentation to come.

You can download the SDK at <https://voxon.co/sdk-unity/>

Interact with us and other Innovators

We have an online forum for developers and enthusiasts to interact with each other and the company to share concepts, ideas and suggested improvements as we continue to further advance the underlying technology.

You can join our community at www.voxon.co/community

Please feel free to contact us if any questions at all at contact@voxon.co