

Technical FAQ

What is Chaos Scans?

Chaos Scans is a scanning technology which converts real-world materials such as textiles, plastic, paint, and metal into digital materials. These can be used in 3D software tools to create photorealistic computer-generated images and animations.

Why should I use Chaos Scans?

Recreating materials from the real world in 3D software can be a painstaking process, especially if they exhibit complex behaviors under certain lighting conditions. Chaos Scans solves this issue by capturing photorealistic, tileable materials with an unmatched level of quality and accuracy. Chaos Scans can be used by anyone who wants to bring new levels of realism to their imagery and animation, from freelance artists to large studios. At the moment, it works with V-Ray for 3ds Max, V-Ray for Maya, V-Ray for SketchUp, V-Ray for Rhino, V-Ray for Revit, V-Ray for Houdini, V-Ray for Cinema 4D, Corona for 3ds Max, and Corona for Cinema 4D.

How are Scans materials different?

Chaos Scans are more than just texture maps or map packs.

Chaos unique hardware and software setup captures thousands of images of a material sample under different camera and lighting angles.

A proprietary software tool compiles the image data into a seamlessly tileable .vrscan material file. This file can be read by V-Ray for 3ds Max, V-Ray for Maya, V-Ray for SketchUp, V-Ray for Rhino, V-Ray for Revit, V-Ray for Houdini, and V-Ray for Cinema 4D, as well as by Corona for 3ds Max and Corona for Cinema 4D.

Scans materials can be dragged and dropped onto geometry. They automatically resolve their behavior under different lighting conditions, without any customization.

Can I modify Scans materials?

Parameters such as color, UV tiling and bump strength can be adjusted, and you can blend Scans materials with V-Ray materials or Corona materials. These parameters can be found on the respective Scan material page.

Since Scans is aimed at accurately reproducing reality, the Scans materials do not allow the same level of control as custom-built materials. The .vrscans file contains a complete data set, so there are no separate texture maps.

Do Scans materials support render elements?

Starting with V-Ray Next, there is support for some Render Elements.

For a list of supported Render Elements in V-Ray for 3ds Max, follow the [link](#).

For a list of supported Render Elements in V-Ray for Maya, follow the [link](#).

For a list of supported Render Elements in V-Ray for Cinema 4D, follow the [link](#).

What kind of materials can be scanned?

Any flat, opaque, or translucent surface is scannable, provided that the size of the sample is between the required parameters (see below).

Material sample requirements:

- **Flat opaque material samples are optimal.** Translucent materials are supported but fully transparent materials, such as glass, are not.

- **Texture depth 1mm.** The materials should have a flat surface, or irregularities such as bumps, pits or grain no higher/deeper than 1mm.
- Samples no smaller than 40x40mm, and no larger than 400x300mm.
- Maximum scan resolution is 0.025mm/ pixel.

What is Scans Service?

If you are working with tight deadlines and need to create many complex 3D materials for automotive, product design or fashion projects, then the Scans service is the perfect match for you. We scan your physical material samples to create a highly accurate, ultra-photorealistic digital material for use in 3D projects.

How does the Scans Scanning Service work?

Step 1. Send materials to be scanned

Clients provide Chaos with one or more physical material samples. We ensure that all samples are dealt with securely and confidentially.

Step 2. Materials are evaluated for scanning

Our lab techs evaluate each material to determine if it's suitable for scanning. If not, the material is returned at no charge.

Step 3. Materials are scanned

Each material is carefully scanned by one of our lab techs. Once the scan is complete, the resulting images are transformed into a seamless, tileable file. After passing inspection and quality control, the material scans are ready for delivery.

Step 4. Scanned files are delivered

Files are delivered via private FTP link or physical drive*.

Step 5. Material samples are returned

We understand that materials may be proprietary or copyrighted, so all samples are promptly returned to the client.

**Additional courier fees may apply*

Can you provide a texture and maps pack with my VRscan?

Yes. Note that particular materials can't be represented well as diffuse/specular mixture, therefore the material recreation via maps is less realistic.

What is Chaos Scans plugin?

The Chaos Scans plugin is the part of V-Ray (versions 3.6 and above) and Corona (versions 9 and above) which provides the UI for importing, modifying, and using the Scans materials in:

- V-Ray for 3ds Max
- V-Ray for Maya
- V-Ray for SketchUp
- V-Ray for Rhino
- V-Ray for Revit
- V-Ray for Modo (discontinued)
- V-Ray for Katana (discontinued)
- V-Ray for Houdini
- V-Ray for Cinema 4D
- Corona for 3ds Max
- Corona for Cinema 4D

There is no additional installation required. When a user purchases a Scans Plugin license, their licenses are added to their Chaos Licensing account. After restarting the platform, the user should be able to see the interface for the Scans materials within the V-Ray Material/Asset Editor and Corona Material/Asset Editor.

When a client purchases a license for the Scans Plugin, they automatically receive a one-year subscription for the Chaos Scans Library.

To continue using the Scans materials and the Chaos Scans Library, the user will have to maintain their subscription on an annual basis.

What is Chaos Scans Library?

The Chaos Scans Library is a repository of ready-made scans of different materials created by Chaos with the Scans hardware. The library currently contains around 2500 materials broken down into categories such as wood, leather, plastic, metal, paint; or color or manufacturer. The library supports material filter/search based on these parameters.

For some materials, the manufacturer has given us permission to scan and upload their samples for people to use. Other materials are generic samples from the world around us.

The [library](#) is accessible to all Scans license holders.

How to access Chaos Scans?

Chaos Scans is provided with the installation of V-Ray or Corona.

Where to find information on costs?

Scans Plugin and Library Subscription prices are [here](#). Note that each workstation license provides access to the library for one user.

Chaos Scans scanning service information is [here](#). Use the contact form for information for a custom quote.

Chaos is also planning production of the scanning hardware. [Contact us](#) for more information.