



- By markers
- By geometry
- Using rotary table



Auto alignment of scans Fast and accurate

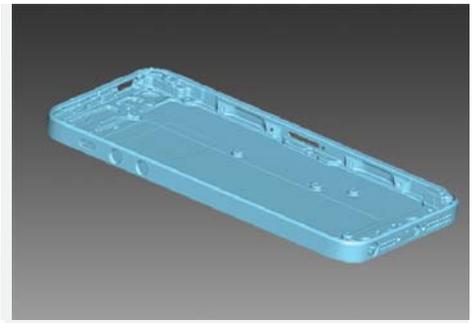
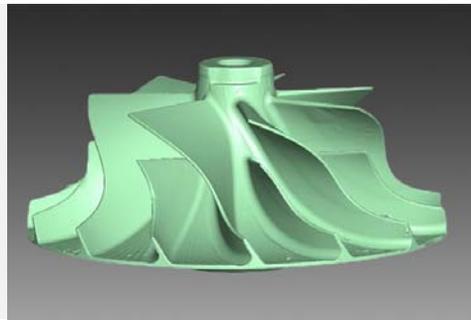


20mm



2500mm

Highly detailed result One scanner for different sizes



RangeVision 3D scanner uniquely combines the affordable price and a wide range of opportunities.

Years of research of the structured light technology and experience of our specialists have resulted in the high quality of 3D models provided by RangeVision 3D scanner. The system supports different methods of alignment.

You can scan either with markers or without them, as well as with the use of a rotary table. Flexibility of RangeVision scanner enables you to obtain highly detailed and accurate scans of small (< 5 cm) and rather big (> 1 m) real world objects. This multi-purpose system can be applied in a wide range of contexts.

APPLICATIONS:

- Reverse engineering
- Rapid prototyping
- Arts and cultural heritage
- Industrial design
- Shoemaking industry
- Toys production
- Education
- Decor and exclusive furniture

SOFTWARE FUNCTIONALITY

1. Ability to handle large projects with lots of scans
2. Local and global registration based on geometry
3. Basic edit functions (selecting, cropping, noise removing, etc.)
4. Scans decimation
5. Mesh creation (scans merging)

BASIC CONFIGURATION

1. Capturing unit
2. Professional tripod
3. Single scanning area (a lens set and a calibration field)
4. RangeVision 3D Scanner software package
5. Annual support via e-mail
6. Free software updates

OPTIONALLY

1. Annual telephone technical support
2. Rotary table system
3. Protective case
4. Additional scanning zones
5. Blue light add-on

TECHNICAL SPECIFICATIONS	1	2	3	4
Scanning area (WxHxD) (mm)	460×345×345	300×225×225	133×100×100	66×50×50
3D point accuracy (mm)	0.085	0.05	0.03	0.03
3D resolution Standard (mm)	0.35	0.23	0.1	0.05
3D resolution Advanced (mm)	0.3	0.2	0.085	0.043
Working distance (m)	0.9	0.52	0.3	0.27

MODELS	Standard Plus	Advanced
Camera resolution	1,3 Mpix	2 Mpix
Diagonal of the sensor, camera case material	1/1.8", metal	1/1.8", metal
Scanning time	~7 sec.	~12 sec.
Black object scanning	-	+

Dimensions of scanning unit (mm)	450×150×400
Weight (kg)	7
Output format	STL, OBJ, PLY, WRL
Scanning principle	Structured light
Operation system	Windows 7/8 32/64 bit
Full calibration time	7 min

SYSTEM REQUIREMENTS

OS	Windows 7/8 32bit/64bit
Processor	Intel Core i3/i5 1.8 GHz or higher
Video card	Video card with output to the 2nd monitor
RAM	4GB or higher
Other	3 USB ports

PROFESSIONAL 3D SCANNERS

RangeVision 3D Scanner Standard Plus



- 1.3 MP cameras (1280x1024)
- CMOS matrix/ diagonal size 1/2"
- Scan time 7 sec
- Metal camera body
- 3D resolution 0.05 mm - 0.35 mm (depending on a scan area)

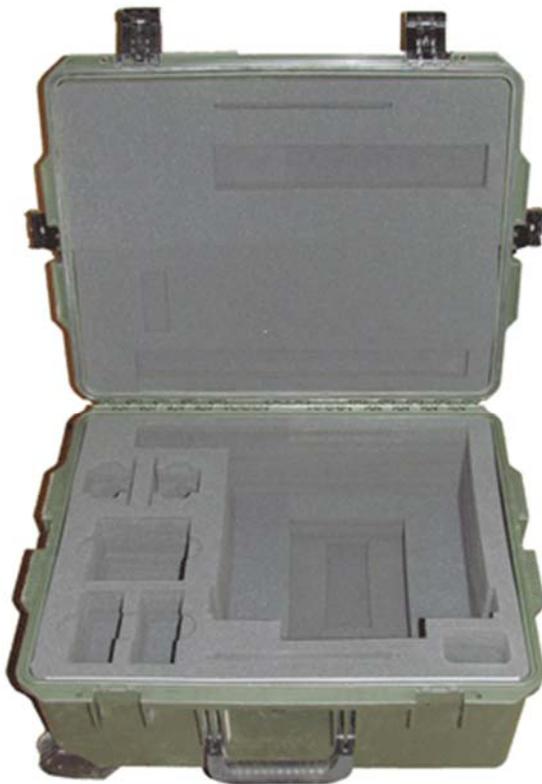
RangeVision 3D Scanner Advanced



- 2 MP cameras (1600x1200)
- CCD matrix/ diagonal size 1/1.8"
- Scan time 12 sec
- Metal camera body
- 3D resolution 0.043 mm - 0.3 mm (depending on a scan area)

OPTIONALS

Protective case



The protective case is used for scanner transportation. It is a very shockproof trunk, that has a lodgement for comfortable placement of the scanner inside it.

Automatic turntable



The automatic turntable is used for scanning of such small objects as jewelry items. It is fully integrated with RangeVision 3D scanner software. Maximal object weight - 3.5 kg.

Blue light add-on



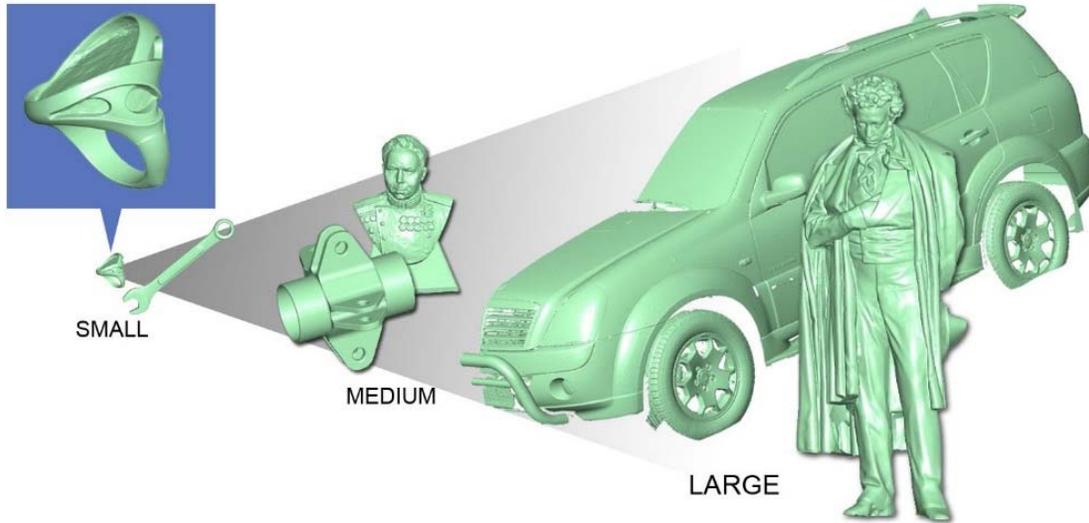
Special filters screwed on lenses allows to scan in difficult lightning conditions (bright illumination, outdoor scanning in sunny day).

CONTENTS OF PACKAGE

- Scanning unit
- 2 Calibration plates
- Tripod
- Protective case
- Software

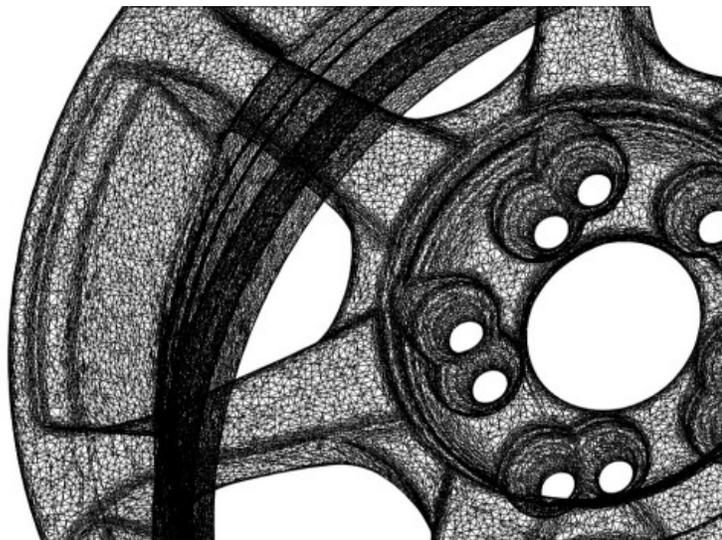
Available in 3 colours: grey, red and yellow



KEY FEATURES**One scanner for different-sized objects**

Most 3d scanners presented at the market are aimed at scanning of objects of a specific size. It is quite easy to check it, because you can't change lenses or distance between cameras in such scanners.

With RangeVision 3D scanner you don't need to purchase different systems for scanning different-sized objects. Due to its ability to change scanning zones RangeVision 3D scanner makes it possible to scan objects of different sizes – from jewelry to cars.

Highly detailed and accurate models

If you want to be sure in the quality of the result and are not ready to overpay, RangeVision 3D scanner is a great option for you.

Due to the use of original algorithms based on the structured light principle RangeVision 3D scanner provides superb quality of a 3d model.

The calibration method used in RangeVision 3D scanner ensures accuracy relevant for most scanning tasks.

Scanning with markers and without them



When you use markers or a rotary table, scanned elements are automatically aligned, which greatly simplifies the scanning process.

Markers can be made on your own in any quantity. You don't need to buy them from the producer.

RangeVision 3D scanner also enables you to scan without markers using geometry features of the object for alignment.

Speed

Illumination lasts about 5-7 seconds. One fragment includes up to 1 mln triangles.

Unlike laser scanners where an object is illuminated with one laser point or line, the structured light technology makes it possible to obtain a rectangular surface fragment.

Mobility

RangeVision 3D scanner is transported in a medium-sized suitcase. You can transport it even by public transport. In contrast to laser scanning heads for CNC-machines or CMM you are not limited by the machine working space.

APPLICATIONS

Restoration and cultural heritage preservation



3D scanners make restoration projects considerably easier.

Combined with devices of rapid prototyping and CNC machines **3D scanning** is efficiently used for restoration of repeated decor elements or ornaments, as well as missing sculpture fragments and antique furniture elements. Obviously, many objects of the sort can not be transported or dismantled.

RangeVision 3D scanner , being a portable tool, enables you to scan such objects on the spot. Moreover, due to non-contact principle of 3D scanning **RangeVision 3D scanner** does not affect an original in any way. Having scanned an object you obtain its 3D model that won't take any place in a storage and does not need special handling.

Production of exclusive furniture, décor and interior elements



Companies designing and producing decor elements, exclusive furniture and interior widely use **3D scanning technologies** in combination with CNC machines, which considerably cuts their costs.

For instance, you need to have six legs of a billiards table cut out of wood. Each of them consists of two similar parts, so a cutter will have to cut twelve elements. If you have a 3D scanner, you can have only one of them cut, then generate its **3D model** and have all the others cut on the CNC machine. Purely computerized creation of décor elements has its weak points, as forms generated by computer programmes turn out to be too “symmetrical”, while a **3D scanner** copies fine handwork.

The result of **3D scanning** is a triangular mesh that is saved to an STL-file that can be imported to most CAM-programmes for further production on a CNC machine

Toys and souvenirs production

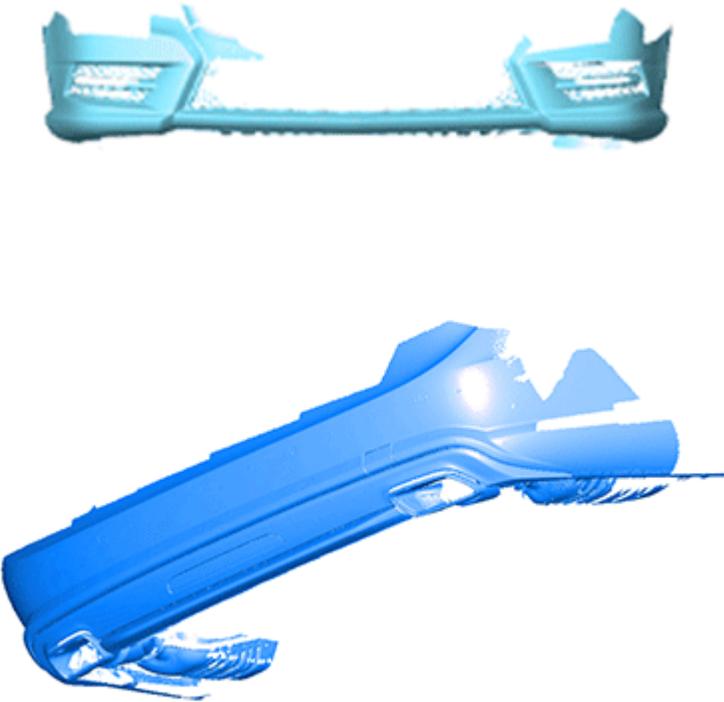


Use of traditional methods in this sphere prevents you from getting **leading positions** in the modern highly competitive market.

Today **3D scanners** are regularly used by producers of toys and original souvenirs. Having scanned any unique object, you receive its digital replica for the production of toys or souvenirs of any size and from any material. 3D scanners are also widely used by **advertising companies** that are seeking for new creative solutions for their tasks.

3D scanning technologies are also often applied when designing fair stands.

Car tuning and design



When designing new car models automakers regularly apply **3D scanning technologies**.

The starting point for most vehicles is in a workshop where a prototype is made of clay. After the right form is obtained, this prototype is scanned for further processing in CAD software. Smaller companies also use **3D scanners** to design exclusive cars based on a serial car body, as well as for car tuning or accessory production. With inexpensive 3D systems you can often face problems with calibration, which can result in noisy data from a 3D scanner and eventually in size discrepancies. Moreover, glaring car surfaces make scanning process without markers hardly possible, as single scans cannot be properly aligned on such surfaces.

RangeVision 3D scanner does not have these weak points – its accurate calibration and automatic stitching by markers make it well-suited for a wide range of tasks in automotive industry

Reverse engineering

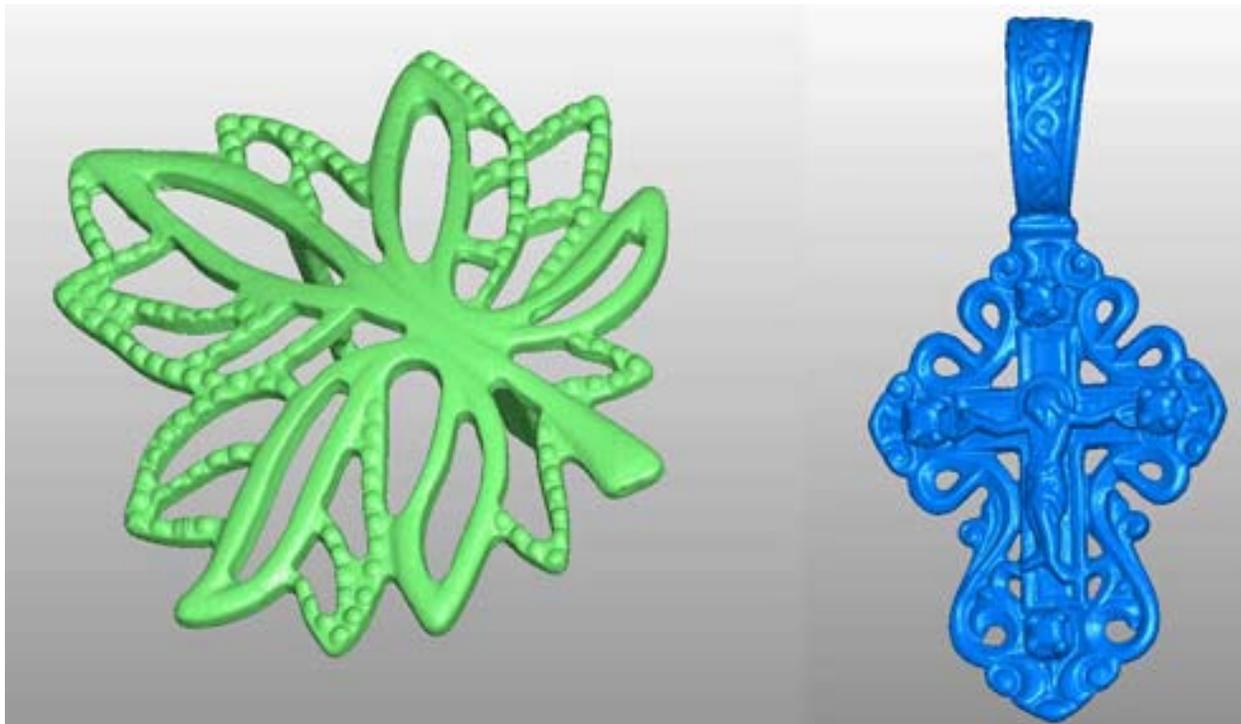


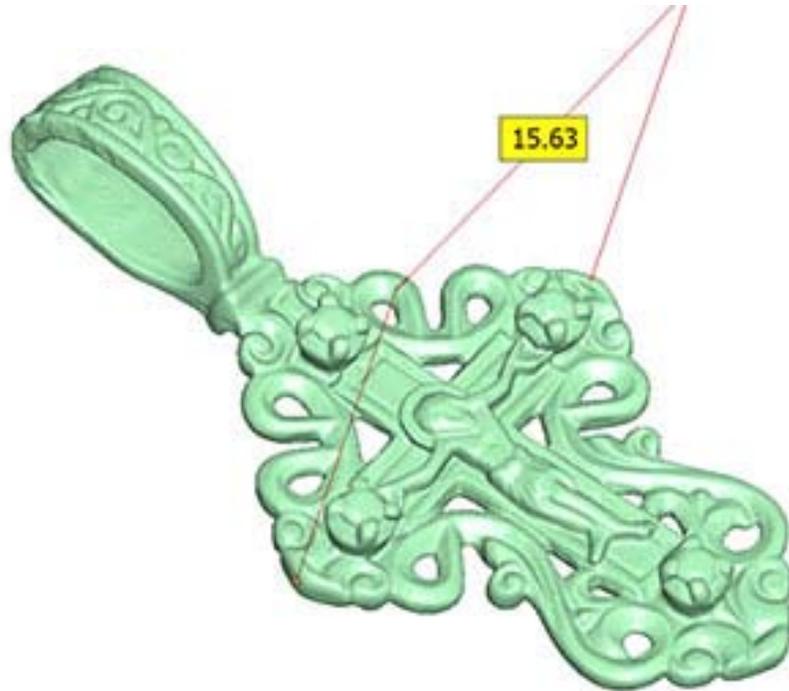
You can see **RangeVision 3D scanner** for a whole range of tasks in reverse engineering which is a generation of a 3D model or a draft of a real world object.

Nowadays **3D scanners** are widely applied for reverse engineering of objects that are complicated in form and can hardly be measured by standard methods. Moreover, in contrast to CMM machines, with a 3D scanner you obtain the surface of a whole object, not only its single points.

Reverse engineering is vital if you need to produce a batch of products but do not have the documentation any longer or you need to develop a new product based on the one you already have

Jewellery





A number of famous jewelry producers have made their choice in favour of our **RangeVision 3D scanner system** as it has proved to be a reliable one in scanning small objects like jewelry. You can hardly scan jewelry items with other affordable 3d scanners that you can find in the market.

In contrast to them, due to a turntable that we also supply RangeVision 3D scanner generates highly accurate and detailed models of jewelry items for further processing and production.

CASE STUDIES

Truck Cabin 3D Scanning









[Download STL File Generated in this Case of Study](#)

MODELS COMPARISSON

RangeVision 3D Scanner Advanced vs Standard Plus Model





[Download Standard+ model](#)

[Download Advanced model](#)

[Access here to download more models](#)

VIDEOS

