Target Overview

ART ▶
Advanced Realtime Tracking

TARGETS consist of several markers (minimum 4), and will give the 6DOF (degrees of freedom). Here also, we distinguish between passive and active types.

In addition to our standard targets we offer several construction sets for your own targets and custom-ised developments.

Glasses Targets

| Passive glasses targets			
Shutter glasses	**ART short name**	**Target geometry**	**picture**
ACER E2W	E2WT	4	E2WT4
ACER EC	EC2WT	4	
Crystal Eyes5	CE5T	4/5	CE5T4
Epson ELPGS03	ELPGS03T	4/9	ELPGS03
Eyes3Shut	E3ST	4	
Generic Glasses Target	GT	4/5/6	GT4
Infitec Premium	IPT	4	
Virtalis ActiveWorks 500	AWT	4	AWT4
Volfoni Active Eyes	AET	4	
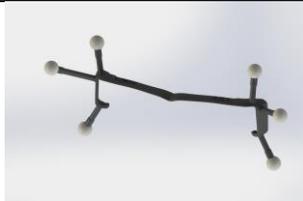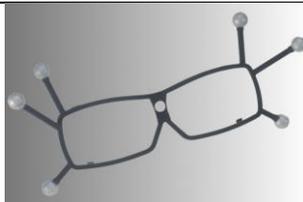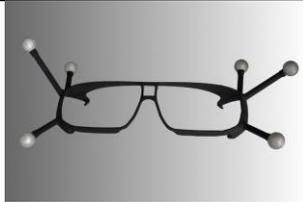
Passive glasses targets			
Shutter glasses	**ART short name**	**Target geometry**	**picture**
Volfoni EDGE	EGT	4/5/8	EGT4
XPAND101	XP101T	4/5/8	
XPAND103	XP103T	4	
XPAND104	XP104T	4	
XPAND105	XP105T	4	XP105
3d Vision	3dVT	4/5	3dVT4
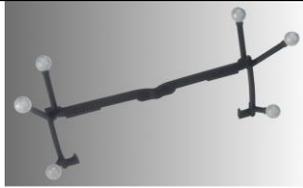
Passive Hand & Tree Targets

Hand target	Claw target	Large hand target	Tree target
The hand target is designed for hands and elbows in usability/assembly studies. It is also frequently used as a small general-purpose target. E.g. HT23, HT25, HT26, HT27, HT29 through HT32	The claw target looks just the same as the hand target, but comes in a bigger size and is equipped with bigger markers. E.g. CT11 through CT16	This hand target is designed for hand tracking in a two-camera tracking system. Its large size allows the user to make almost any movement with the hand without producing any occlusions. E.g. LHT1 and LHT2	Originally designed for tracking HMDs, the tree target is a general-purpose target for tracking from longer distances (see picture below). It is equipped with 20 mm markers. E.g. TT1 through TT5
HT23	CT11	LHT1	LHT1
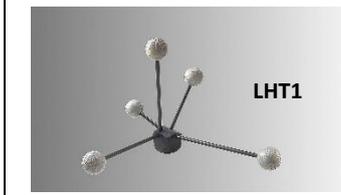
Customized Targets

In addition to our standard target collection, we specialize in creating non-standard targets customized to your specifications, varying size or radiant power, using passive or active markers. If you have special requirements regarding the target design, we can help by developing an appropriate rapid prototyping layout.

Target for Logitech Gamepad F710	Sensics zSight Target	Target for NVisor SX 60	Robust Passive Targets
As a special solution for gaming applications we designed a target for the Gamepad by Logitech. Of course it can be adapted to other Gamepad geometries.	A special target for the Sensics zSight SXGA HMD is built with coated markers for a robust tracking solution. Two different target geometries are available to allow concurrent usage of two HMDs in one tracking system.	Specially developed target with passive markers for the head-mounted display NVisor SX 60.	To track objects (e.g. tools) in industrial environments, targets have to be lightweight and robust. They should be inconspicuous and must not disturb the operators in their activity. With a target attached to both a tool and the processed object, the user can get all relevant information like position and rotation. A target can be designed with passive (ring) markers or active LED diodes.
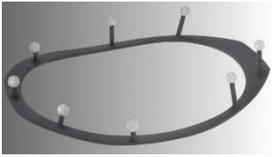
Self-made targets

Self-made targets allow for the flexibility which developers and researchers need for testing purposes. Upon request ART provides the corresponding material for passive and active targets, such as retroreflective foil or electronics. If you want to build up your own targets, you have to apply only a few simple rules:

- A target consists of at least 4 markers in a fixed constellation.
- The minimum marker distance within a target should exceed 3 cm.
- All distances of all markers in a target should differ by at least 5 mm.

Active Targets

Fingertracking	Robust active targets
Our Fingertracking targets use small and robust active markers, allowing a compact design with higher wearing comfort than the gloves you typically find in VR setups.	An active target is designed individually for each customer and tool, in order to make it perfectly fit to the geometry of the tool. The power supply can be directly sourced from the screwdriver. The target design ensures that it can be tracked in nearly every position.