3D Transformations

hom\_mat3d\_identity

hom\_mat3d\_translate

hom\_mat3d\_translate\_local

hom\_mat3d\_rotate

hom\_mat3d\_rotate\_local

hom\_mat3d\_compose

hom\_mat3d\_invert

affine\_trans\_point\_3d

create\_pose

hom\_mat3d\_to\_pose

pose\_to\_hom\_mat3d

convert\_pose\_type

set\_origin\_pose

pose\_invert

pose\_compose

write\_pose

read\_pose

vector\_to\_pose

Object Model 3D

gen\_empty\_object\_model\_3d

gen\_object\_model\_3d\_from\_points

gen\_box\_object\_model\_3d

gen\_sphere\_object\_model\_3d

gen\_cylinder\_object\_model\_3d

gen\_plane\_object\_model\_3d

read\_object\_model\_3d

set\_object\_model\_3d\_attrib

set\_object\_model\_3d\_attrib\_mod  
get\_object\_model\_3d\_params

rigid\_trans\_object\_model\_3d

affine\_trans\_object\_model\_3d

projective\_trans\_object\_model\_3d

xyz\_to\_object\_model\_3d  
triangulate\_object\_model\_3d  
surface\_normals\_object\_model\_3d

prepare\_object\_model\_3d  
sample\_object\_model\_3d

fit\_primitives\_object\_model\_3d  
segment\_object\_model\_3d

area\_object\_model\_3d  
distance\_object\_model\_3d  
max\_diameter\_object\_model\_3d  
smallest\_bounding\_box\_object\_model\_3d  
smallest\_sphere\_object\_model\_3d  
intersect\_plane\_object\_model\_3d

select\_points\_object\_model\_3d  
select\_object\_model\_3d

connection\_object\_model\_3d  
union\_object\_model\_3d

visualize\_object\_model\_3d

disp\_3d\_coord\_system

Camera Calibration

gen\_cam\_par\_area\_scan\_division

create\_calib\_data

set\_calib\_data\_cam\_param

set\_calib\_data\_calib\_object

get\_calib\_data

find\_calib\_object

set\_calib\_data\_observ\_points  
get\_calib\_data\_observ\_contours

get\_calib\_data\_observ\_points

calibrate\_cameras

get\_calib\_data

write\_cam\_par

project\_3d\_point

image\_to\_world\_plane

image\_points\_to\_world\_plane

gen\_image\_to\_world\_plane\_map

map\_image

Stereo Reconstruction: Calibration

get\_calib\_data

create\_camera\_setup\_model

set\_camera\_setup\_param

get\_camera\_setup\_param

write\_camera\_setup\_model

read\_camera\_setup\_model

intersect\_lines\_of\_sight

Stereo Reconstruction: Binocular

binocular\_disparity

binocular\_distance

binocular\_disparity\_mg

binocular\_distance\_mg

binocular\_disparity\_ms

binocular\_distance\_ms

gen\_binocular\_rectification\_map

map\_image

disparity\_image\_to\_xyz

xyz\_to\_object\_model\_3d

Stereo Reconstruction: Multi-View

create\_camera\_setup\_model

create\_stereo\_model

set\_stereo\_model\_param

reconstruct\_surface\_stereo

reconstruct\_points\_stereo

Shape-Based Matching

prepare\_object\_model\_3d

create\_shape\_model\_3d

find\_shape\_model\_3d

project\_shape\_model\_3d

write\_shape\_model\_3d  
read\_shape\_model\_3d

Surface-Based Matching

create\_surface\_model

set\_surface\_model\_param

find\_surface\_model

refine\_surface\_model\_pose

debug\_find\_surface\_model

get\_surface\_matching\_result

write\_surface\_model

read\_surface\_model