

GazeboMessages

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Chapter 1

Gazebo Messages Reference

Gazebo uses Google Protobufs for message specification and serialization.

Messages Definitions

Chapter 2

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2.1 Class List

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Chapter 4

Class Documentation

4.1 Axis Interface Reference

msgs::Joint axis message

4.1.1 Detailed Description

msgs::Joint axis message

The documentation for this interface was generated from the following file:

- **axis.proto**

4.2 BoxGeom Interface Reference

Information about a box geometry.

4.2.1 Detailed Description

Information about a box geometry.

The documentation for this interface was generated from the following file:

- **boxgeom.proto**

4.3 CameraSensor Interface Reference

Information about a camera sensor element.

4.3.1 Detailed Description

Information about a camera sensor element.

The documentation for this interface was generated from the following file:

- **camerasensor.proto**

4.4 Collision Interface Reference

Information about a collision element.

4.4.1 Detailed Description

Information about a collision element.

The documentation for this interface was generated from the following file:

- **collision.proto**

4.5 Color Interface Reference

Color (p. 12) message.

4.5.1 Detailed Description

Color (p. 12) message.

The documentation for this interface was generated from the following file:

- **color.proto**

4.6 Contact Interface Reference

Contact (p. 12) message for passing info between two entities.

4.6.1 Detailed Description

Contact (p. 12) message for passing info between two entities.

The documentation for this interface was generated from the following file:

- **contact.proto**

4.7 Contacts Interface Reference

Contacts (p. 12) from collision detection.

4.7.1 Detailed Description

Contacts (p. 12) from collision detection.

The documentation for this interface was generated from the following file:

- **contacts.proto**

4.8 ContactSensor Interface Reference

Information about a contact sensor element.

4.8.1 Detailed Description

Information about a contact sensor element.

The documentation for this interface was generated from the following file:

- **contactsensor.proto**

4.9 CylinderGeom Interface Reference

Information about a cylinder geometry.

4.9.1 Detailed Description

Information about a cylinder geometry.

The documentation for this interface was generated from the following file:

- **cylindergeom.proto**

4.10 Diagnostic Interface Reference

Diagnostic (p. 13) information about a running instance of Gazebo.

4.10.1 Detailed Description

Diagnostic (p. 13) information about a running instance of Gazebo.

Gazebo must have been compiled with the `ENABLE_DIAGNOSTICS` flag.

The documentation for this interface was generated from the following file:

- **diagnostics.proto**

4.11 Entities Interface Reference

Information about all entities in a world.

4.11.1 Detailed Description

Information about all entities in a world.

The documentation for this interface was generated from the following file:

- **model_v.proto**

4.12 Factory Interface Reference

Message to create new model in gazebo.

4.12.1 Detailed Description

Message to create new model in gazebo.

The documentation for this interface was generated from the following file:

- **factory.proto**

4.13 Fog Interface Reference

Message for fog data.

4.13.1 Detailed Description

Message for fog data.

The documentation for this interface was generated from the following file:

- **fog.proto**

4.14 ForceTorque Interface Reference

ForceTorque (p. 14) from constraint solving.

4.14.1 Detailed Description

ForceTorque (p. 14) from constraint solving.

The documentation for this interface was generated from the following file:

- **joint_wrench_stamped.proto**

4.15 Frction Interface Reference

Information about friction.

4.15.1 Detailed Description

Information about friction.

The documentation for this interface was generated from the following file:

- **friction.proto**

4.16 Geometry Interface Reference

Information about a geometry element.

4.16.1 Detailed Description

Information about a geometry element.

The documentation for this interface was generated from the following file:

- **geometry.proto**

4.17 GUI Interface Reference

Message for a **GUI** (p. 15).

4.17.1 Detailed Description

Message for a **GUI** (p. 15).

The documentation for this interface was generated from the following file:

- **gui.proto**

4.18 GUICamera Interface Reference

Message for a **GUI** (p. 15) Camera.

4.18.1 Detailed Description

Message for a **GUI** (p. 15) Camera.

The documentation for this interface was generated from the following file:

- **gui_camera.proto**

4.19 GUIOverlayConfig Interface Reference

Message for a gui overlay configuration.

4.19.1 Detailed Description

Message for a gui overlay configuration.

The documentation for this interface was generated from the following file:

- **gui_overlay_config.proto**

4.20 GzString Interface Reference

A message for string data.

4.20.1 Detailed Description

A message for string data.

The documentation for this interface was generated from the following file:

- **gz_string.proto**

4.21 GzString_V Interface Reference

A message for a vector of string data.

4.21.1 Detailed Description

A message for a vector of string data.

The documentation for this interface was generated from the following file:

- **gz_string_v.proto**

4.22 Header Interface Reference

General information included by many messages.

4.22.1 Detailed Description

General information included by many messages.

The documentation for this interface was generated from the following file:

- **header.proto**

4.23 HeightmapGeom Interface Reference

Message for a heightmap geometry.

4.23.1 Detailed Description

Message for a heightmap geometry.

The documentation for this interface was generated from the following file:

- **heightmapgeom.proto**

4.24 Image Interface Reference

Message for an image.

4.24.1 Detailed Description

Message for an image.

The documentation for this interface was generated from the following file:

- **image.proto**

4.25 ImageGeom Interface Reference

Message for a image geometry.

4.25.1 Detailed Description

Message for a image geometry.

The documentation for this interface was generated from the following file:

- **imagegeom.proto**

4.26 ImagesStamped Interface Reference

Message for a multiple image with a time.

4.26.1 Detailed Description

Message for a multiple image with a time.

The documentation for this interface was generated from the following file:

- **images_stamped.proto**

4.27 ImageStamped Interface Reference

Message for an image with a time.

4.27.1 Detailed Description

Message for an image with a time.

The documentation for this interface was generated from the following file:

- **image_stamped.proto**

4.28 IMU Interface Reference

Data from an **IMU** (p. 18) sensor.

4.28.1 Detailed Description

Data from an **IMU** (p. 18) sensor.

The documentation for this interface was generated from the following file:

- **imu.proto**

4.29 Inertial Interface Reference

Information about inertia.

4.29.1 Detailed Description

Information about inertia.

The documentation for this interface was generated from the following file:

- **inertial.proto**

4.30 Int Interface Reference

Integer message.

4.30.1 Detailed Description

Integer message.

The documentation for this interface was generated from the following file:

- **int.proto**

4.31 Joint Interface Reference

Message for creating joint in rendering::Scene.

4.31.1 Detailed Description

Message for creating joint in rendering::Scene.

Joint (p. 19) wrench message.

The documentation for this interface was generated from the following file:

- **joint.proto**

4.32 JointAnimation Interface Reference

Message for a model joint animation, does not appear to be used.

4.32.1 Detailed Description

Message for a model joint animation, does not appear to be used.

The documentation for this interface was generated from the following file:

- **joint_animation.proto**

4.33 JointCmd Interface Reference

Message for joint command, used by physics::JointControlWidget.

4.33.1 Detailed Description

Message for joint command, used by physics::JointControlWidget.

The documentation for this interface was generated from the following file:

- **joint_cmd.proto**

4.34 LaserScan Interface Reference

Data from a laser scan.

4.34.1 Detailed Description

Data from a laser scan.

The documentation for this interface was generated from the following file:

- **laserscan.proto**

4.35 LaserStamped Interface Reference

Message for an laser scan with a time.

4.35.1 Detailed Description

Message for an laser scan with a time.

The documentation for this interface was generated from the following file:

- **laserscan_stamped.proto**

4.36 Light Interface Reference

Message for a light.

4.36.1 Detailed Description

Message for a light.

The documentation for this interface was generated from the following file:

- **light.proto**

4.37 Link Interface Reference

Information about a link.

4.37.1 Detailed Description

Information about a link.

Timestamped link data.

The documentation for this interface was generated from the following file:

- **link.proto**

4.38 LogControl Interface Reference

A message that allows for control of logging functions.

4.38.1 Detailed Description

A message that allows for control of logging functions.

The documentation for this interface was generated from the following file:

- **log_control.proto**

4.39 LogStatus Interface Reference

A message that contains information about data logging.

4.39.1 Detailed Description

A message that contains information about data logging.

The documentation for this interface was generated from the following file:

- **log_status.proto**

4.40 Material Interface Reference

Information about a material.

4.40.1 Detailed Description

Information about a material.

The documentation for this interface was generated from the following file:

- **material.proto**

4.41 MeshGeom Interface Reference

Message for a mesh geometry.

4.41.1 Detailed Description

Message for a mesh geometry.

The documentation for this interface was generated from the following file:

- **meshgeom.proto**

4.42 Model Interface Reference

Information about a model.

4.42.1 Detailed Description

Information about a model.

The documentation for this interface was generated from the following file:

- **model.proto**

4.43 ModelConfiguration Interface Reference

Message for model configuration (joint positions)

4.43.1 Detailed Description

Message for model configuration (joint positions)

The documentation for this interface was generated from the following file:

- **model_configuration.proto**

4.44 Packet Interface Reference

Message that encapsulates another message with a type description.

4.44.1 Detailed Description

Message that encapsulates another message with a type description.

The documentation for this interface was generated from the following file:

- **packet.proto**

4.45 Physics Interface Reference

A message containing a description of the global physics properties.

4.45.1 Detailed Description

A message containing a description of the global physics properties.

The documentation for this interface was generated from the following file:

- **physics.proto**

4.46 PID Interface Reference

Message for simple **PID** (p. 22) controllers.

4.46.1 Detailed Description

Message for simple **PID** (p. 22) controllers.

The documentation for this interface was generated from the following file:

- **pid.proto**

4.47 PlaneGeom Interface Reference

Message for a plane geometry.

4.47.1 Detailed Description

Message for a plane geometry.

The documentation for this interface was generated from the following file:

- **planegeom.proto**

4.48 Plugin Interface Reference

A message containing visual information for gazebo::Plugin.

4.48.1 Detailed Description

A message containing visual information for gazebo::Plugin.

The documentation for this interface was generated from the following file:

- **plugin.proto**

4.49 Point Interface Reference

A point cloud.

4.49.1 Detailed Description

A point cloud.

The documentation for this interface was generated from the following file:

- **pointcloud.proto**

4.50 Pose Interface Reference

Message for a pose.

4.50.1 Detailed Description

Message for a pose.

Message for a vector of poses.

The documentation for this interface was generated from the following file:

- **pose.proto**

4.51 PoseAnimation Interface Reference

Message for a model pose animation.

4.51.1 Detailed Description

Message for a model pose animation.

The documentation for this interface was generated from the following file:

- **pose_animation.proto**

4.52 PosesStamped Interface Reference

Message for a vector of poses with a time stamp.

4.52.1 Detailed Description

Message for a vector of poses with a time stamp.

The documentation for this interface was generated from the following file:

- **poses_stamped.proto**

4.53 PoseStamped Interface Reference

Message for a pose with a time.

4.53.1 Detailed Description

Message for a pose with a time.

The documentation for this interface was generated from the following file:

- **pose_stamped.proto**

4.54 PoseTrajectory Interface Reference

Message for a pose trajectory.

4.54.1 Detailed Description

Message for a pose trajectory.

The documentation for this interface was generated from the following file:

- **pose_trajectory.proto**

4.55 Projector Interface Reference

Information about a projector.

4.55.1 Detailed Description

Information about a projector.

The documentation for this interface was generated from the following file:

- **projector.proto**

4.56 Publish Interface Reference

Message that contains information about a publisher of data.

4.56.1 Detailed Description

Message that contains information about a publisher of data.

The documentation for this interface was generated from the following file:

- **publish.proto**

4.57 Publishers Interface Reference

A list of publishers.

4.57.1 Detailed Description

A list of publishers.

The documentation for this interface was generated from the following file:

- **publishers.proto**

4.58 Quaternion Interface Reference

A message for a quaternion.

4.58.1 Detailed Description

A message for a quaternion.

The documentation for this interface was generated from the following file:

- **quaternion.proto**

4.59 RaySensor Interface Reference

Information about a ray sensor element.

4.59.1 Detailed Description

Information about a ray sensor element.

The documentation for this interface was generated from the following file:

- **raysensor.proto**

4.60 Request Interface Reference

A message containing a string request.

4.60.1 Detailed Description

A message containing a string request.

The documentation for this interface was generated from the following file:

- **request.proto**

4.61 Response Interface Reference

Message that encapsulates a respons message with a type description.

4.61.1 Detailed Description

Message that encapsulates a respons message with a type description.

The documentation for this interface was generated from the following file:

- **response.proto**

4.62 Road Interface Reference

Message for a road.

4.62.1 Detailed Description

Message for a road.

The documentation for this interface was generated from the following file:

- **road.proto**

4.63 Scene Interface Reference

A message containing a description of a scene.

4.63.1 Detailed Description

A message containing a description of a scene.

The documentation for this interface was generated from the following file:

- **scene.proto**

4.64 Selection Interface Reference

A message for **GUI** (p. 15) selection data.

4.64.1 Detailed Description

A message for **GUI** (p. 15) selection data.

The documentation for this interface was generated from the following file:

- **selection.proto**

4.65 Sensor Interface Reference

Information about a sensor element.

4.65.1 Detailed Description

Information about a sensor element.

The documentation for this interface was generated from the following file:

- **sensor.proto**

4.66 ServerControl Interface Reference

A message that allows for control of the server functions.

4.66.1 Detailed Description

A message that allows for control of the server functions.

The documentation for this interface was generated from the following file:

- **server_control.proto**

4.67 Shadows Interface Reference

A message for shadow data.

4.67.1 Detailed Description

A message for shadow data.

The documentation for this interface was generated from the following file:

- **shadows.proto**

4.68 Sky Interface Reference

Information about the sky.

4.68.1 Detailed Description

Information about the sky.

The documentation for this interface was generated from the following file:

- **sky.proto**

4.69 Sonar Interface Reference

Message for a sonar value.

4.69.1 Detailed Description

Message for a sonar value.

The documentation for this interface was generated from the following file:

- **sonar.proto**

4.70 SonarStamped Interface Reference

Message for a time stamped sonar value.

4.70.1 Detailed Description

Message for a time stamped sonar value.

The documentation for this interface was generated from the following file:

- **sonar_stamped.proto**

4.71 SphereGeom Interface Reference

Information about a sphere geometry.

4.71.1 Detailed Description

Information about a sphere geometry.

The documentation for this interface was generated from the following file:

- **spheregeom.proto**

4.72 Subscribe Interface Reference

A message for subscription data.

4.72.1 Detailed Description

A message for subscription data.

The documentation for this interface was generated from the following file:

- **subscribe.proto**

4.73 Surface Interface Reference

Information about a surface element.

4.73.1 Detailed Description

Information about a surface element.

The documentation for this interface was generated from the following file:

- **surface.proto**

4.74 Tactile Interface Reference

Message for a tactile data.

4.74.1 Detailed Description

Message for a tactile data.

The documentation for this interface was generated from the following file:

- **tactile.proto**

4.75 Test Interface Reference

A test message.

4.75.1 Detailed Description

A test message.

The documentation for this interface was generated from the following file:

- **test.proto**

4.76 Time Interface Reference

A message for time data.

4.76.1 Detailed Description

A message for time data.

The documentation for this interface was generated from the following file:

- **time.proto**

4.77 TopicInfo Interface Reference

A message for topic information.

4.77.1 Detailed Description

A message for topic information.

The documentation for this interface was generated from the following file:

- **topic_info.proto**

4.78 Trackvisual Interface Reference

Message for a tracking a rendering::Visual with a rendering::Camera.

4.78.1 Detailed Description

Message for a tracking a rendering::Visual with a rendering::Camera.

The documentation for this interface was generated from the following file:

- **track_visual.proto**

4.79 Vector2d Interface Reference

Message for a vector2 double.

4.79.1 Detailed Description

Message for a vector2 double.

The documentation for this interface was generated from the following file:

- **vector2d.proto**

4.80 Vector3d Interface Reference

Message for a vector3 double.

4.80.1 Detailed Description

Message for a vector3 double.

The documentation for this interface was generated from the following file:

- **vector3d.proto**

4.81 Visual Interface Reference

A message containing visual information for rendering::Visual.

4.81.1 Detailed Description

A message containing visual information for rendering::Visual.

The documentation for this interface was generated from the following file:

- **visual.proto**

4.82 WorldControl Interface Reference

A message that allows for control of world functions.

4.82.1 Detailed Description

A message that allows for control of world functions.

The documentation for this interface was generated from the following file:

- **world_control.proto**

4.83 WorldModify Interface Reference

A message that allows for modifying (open, close) worlds.

4.83.1 Detailed Description

A message that allows for modifying (open, close) worlds.

The documentation for this interface was generated from the following file:

- **world_modify.proto**

4.84 WorldReset Interface Reference

A message that controls how the world is reset.

4.84.1 Detailed Description

A message that controls how the world is reset.

The documentation for this interface was generated from the following file:

- **world_reset.proto**

4.85 WorldStatistics Interface Reference

A message statistics about a world.

4.85.1 Detailed Description

A message statistics about a world.

The documentation for this interface was generated from the following file:

- **world_stats.proto**

4.86 Wrench Interface Reference

Message for a wrench value.

4.86.1 Detailed Description

Message for a wrench value.

The documentation for this interface was generated from the following file:

- **wrench.proto**

4.87 WrenchStamped Interface Reference

Message for a time stamped wrench value.

4.87.1 Detailed Description

Message for a time stamped wrench value.

The documentation for this interface was generated from the following file:

- **wrench_stamped.proto**

Chapter 5

File Documentation

5.1 axis.proto File Reference

Variables

- package gazebo **msgs**
- import vector3d **proto**

5.1.1 Variable Documentation

5.1.1.1 package gazebo msgs

5.1.1.2 import wrench proto

5.2 boxgeom.proto File Reference

Variables

- package gazebo **msgs**
- import vector3d **proto**

5.2.1 Variable Documentation

5.2.1.1 package gazebo msgs

5.2.1.2 import vector3d proto

5.3 camerasensor.proto File Reference

Variables

- package gazebo **msgs**
- import vector2d **proto**

5.3.1 Variable Documentation

5.3.1.1 package gazebo msgs

5.3.1.2 import vector2d proto

5.4 collision.proto File Reference

Variables

- package gazebo **msgs**
- import header **proto**

5.4.1 Variable Documentation

5.4.1.1 package gazebo msgs

5.4.1.2 import visual proto

5.5 color.proto File Reference

Variables

- package gazebo **msgs**

5.5.1 Variable Documentation

5.5.1.1 package gazebo msgs

5.6 contact.proto File Reference

Variables

- package gazebo **msgs**
- import vector3d **proto**

5.6.1 Variable Documentation

5.6.1.1 package gazebo msgs

5.6.1.2 import joint_wrench proto

5.7 contacts.proto File Reference

Variables

- package gazebo **msgs**

- import contact **proto**

5.7.1 Variable Documentation

5.7.1.1 package gazebo **msgs**

5.7.1.2 import time **proto**

5.8 contactsensor.proto File Reference

Variables

- package gazebo **msgs**

5.8.1 Variable Documentation

5.8.1.1 package gazebo **msgs**

5.9 cylindergeom.proto File Reference

Variables

- package gazebo **msgs**

5.9.1 Variable Documentation

5.9.1.1 package gazebo **msgs**

5.10 diagnostics.proto File Reference

Variables

- package gazebo **msgs**
- import time **proto**

5.10.1 Variable Documentation

5.10.1.1 package gazebo **msgs**

5.10.1.2 import time **proto**

5.11 factory.proto File Reference

Variables

- package gazebo **msgs**

- import header **proto**

5.11.1 Variable Documentation

5.11.1.1 package gazebo msgs

5.11.1.2 import pose proto

5.12 fog.proto File Reference

Variables

- package gazebo **msgs**
- import color **proto**

5.12.1 Variable Documentation

5.12.1.1 package gazebo msgs

5.12.1.2 import color proto

5.13 friction.proto File Reference

Variables

- package gazebo **msgs**
- import vector3d **proto**

5.13.1 Variable Documentation

5.13.1.1 package gazebo msgs

5.13.1.2 import vector3d proto

5.14 geometry.proto File Reference

Variables

- package gazebo **msgs**
- import boxgeom **proto**

5.14.1 Variable Documentation

5.14.1.1 package gazebo msgs

5.14.1.2 import vector3d proto

5.15 gui.proto File Reference

Variables

- package gazebo **msgs**
- import gui_camera **proto**

5.15.1 Variable Documentation

5.15.1.1 package gazebo msgs

5.15.1.2 import gui_camera proto

5.16 gui_camera.proto File Reference

Variables

- package gazebo **msgs**
- import pose **proto**

5.16.1 Variable Documentation

5.16.1.1 package gazebo msgs

5.16.1.2 import track_visual proto

5.17 gui_overlay_config.proto File Reference

Variables

- package gazebo **msgs**

5.17.1 Variable Documentation

5.17.1.1 package gazebo msgs

5.18 gz_string.proto File Reference

Variables

- package gazebo **msgs**

5.18.1 Variable Documentation

5.18.1.1 package gazebo msgs

5.19 gz_string_v.proto File Reference

Variables

- package gazebo **msgs**

5.19.1 Variable Documentation

5.19.1.1 package gazebo msgs

5.20 header.proto File Reference

Variables

- package gazebo **msgs**
- import time **proto**

5.20.1 Variable Documentation

5.20.1.1 package gazebo msgs

5.20.1.2 import time proto

5.21 heightmapgeom.proto File Reference

Variables

- package gazebo **msgs**
- import image **proto**

5.21.1 Variable Documentation

5.21.1.1 package gazebo msgs

5.21.1.2 import vector3d proto

5.22 image.proto File Reference

Variables

- package gazebo **msgs**

5.22.1 Variable Documentation

5.22.1.1 package gazebo msgs

5.23 image_stamped.proto File Reference

Variables

- package gazebo **msgs**
- import time **proto**

5.23.1 Variable Documentation

5.23.1.1 package gazebo msgs

5.23.1.2 import image proto

5.24 imagegeom.proto File Reference

Variables

- package gazebo **msgs**

5.24.1 Variable Documentation

5.24.1.1 package gazebo msgs

5.25 images_stamped.proto File Reference

Variables

- package gazebo **msgs**
- import time **proto**

5.25.1 Variable Documentation

5.25.1.1 package gazebo msgs

5.25.1.2 import image proto

5.26 imu.proto File Reference

Variables

- package gazebo **msgs**
- import time **proto**

5.26.1 Variable Documentation

5.26.1.1 package gazebo msgs

5.26.1.2 import quaternion proto

5.27 inertial.proto File Reference

Variables

- package gazebo **msgs**
- import pose **proto**

5.27.1 Variable Documentation

5.27.1.1 package gazebo msgs

5.27.1.2 import pose proto

5.28 int.proto File Reference

Variables

- package gazebo **msgs**

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