



RenderScript Graphics Functions and Types

Overview

The graphics subsystem of RenderScript was removed at API level 23.

Summary

Deprecated Types

rs_blend_dst_func	Deprecated. Blend destination function
rs_blend_src_func	Deprecated. Blend source function
rs_cull_mode	Deprecated. Culling mode
rs_depth_func	Deprecated. Depth function
rs_font	Deprecated. Handle to a Font
rs_mesh	Deprecated. Handle to a Mesh
rs_primitive	Deprecated. How to interpret mesh vertex data
rs_program_fragment	Deprecated. Handle to a ProgramFragment
rs_program_raster	Deprecated. Handle to a ProgramRaster
rs_program_store	Deprecated. Handle to a ProgramStore
rs_program_vertex	Deprecated. Handle to a ProgramVertex

Deprecated Functions

rsgAllocationSyncAll	Deprecated. Sync the contents of an allocation
rsgBindColorTarget	Deprecated. Set the color target
rsgBindConstant	Deprecated. Bind a constant allocation
rsgBindDepthTarget	Deprecated. Set the depth target
rsgBindFont	Deprecated. Bind a font object
rsgBindProgramFragment	Deprecated. Bind a ProgramFragment
rsgBindProgramRaster	Deprecated. Bind a ProgramRaster
rsgBindProgramStore	Deprecated. Bind a ProgramStore
rsgBindProgramVertex	Deprecated. Bind a ProgramVertex
rsgBindSampler	Deprecated. Bind a sampler
rsgBindTexture	Deprecated. Bind a texture allocation
rsgClearAllRenderTargets	Deprecated. Clear all color and depth targets
rsgClearColor	Deprecated. Clear the specified color from the surface
rsgClearColorTarget	Deprecated. Clear the color target
rsgClearDepth	Deprecated. Clear the depth surface

rsgClearDepthTarget	Deprecated. Clear the depth target
rsgDrawMesh	Deprecated. Draw a mesh
rsgDrawQuad	Deprecated. Draw a quad
rsgDrawQuadTexCoords	Deprecated. Draw a textured quad
rsgDrawRect	Deprecated. Draw a rectangle
rsgDrawSpriteScreenspace	Deprecated. Draw rectangles in screenspace
rsgDrawText	Deprecated. Draw a text string
rsgFinish	Deprecated. End rendering commands
rsgFontColor	Deprecated. Set the font color
rsgGetHeight	Deprecated. Get the surface height
rsgGetWidth	Deprecated. Get the surface width
rsgMeasureText	Deprecated. Get the bounding box for a text string
rsgMeshComputeBoundingBox	Deprecated. Compute a bounding box
rsgMeshGetIndexAllocation	Deprecated. Return an allocation containing index data
rsgMeshGetPrimitive	Deprecated. Return the primitive
rsgMeshGetPrimitiveCount	Deprecated. Return the number of index sets
rsgMeshGetVertexAllocation	Deprecated. Return a vertex allocation
rsgMeshGetVertexAllocationCount	Deprecated. Return the number of vertex allocations
rsgProgramFragmentConstantColor	Deprecated. Set the constant color for a fixed function emulation program
rsgProgramRasterGetCullMode	Deprecated. Get program raster cull mode
rsgProgramRasterIsPointSpriteEnabled	Deprecated. Get program raster point sprite state
rsgProgramStoreGetBlendDstFunc	Deprecated. Get program store blend destination function
rsgProgramStoreGetBlendSrcFunc	Deprecated. Get program store blend source function
rsgProgramStoreGetDepthFunc	Deprecated. Get program store depth function
rsgProgramStoreIsColorMaskAlphaEnabled	Deprecated. Get program store alpha component color mask
rsgProgramStoreIsColorMaskBlueEnabled	Deprecated. Get program store blue component color mask
rsgProgramStoreIsColorMaskGreenEnabled	Deprecated. Get program store green component color mask
rsgProgramStoreIsColorMaskRedEnabled	Deprecated. Get program store red component color mask
rsgProgramStoreIsDepthMaskEnabled	Deprecated. Get program store depth mask
rsgProgramStoreIsDitherEnabled	Deprecated. Get program store dither state
rsgProgramVertexGetProjectionMatrix	Deprecated. Get the projection matrix for a fixed function vertex program
rsgProgramVertexLoadModelMatrix	Deprecated. Load the model matrix for a bound fixed function vertex program
rsgProgramVertexLoadProjectionMatrix	Deprecated. Load the projection matrix for a bound fixed function vertex program
rsgProgramVertexLoadTextureMatrix	Deprecated. Load the texture matrix for a bound fixed function vertex program

Types

`rs_blend_dst_func` : Blend destination function

An enum with the following values: When compiling for 32 bits. [API level 16 - 22](#)

```

RS_BLEND_DST_ZERO = 0
RS_BLEND_DST_ONE = 1
RS_BLEND_DST_SRC_COLOR = 2
RS_BLEND_DST_ONE_MINUS_SRC_COLOR = 3
RS_BLEND_DST_SRC_ALPHA = 4
RS_BLEND_DST_ONE_MINUS_SRC_ALPHA = 5
RS_BLEND_DST_DST_ALPHA = 6
RS_BLEND_DST_ONE_MINUS_DST_ALPHA = 7
RS_BLEND_DST_INVALID = 100

```

Deprecated. Do not use.

rs_blend_src_func : Blend source function

An enum with the following values: When compiling for 32 bits. [API level 16 - 22](#)

```

RS_BLEND_SRC_ZERO = 0
RS_BLEND_SRC_ONE = 1
RS_BLEND_SRC_DST_COLOR = 2
RS_BLEND_SRC_ONE_MINUS_DST_COLOR = 3
RS_BLEND_SRC_SRC_ALPHA = 4
RS_BLEND_SRC_ONE_MINUS_SRC_ALPHA = 5
RS_BLEND_SRC_DST_ALPHA = 6
RS_BLEND_SRC_ONE_MINUS_DST_ALPHA = 7
RS_BLEND_SRC_SRC_ALPHA_SATURATE = 8
RS_BLEND_SRC_INVALID = 100

```

Deprecated. Do not use.

rs_cull_mode : Culling mode

An enum with the following values: When compiling for 32 bits. [API level 16 - 22](#)

```

RS_CULL_BACK = 0
RS_CULL_FRONT = 1
RS_CULL_NONE = 2
RS_CULL_INVALID = 100

```

Deprecated. Do not use.

rs_depth_func : Depth function

An enum with the following values: When compiling for 32 bits. [API level 16 - 22](#)

<code>RS_DEPTH_FUNC_ALWAYS = 0</code>	Always drawn
<code>RS_DEPTH_FUNC_LESS = 1</code>	Drawn if the incoming depth value is less than that in the depth buffer
<code>RS_DEPTH_FUNC_LEQUAL = 2</code>	Drawn if the incoming depth value is less or equal to that in the depth buffer
<code>RS_DEPTH_FUNC_GREATER = 3</code>	Drawn if the incoming depth value is greater than that in the depth buffer
<code>RS_DEPTH_FUNC_GEQUAL = 4</code>	Drawn if the incoming depth value is greater or equal to that in the depth buffer
<code>RS_DEPTH_FUNC_EQUAL = 5</code>	Drawn if the incoming depth value is equal to that in the depth buffer
<code>RS_DEPTH_FUNC_NOTEQUAL = 6</code>	Drawn if the incoming depth value is not equal to that in the depth buffer
<code>RS_DEPTH_FUNC_INVALID = 100</code>	Invalid depth function

Deprecated. Do not use.

Specifies conditional drawing depending on the comparison of the incoming depth to that found in the depth buffer.

rs_font : Handle to a Font

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Opaque handle to a RenderScript font object. See: android.renderscript.Font

rs_mesh : Handle to a Mesh

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Opaque handle to a RenderScript mesh object. See: android.renderscript.Mesh

rs_primitive : How to interpret mesh vertex data

An enum with the following values: When compiling for 32 bits. [API level 16 - 22](#)

<i>RS_PRIMITIVE_POINT = 0</i>	Vertex data will be rendered as a series of points
<i>RS_PRIMITIVE_LINE = 1</i>	Vertex pairs will be rendered as lines
<i>RS_PRIMITIVE_LINE_STRIP = 2</i>	Vertex data will be rendered as a connected line strip
<i>RS_PRIMITIVE_TRIANGLE = 3</i>	Vertices will be rendered as individual triangles
<i>RS_PRIMITIVE_TRIANGLE_STRIP = 4</i>	Vertices will be rendered as a connected triangle strip defined by the first three vertices with each additional triangle defined by a new vertex
<i>RS_PRIMITIVE_TRIANGLE_FAN = 5</i>	Vertices will be rendered as a sequence of triangles that all share first vertex as the origin
<i>RS_PRIMITIVE_INVALID = 100</i>	Invalid primitive

Deprecated. Do not use.

Describes the way mesh vertex data is interpreted when rendering

rs_program_fragment : Handle to a ProgramFragment

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Opaque handle to a RenderScript ProgramFragment object. See: android.renderscript.ProgramFragment

rs_program_raster : Handle to a ProgramRaster

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Opaque handle to a RenderScript ProgramRaster object. See: android.renderscript.ProgramRaster

rs_program_store : Handle to a ProgramStore

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Opaque handle to a RenderScript ProgramStore object. See: [android.renderscript.ProgramStore](#)

rs_program_vertex : Handle to a ProgramVertex

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Opaque handle to a RenderScript ProgramVertex object. See: [android.renderscript.ProgramVertex](#)

Functions

rsgAllocationSyncAll : Sync the contents of an allocation

void rsgAllocationSyncAll([rs_allocation](#) alloc);

When compiling for 32 bits. Removed from [API level 23 and higher](#)

void rsgAllocationSyncAll([rs_allocation](#) alloc, [rs_allocation_usage_type](#) source);

When compiling for 32 bits. [API level 14 - 22](#)

Deprecated. Do not use.

Sync the contents of an allocation.

If the source is specified, sync from memory space specified by source.

If the source is not specified, sync from its SCRIPT memory space to its HW memory spaces.

rsgBindColorTarget : Set the color target

void rsgBindColorTarget([rs_allocation](#) colorTarget, [uint](#) slot);

When compiling for 32 bits. [API level 14 - 22](#)

Deprecated. Do not use.

Set the color target used for all subsequent rendering calls

rsgBindConstant : Bind a constant allocation

void rsgBindConstant([rs_program_fragment](#) ps, [uint](#) slot, [rs_allocation](#) c);

When compiling for 32 bits. Removed from [API level 23 and higher](#)

void rsgBindConstant([rs_program_vertex](#) pv, [uint](#) slot, [rs_allocation](#) c);

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Parameters

ps program fragment object
slot index of the constant buffer on the program
c constants to bind
pv program vertex object

Deprecated. Do not use.

Bind a new Allocation object to a ProgramFragment or ProgramVertex. The Allocation must be a valid constant input for the Program.

rsgBindDepthTarget : Set the depth target

void rsgBindDepthTarget([rs_allocation](#) depthTarget);

When compiling for 32 bits. [API level 14 - 22](#)

Deprecated. Do not use.

Set the depth target used for all subsequent rendering calls

rsgBindFont : Bind a font object

rsgBindFont : Bind a font object

void rsgBindFont([rs_font](#) font); When compiling for 32 bits. Removed from [API level 23 and higher](#)

Parameters

font object to bind

Deprecated. Do not use.

Binds the font object to be used for all subsequent font rendering calls

rsgBindProgramFragment : Bind a ProgramFragment

void rsgBindProgramFragment([rs_program_fragment](#) pf); When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Bind a new ProgramFragment to the rendering context.

rsgBindProgramRaster : Bind a ProgramRaster

void rsgBindProgramRaster([rs_program_raster](#) pr); When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Bind a new ProgramRaster to the rendering context.

rsgBindProgramStore : Bind a ProgramStore

void rsgBindProgramStore([rs_program_store](#) ps); When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Bind a new ProgramStore to the rendering context.

rsgBindProgramVertex : Bind a ProgramVertex

void rsgBindProgramVertex([rs_program_vertex](#) pv); When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Bind a new ProgramVertex to the rendering context.

rsgBindSampler : Bind a sampler

void rsgBindSampler([rs_program_fragment](#) fragment, [uint](#) slot, [rs_sampler](#) sampler); When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Bind a new Sampler object to a ProgramFragment. The sampler will operate on the texture bound at the matching slot.

rsgBindTexture : Bind a texture allocation

void rsgBindTexture([rs_program_fragment](#) v, [uint](#) slot, [rs_allocation](#) alloc); When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Bind a new Allocation object to a ProgramFragment. The Allocation must be a valid texture for the Program. The sampling of the texture will be controlled by the Sampler bound at the matching slot.

rsgClearAllRenderTargets : Clear all color and depth targets

void rsgClearAllRenderTargets(); When compiling for 32 bits. [API level 14 - 22](#)

Deprecated. Do not use.

Clear all color and depth targets and resume rendering into the framebuffer

rsgClearColor : Clear the specified color from the surface

void rsgClearColor(float r, float g, float b, float a); When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Clears the rendering surface to the specified color.

rsgClearColorTarget : Clear the color target

void rsgClearColorTarget(uint slot); When compiling for 32 bits. [API level 14 - 22](#)

Deprecated. Do not use.

Clear the previously set color target

rsgClearDepth : Clear the depth surface

void rsgClearDepth(float value); When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Clears the depth surface to the specified value.

rsgClearDepthTarget : Clear the depth target

void rsgClearDepthTarget(); When compiling for 32 bits. [API level 14 - 22](#)

Deprecated. Do not use.

Clear the previously set depth target

rsgDrawMesh : Draw a mesh

void rsgDrawMesh(rs_mesh ism);

When compiling for 32 bits. Removed from [API level 23 and higher](#)

void rsgDrawMesh(rs_mesh ism, uint primitiveIndex);

When compiling for 32 bits. Removed from [API level 23 and higher](#)

void rsgDrawMesh(rs_mesh ism, uint primitiveIndex, uint start, uint len);

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Parameters

ism mesh object to render

primitiveIndex for meshes that contain multiple primitive groups this parameter specifies the index of the group to draw.

start starting index in the range

len number of indices to draw

Deprecated. Do not use.

Draw a mesh using the current context state.

If primitiveIndex is specified, draw part of a mesh using the current context state.

If start and len are also specified, draw specified index range of part of a mesh using the current context state.

Otherwise the whole mesh is rendered.

rsgDrawQuad : Draw a quad

rsgDrawQuad : Draw a quad

```
void rsgDrawQuad(float x1, float y1, float z1, float x2, float y2, float z2, float x3, float y3, float z3, float x4, float y4, float z4);
```

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Low performance utility function for drawing a simple quad. Not intended for drawing large quantities of geometry.

rsgDrawQuadTexCoords : Draw a textured quad

```
void rsgDrawQuadTexCoords(float x1, float y1, float z1, float u1, float v1, float x2, float y2, float z2, float u2, float v2, float x3, float y3, float z3, float u3, float v3, float x4, float y4, float z4, float u4, float v4);
```

When compiling for 32 bits.
Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Low performance utility function for drawing a textured quad. Not intended for drawing large quantities of geometry.

rsgDrawRect : Draw a rectangle

```
void rsgDrawRect(float x1, float y1, float x2, float y2, float z);
```

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Low performance utility function for drawing a simple rectangle. Not intended for drawing large quantities of geometry.

rsgDrawSpriteScreenspace : Draw rectangles in screenspace

```
void rsgDrawSpriteScreenspace(float x, float y, float z, float w, float h);
```

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Low performance function for drawing rectangles in screenspace. This function uses the default passthrough ProgramVertex. Any bound ProgramVertex is ignored. This function has considerable overhead and should not be used for drawing in shipping applications.

rsgDrawText : Draw a text string

```
void rsgDrawText(const char* text, int x, int y);
```

When compiling for 32 bits. Removed from [API level 23 and higher](#)

```
void rsgDrawText(rs_allocation alloc, int x, int y);
```

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Draws text given a string and location

rsgFinish : End rendering commands

```
uint rsgFinish();
```

When compiling for 32 bits. [API level 14 - 22](#)

Deprecated. Do not use.

Force RenderScript to finish all rendering commands

rsgFontColor : Set the font color

```
void rsgFontColor(float r, float g, float b, float a);
```

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Parameters

- r* red component
- g* green component
- b* blue component
- a* alpha component

Deprecated. Do not use.

Sets the font color for all subsequent rendering calls

rsgGetHeight : Get the surface height

[uint](#) rsgGetHeight(); When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Get the height of the current rendering surface.

rsgGetWidth : Get the surface width

[uint](#) rsgGetWidth(); When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Get the width of the current rendering surface.

rsgMeasureText : Get the bounding box for a text string

void rsgMeasureText(const char* text, int* left, int* right, int* top, int* bottom); When compiling for 32 bits. Removed from [API level 23 and higher](#)

void rsgMeasureText([rs_allocation](#) alloc, int* left, int* right, int* top, int* bottom); When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Returns the bounding box of the text relative to (0, 0) Any of left, right, top, bottom could be NULL

rsgMeshComputeBoundingBox : Compute a bounding box

void rsgMeshComputeBoundingBox([rs_mesh](#) mesh, float* minX, float* minY, float* min, float* maxX, float* maxY, float* maxZ); When compiling for 32 bits. Removed from [API level 23 and higher](#)

void rsgMeshComputeBoundingBox([rs_mesh](#) mesh, [float3*](#) bBoxMin, [float3*](#) bBoxMax); When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Computes an axis aligned bounding box of a mesh object

rsgMeshGetIndexAllocation : Return an allocation containing index data

[rs_allocation](#) rsgMeshGetIndexAllocation([rs_mesh](#) m, [uint32_t](#) index); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

m mesh to get data from

index index of the index allocation

Returns

allocation containing index data

Deprecated. Do not use.

Returns an allocation containing index data or a null allocation if only the primitive is specified

rsgMeshGetPrimitive : Return the primitive

[rs_primitive](#) rsgMeshGetPrimitive([rs_mesh](#) m, [uint32_t](#) index); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

m mesh to get data from

index index of the primitive

Returns

primitive describing how the mesh is rendered

Deprecated. Do not use.

Returns the primitive describing how a part of the mesh is rendered

rsgMeshGetPrimitiveCount : Return the number of index sets

[uint32_t](#) rsgMeshGetPrimitiveCount([rs_mesh](#) m); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

m mesh to get data from

Returns

number of primitive groups in the mesh. This would include simple primitives as well as allocations containing index data

Deprecated. Do not use.

Meshes could have multiple index sets, this function returns the number.

rsgMeshGetVertexAllocation : Return a vertex allocation

[rs_allocation](#) rsgMeshGetVertexAllocation([rs_mesh](#) m, [uint32_t](#) index); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

m mesh to get data from

index index of the vertex allocation

Returns

allocation containing vertex data

Deprecated. Do not use.

Returns an allocation that is part of the mesh and contains vertex data, e.g. positions, normals, texcoords

rsgMeshGetVertexAllocationCount : Return the number of vertex allocations

[uint32_t](#) rsgMeshGetVertexAllocationCount([rs_mesh](#) m); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

m mesh to get data from

Returns

number of allocations in the mesh that contain vertex data

Deprecated. Do not use.

Returns the number of allocations in the mesh that contain vertex data

rsgProgramFragmentConstantColor : Set the constant color for a fixed function emulation program

void rsgProgramFragmentConstantColor([rs_program_fragment](#) pf, float r, float g, float b, float a); When compiling for 32 bits. Removed from [API level 23 and higher](#)

Deprecated. Do not use.

Set the constant color for a fixed function emulation program.

rsgProgramRasterGetCullMode : Get program raster cull mode

[rs_cull_mode](#) rsgProgramRasterGetCullMode([rs_program_raster](#) pr); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

pr program raster to query

Deprecated. Do not use.

Get program raster cull mode

rsgProgramRasterIsPointSpriteEnabled : Get program raster point sprite state

bool rsgProgramRasterIsPointSpriteEnabled([rs_program_raster](#) pr); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

pr program raster to query

Deprecated. Do not use.

Get program raster point sprite state

rsgProgramStoreGetBlendDstFunc : Get program store blend destination function

[rs_blend_dst_func](#) rsgProgramStoreGetBlendDstFunc([rs_program_store](#) ps); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

ps program store to query

Deprecated. Do not use.

Get program store blend destination function

rsgProgramStoreGetBlendSrcFunc : Get program store blend source function

[rs_blend_src_func](#) rsgProgramStoreGetBlendSrcFunc([rs_program_store](#) ps); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

ps program store to query

Deprecated. Do not use.

Get program store blend source function

rsgProgramStoreGetDepthFunc : Get program store depth function

[rs_depth_func](#) rsgProgramStoreGetDepthFunc([rs_program_store](#) ps); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

ps program store to query

Deprecated. Do not use.

Get program store depth function

rsgProgramStoreIsColorMaskAlphaEnabled : Get program store alpha component color mask

bool rsgProgramStoreIsColorMaskAlphaEnabled([rs_program_store](#) ps); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

ps program store to query

Deprecated. Do not use.

Get program store alpha component color mask

rsgProgramStoreIsColorMaskBlueEnabled : Get program store blur component color mask

bool rsgProgramStoreIsColorMaskBlueEnabled([rs_program_store](#) ps); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

ps program store to query

Deprecated. Do not use.

Get program store blur component color mask

rsgProgramStoreIsColorMaskGreenEnabled : Get program store green component color mask

bool rsgProgramStoreIsColorMaskGreenEnabled([rs_program_store](#) ps); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

ps program store to query

Deprecated. Do not use.

Get program store green component color mask

rsgProgramStoreIsColorMaskRedEnabled : Get program store red component color mask

bool rsgProgramStoreIsColorMaskRedEnabled([rs_program_store](#) ps); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

ps program store to query

Deprecated. Do not use.

Get program store red component color mask

rsgProgramStoreIsDepthMaskEnabled : Get program store depth mask

bool rsgProgramStoreIsDepthMaskEnabled([rs_program_store](#) ps); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

ps program store to query

Deprecated. Do not use.

Get program store depth mask

rsgProgramStoreIsDitherEnabled : Get program store dither state

bool rsgProgramStoreIsDitherEnabled([rs_program_store](#) ps); When compiling for 32 bits. [API level 16 - 22](#)

Parameters

ps program store to query

Deprecated. Do not use.

Get program store dither state

rsgProgramVertexGetProjectionMatrix : Get the projection matrix for a fixed function vertex program

void rsgProgramVertexGetProjectionMatrix([rs_matrix4x4*](#) proj); When compiling for 32 bits. Removed from [API level 23 and higher](#)

Parameters

proj matrix to store the current projection matrix into

Deprecated. Do not use.

Get the projection matrix for a currently bound fixed function vertex program. Calling this function with a custom vertex shader would result in an error.

rsgProgramVertexLoadModelMatrix : Load the model matrix for a bound fixed function vertex program

```
void rsgProgramVertexLoadModelMatrix(const rs_matrix4x4*  
model);
```

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Parameters

model model matrix

Deprecated. Do not use.

Load the model matrix for a currently bound fixed function vertex program. Calling this function with a custom vertex shader would result in an error.

rsgProgramVertexLoadProjectionMatrix : Load the projection matrix for a bound fixed function vertex program

```
void rsgProgramVertexLoadProjectionMatrix(const rs_matrix4x4*  
proj);
```

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Parameters

proj projection matrix

Deprecated. Do not use.

Load the projection matrix for a currently bound fixed function vertex program. Calling this function with a custom vertex shader would result in an error.

rsgProgramVertexLoadTextureMatrix : Load the texture matrix for a bound fixed function vertex program

```
void rsgProgramVertexLoadTextureMatrix(const rs_matrix4x4*  
tex);
```

When compiling for 32 bits. Removed from [API level 23 and higher](#)

Parameters

tex texture matrix

Deprecated. Do not use.

Load the texture matrix for a currently bound fixed function vertex program. Calling this function with a custom vertex shader would result in an error.