

WebGL 渲染引擎 API

(一) Core

Class: WebGLEngine

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Constructors

constructor

- `new WebGLEngine(canvas, options?)`

Parameters

Name	Type
<code>canvas</code>	<code>HTMLCanvasElement</code>
<code>options</code>	<code>WebGLContextAttributes</code>

Defined in

engine/engine.ts:35

Properties

assets

- `Readonly assets: AssetManager`

Defined in

engine/engine.ts:32



scenes

- **Readonly** **scenes**: SceneManager

Defined in

engine/engine.ts:33

Methods

release

- ▶ **release()**: void

Returns

void

Defined in

engine/engine.ts:56



render

- ▶ **render(scene)**: void

Parameters

Name	Type
scene	JScene

Returns

void

Defined in

engine/engine.ts:50

Class: SceneManager

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Constructors

constructor

- **new SceneManager**(`context`, `assets`, `options`)

Parameters

Name	Type
<code>context</code>	<code>RenderContext</code>
<code>assets</code>	<code>AssetManager</code>
<code>options</code>	<code>WebGLContextAttributes</code>

Defined in

engine/scenemanager.ts:67

Properties

strategy

- **strategy**: `RenderStrategy = RenderStrategy.Performance`

Defined in

engine/scenemanager.ts:57

Methods

create

- ▶ **create(scene): void**

Parameters

Name	Type
scene	JScene

Returns

void

Defined in

engine/scenemanager.ts:73

delete

- ▶ **delete(scene): void**

Parameters

Name	Type
scene	JScene

Returns

void

Defined in

engine/scenemanager.ts:82

has

- ▶ **has**(`scene`): boolean

Parameters

Name	Type
<code>scene</code>	JScene

Returns

boolean

Defined in

engine/scenemanager.ts:93



list

- ▶ **list**(): JScene[]

Returns

JScene[]

Defined in

engine/scenemanager.ts:97



releaseUnused

- ▶ **releaseUnused**(): void

Returns

void

Defined in

engine/scenemanager.ts:358



render

► **render(`scene`): void**

Parameters

Name	Type
<code>scene</code>	<code>JScene</code>

Returns

`void`

Defined in

`engine/scenemanager.ts:101`

Class: `Vector<T>`

Type parameters

Name	Type
<code>T</code>	extends <code>Float32Array</code> <code>Int32Array</code>

Hierarchy



```
↳ ↳ iVector4
```

```
•  
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```

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Constructors

constructor

- **new Vector<`T`>(data)**

Type parameters

Name	Type
<code>T</code>	extends <code>Int32Array</code> <code>Float32Array</code>

Parameters

Name	Type
<code>data</code>	<code>T</code>

Overrides

[Variant.constructor](#)

Defined in

variant/vector.ts:25

Properties

`m_data`

- **Protected** `m_data: T`

Inherited from

[Variant.m_data](#)

Defined in

variant/variant.ts:43

Accessors

`data`

- **get** `data(): T`

Returns

`T`

Inherited from

[Variant.data](#)

Defined in

variant/variant.ts:50

- `set data(data): void`

Parameters

Name	Type
<code>data</code>	<code>T</code>

Returns

`void`

Inherited from

`Variant.data`

Defined in

variant/variant.ts:54



dim

- `get dim(): number`

Returns

`number`

Defined in

variant/vector.ts:93



w

- `get w(): number`

Returns

`number`

Defined in

variant/vector.ts:47

- `set w(v): void`

Parameters

Name	Type
v	number

Returns

`void`

Defined in

`variant/vector.ts:63`



x

- `get x(): number`

Returns

`number`

Defined in

`variant/vector.ts:35`

- `set x(v): void`

Parameters

Name	Type
v	number

Returns

`void`

Defined in

`variant/vector.ts:51`



y

- `get y(): number`

Returns

`number`

Defined in

variant/vector.ts:39

- `set y(v): void`

Parameters

Name	Type
<code>v</code>	<code>number</code>

Returns

`void`

Defined in

variant/vector.ts:55



Z

- `get z(): number`

Returns

`number`

Defined in

variant/vector.ts:43

- `set z(v): void`

Parameters

Name	Type
<code>v</code>	<code>number</code>

Returns

`void`

Defined in

variant/vector.ts:59

Methods

add

- ▶ **add(rhs): Vector<T>**

Parameters

Name	Type
rhs	Vector<T>

Returns

Vector<T>

Defined in

variant/vector.ts:149

at

- ▶ **at(i): number**

Parameters

Name	Type
i	number

Returns

number

Defined in

variant/vector.ts:31

clone

- ▶ **clone()**: `Vector<T>`

Returns

`Vector<T>`

Inherited from

[Variant.clone](#)

Defined in

variant/variant.ts:65



compare

- ▶ **compare(`other`)**: `boolean`

Parameters

Name	Type
<code>other</code>	<code>Vector<T></code>

Returns

`boolean`

Inherited from

[Variant.compare](#)

Defined in

variant/variant.ts:71



copy

- ▶ **copy(`other`)**: `void`

Parameters

Name	Type

Name	Type
other	Vector<T>

Returns

void

Inherited from

[Variant.copy](#)

Defined in

variant/variant.ts:61



div

- **div(rhs): Vector<T>**

Parameters

Name	Type
rhs	number

Returns

Vector<T>

Defined in

variant/vector.ts:176



dot

- **dot(rhs): number**

Parameters

Name	Type
rhs	Vector<T>

Returns

`number`

Defined in

variant/vector.ts:185



fill

- ▶ `fill(v): Vector<T>`

Parameters

Name	Type
<code>v</code>	<code>number</code>

Returns

`Vector<T>`

Defined in

variant/vector.ts:195



isZero

- ▶ `isZero(): boolean`

Returns

`boolean`

Defined in

variant/vector.ts:97



length

- ▶ `length(): number`

Returns

`number`

Defined in

`variant/vector.ts:124`



mul

- ▶ `mul(rhs): Vector<T>`

Parameters

Name	Type
<code>rhs</code>	<code>number</code>

Returns

`Vector<T>`

Defined in

`variant/vector.ts:167`



neg

- ▶ `neg(): Vector<T>`

Returns

`Vector<T>`

Defined in

`variant/vector.ts:140`



normalize

- ▶ **normalize():** `Vector<T>`

Returns

`Vector<T>`

Defined in

variant/vector.ts:129



set

- ▶ **set(value):** `void`

Parameters

Name	Type
<code>value</code>	<code>number</code>

Returns

`void`

Defined in

variant/vector.ts:67

- ▶ **set(other):** `void`

Parameters

Name	Type
<code>other</code>	<code>Vector<T></code>

Returns

`void`

Defined in

variant/vector.ts:68

- ▶ **set(array):** `void`

Parameters

Name	Type
array	ArrayLike<number>

Returns

void

Defined in

variant/vector.ts:69

- ▶ **set(...values): void**

Parameters

Name	Type
...values	(number ArrayLike<number> Vector<T>)[]

Returns

void

Defined in

variant/vector.ts:70

setLength

- ▶ **setLength(₁len): Vector<T>**

Parameters

Name	Type
len	number

Returns

Vector<T>

Defined in

variant/vector.ts:109

setZero

- ▶ **setZero()**: `Vector<T>`

Returns

`Vector<T>`

Defined in

variant/vector.ts:103



squaredLength

- ▶ **squaredLength()**: `number`

Returns

`number`

Defined in

variant/vector.ts:115



sub

- ▶ **sub(rhs)**: `Vector<T>`

Parameters

Name	Type
<code>rhs</code>	<code>Vector<T></code>

Returns

`Vector<T>`

Defined in

variant/vector.ts:158

[ore.core / Exports / Matrix](#)

Class: Matrix

Hierarchy

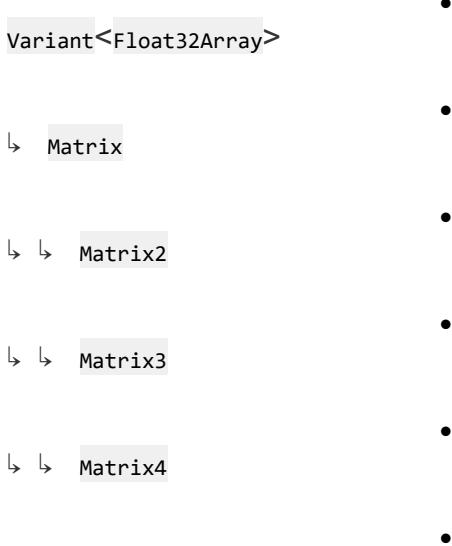


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Constructors

constructor

- **new Matrix**(`data`, `dim`)

Parameters

Name	Type
<code>data</code>	<code>Float32Array</code>
<code>dim</code>	<code>number</code>

Overrides

[Variant.constructor](#)

Defined in

variant/matrix.ts:27

Properties

m_data

- **Protected** **m_data**: `Float32Array`

Inherited from

[Variant.m_data](#)

Defined in

variant/variant.ts:43



m_dim

- **Protected** **m_dim**: `number`

Defined in

variant/matrix.ts:25

Accessors

data

- `get data(): T`

Returns

T

Inherited from

Variant.data

Defined in

variant/variant.ts:50

- `set data(data): void`

Parameters

Name	Type
data	T

Returns

void

Inherited from

Variant.data

Defined in

variant/variant.ts:54

dim

- `get dim(): number`

Returns

number

Defined in

variant/matrix.ts:74

Methods

at

- `Abstract at(i): Vector<Float32Array>`

Parameters

Name	Type
i	number

Returns

`Vector<Float32Array>`

Defined in

variant/matrix.ts:35



clone

- `clone(): Matrix`

Returns

`Matrix`

Inherited from

[Variant.clone](#)

Defined in

variant/variant.ts:65



compare

- `compare(other): boolean`

Parameters

Name	Type

Name	Type
other	Matrix

Returns

boolean

Inherited from

[Variant.compare](#)

Defined in

variant/variant.ts:71



copy

- ▶ **copy**(other): void

Parameters

Name	Type
other	Matrix

Returns

void

Inherited from

[Variant.copy](#)

Defined in

variant/variant.ts:61



determinant

- ▶ **determinant()**: number

Returns

number

Defined in

variant/matrix.ts:130



isIdentity

- ▶ **isIdentity(): boolean**

Returns

boolean

Defined in

variant/matrix.ts:99



isZero

- ▶ **isZero(): boolean**

Returns

boolean

Defined in

variant/matrix.ts:78



set

- ▶ **set(value): void**

Parameters

Name	Type
value	number

Returns

void

Defined in

variant/matrix.ts:37

- ▶ **set(other): void**

Parameters

Name	Type
other	Matrix

Returns

void

Defined in

variant/matrix.ts:38

- ▶ **set(array): void**

Parameters

Name	Type
array	ArrayLike<number>

Returns

void

Defined in

variant/matrix.ts:39

- ▶ **set(...values): void**

Parameters

Name	Type
...values	(number ArrayLike<number> Vector<Float32Array>)[]

Returns

void

Defined in

variant/matrix.ts:40

setIdentity

- ▶ **setIdentity(): Matrix**

Returns

Matrix

Defined in

variant/matrix.ts:90

setZero

- ▶ **setZero(): Matrix**

Returns

Matrix

Defined in

variant/matrix.ts:84

transpose

- ▶ **transpose(): Matrix**

Returns

Matrix

Defined in

variant/matrix.ts:117

[ore.core / Exports / AssetManager](#)

Class: AssetManager

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Constructors

constructor

- **new AssetManager(context)**

Parameters

Name	Type
context	RenderingContext

Defined in

engine/assetmanager.ts:158

Properties

m_filterConstant

- **Private m_filterConstant: Object**

Type declaration

Name	Type
linear	number

Name	Type
linear_mipmap_linear	number
linear_mipmap_nearest	number
nearest	number
nearest_mipmap_linear	number
nearest_mipmap_nearest	number

Defined in

engine/assetmanager.ts:80



m_imageTargetConstant

- **Private** **m_imageTargetConstant:** Object

Type declaration

Name	Type
neg_x	number
neg_y	number
neg_z	number
pos_x	number
pos_y	number
pos_z	number

Defined in

engine/assetmanager.ts:122



m_queryTargetConstant

- **Private** **m_queryTargetConstant:** Object

Type declaration

Name	Type

Name	Type
any_samples_passed	number
any_samples_passed_conservative	number
transform_feedback_primitives_written	number

Defined in

engine/assetmanager.ts:130



m_renderBufferInternalFormatConstant

- **Private** **m_renderBufferInternalFormatConstant:** Object

Type declaration

Name	Type
depth_component16	number
depth_stencil	number
rgb565	number
rgb5_a1	number
rgba4	number
stencil_index8	number

Defined in

engine/assetmanager.ts:103



m_textureFormatConstant

- **Private** **m_textureFormatConstant:** Object

Type declaration

Name	Type
alpha	number
depth_component	number

Name	Type
depth_stencil	number
luminance	number
luminance_alpha	number
rgb	number
rgba	number

Defined in

engine/assetmanager.ts:93



m_textureInternalFormatConstant

- **Private** **m_textureInternalFormatConstant:** Object

Type declaration

Name	Type
alpha	number
depth_component	number
depth_stencil	number
luminance	number
luminance_alpha	number
rgb	number
rgba	number

Defined in

engine/assetmanager.ts:102



m_typeConstant

- **Private** **m_typeConstant:** Object

Type declaration

Name	Type
byte	number
float	number
short	number
unsigned_byte	number
unsigned_int	number
unsigned_short	number
unsigned_short_4_4_4_4	number
unsigned_short_5_5_5_1	number
unsigned_short_5_6_5	number

Defined in

engine/assetmanager.ts:111



m_usageConstant

- Private **m_usageConstant**: Object

Type declaration

Name	Type
dynamic_draw	number
static_draw	number
stream_draw	number

Defined in

engine/assetmanager.ts:75



m_wrapModeConstant

- Private **m_wrapModeConstant**: Object

Type declaration

Name	Type
clamp_to_edge	number
mirrored_repeat	number
repeat	number

Defined in

engine/assetmanager.ts:88

Methods

free

- ▶ **free(asset): void**

Parameters

Name	Type
asset	JAsset

Returns

void

Defined in

engine/assetmanager.ts:167



load

- ▶ **load(asset): void**

Parameters

Name	Type
asset	JAsset

Returns

void

Defined in

engine/assetmanager.ts:162

update

- ▶ `update(asset): void`

Parameters

Name	Type
asset	JAsset

Returns

`void`

Defined in

engine/assetmanager.ts:172

[ore.core / Exports / Color](#)

Class: Color<T>

Type parameters

Name	Type
T	extends <code>Float32Array Uint8Array</code> = <code>Float32Array Uint8Array</code>

Hierarchy



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Constructors

constructor

- `new Color<T>(data)`

Type parameters

Name	Type
T	extends <code>Uint8Array</code> <code>Float32Array</code> = <code>Uint8Array</code> <code>Float32Array</code>

Parameters

Name	Type
data	T

Overrides

[Variant.constructor](#)

Defined in

variant/color.ts:24

Properties

m_data

- **Protected** **m_data**: T

Inherited from

[Variant.m_data](#)

Defined in

variant/variant.ts:43

Accessors

a

- **get** **a()**: number

Returns

number

Defined in

variant/color.ts:44

- **set** **a(v)**: void

Parameters

Name	Type
v	number

Returns

void

Defined in

variant/color.ts:60

b

- `get b(): number`

Returns

`number`

Defined in

variant/color.ts:40

- `set b(v): void`

Parameters

Name	Type
v	<code>number</code>

Returns

`void`

Defined in

variant/color.ts:56



data

- `get data(): T`

Returns

`T`

Inherited from

Variant.data

Defined in

variant/variant.ts:50

- `set data(data): void`

Parameters

Name	Type
data	T

Returns

void

Inherited from

Variant.data

Defined in

variant/variant.ts:54



g

- `get g(): number`

Returns

number

Defined in

variant/color.ts:36

- `set g(v): void`

Parameters

Name	Type
v	number

Returns

void

Defined in

variant/color.ts:52



r

- `get r(): number`

Returns

`number`

Defined in

variant/color.ts:32

- `set r(v): void`

Parameters

Name	Type
v	<code>number</code>

Returns

`void`

Defined in

variant/color.ts:48

Methods

at

- `at(i): number`

Parameters

Name	Type
i	<code>number</code>

Returns

`number`

Defined in

variant/color.ts:28

clone

- ▶ **clone()**: `Color<T>`

Returns

`Color<T>`

Inherited from

[Variant.clone](#)

Defined in

variant/variant.ts:65



compare

- ▶ **compare(`other`)**: `boolean`

Parameters

Name	Type
<code>other</code>	<code>Color<T></code>

Returns

`boolean`

Inherited from

[Variant.compare](#)

Defined in

variant/variant.ts:71



copy

- ▶ **copy(`other`)**: `void`

Parameters

Name	Type

Name	Type
other	Color<T>

Returns

void

Inherited from

[Variant.copy](#)

Defined in

variant/variant.ts:61



fill

- **fill(v): Color<T>**

Parameters

Name	Type
v	number

Returns

Color<T>

Defined in

variant/color.ts:90



set

- **set(value): void**

Parameters

Name	Type
value	number

Returns

void

Defined in

variant/color.ts:64

- ▶ **set**(other): void

Parameters

Name	Type
other	Color<Uint8Array Float32Array>

Returns

void

Defined in

variant/color.ts:65

- ▶ **set**(array): void

Parameters

Name	Type
array	ArrayLike<number>

Returns

void

Defined in

variant/color.ts:66

- ▶ **set**(...values): void

Parameters

Name	Type
...values	(number ArrayLike<number> Color<Uint8Array Float32Array>)[]

Returns

void

Defined in

variant/color.ts:67

[ore.core](#) / [Exports](#) / BoundingBox

Class: BoundingBox

Hierarchy

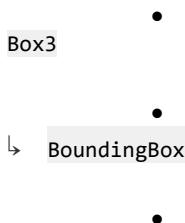


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Constructors

constructor

- `new BoundingBox()`

Overrides

[Box3.constructor](#)

Defined in

variant/box.ts:131

Properties

m_data

- `Protected m_data: Float32Array`

Inherited from

[Box3.m_data](#)

Defined in

variant/variant.ts:43

Accessors

data

- `get data(): T`

Returns

T

Inherited from

[Box3.data](#)

Defined in

variant/variant.ts:50

- `set data(data): void`

Parameters

Name	Type
data	T

Returns

void

Inherited from

Box3.data

Defined in

variant/variant.ts:54



max

- `get max(): T`

Returns

T

Inherited from

Box3.max

Defined in

variant/box.ts:48

- `set max(v): void`

Parameters

Name	Type
v	T

Returns

void

Inherited from

Box3.max

Defined in

variant/box.ts:56



min

- `get min(): T`

Returns

`T`

Inherited from

Box3.min

Defined in

variant/box.ts:33

- `set min(v): void`

Parameters

Name	Type
<code>v</code>	<code>T</code>

Returns

`void`

Inherited from

Box3.min

Defined in

variant/box.ts:41

Methods

add

- ▶ `add(other): void`

Parameters

Name	Type
------	------

Name	Type
other	BoundingBox

Returns

`void`

Defined in

variant/box.ts:187



addPoint

- ▶ **addPoint(point): void**

Parameters

Name	Type
point	Vector3

Returns

`void`

Defined in

variant/box.ts:147

- ▶ **addPoint(x, y, z): void**

Parameters

Name	Type
x	number
y	number
z	number

Returns

`void`

Defined in

variant/box.ts:148

addPoints

- ▶ **addPoints(points): void**

Parameters

Name	Type
points	Float32Array Vector3[]

Returns

void

Defined in

variant/box.ts:170

center

- ▶ **center(): Vector3**

Returns

Vector3

Inherited from

[Box3.center](#)

Defined in

variant/box.ts:84

clone

- ▶ **clone(): BoundingBox**

Returns

BoundingBox

Inherited from

[Box3.clone](#)

Defined in

variant/variant.ts:65



compare

- ▶ **compare**(`other`): boolean

Parameters

Name	Type
<code>other</code>	BoundingBox

Returns

boolean

Inherited from

[Box3.compare](#)

Defined in

variant/variant.ts:71



copy

- ▶ **copy**(`other`): void

Parameters

Name	Type
<code>other</code>	BoundingBox

Returns

void

Inherited from

[Box3.copy](#)

Defined in

variant/variant.ts:61



expand

- **expand(amount): void**

Parameters

Name	Type
amount	number

Returns

void

Inherited from

[Box3.expand](#)

Defined in

variant/box.ts:92



extent

- **extent(): Vector3**

Returns

Vector3

Inherited from

[Box3.extent](#)

Defined in

variant/box.ts:88

isValid

- ▶ **isValid(): boolean**

Returns

`boolean`

Defined in

variant/box.ts:137

set

- ▶ **set(other): void**

Parameters

Name	Type
<code>other</code>	<code>Box<Vector3></code>

Returns

`void`

Inherited from

[Box3.set](#)

Defined in

variant/box.ts:63

- ▶ **set(array): void**

Parameters

Name	Type
<code>array</code>	<code>ArrayLike<number></code>

Returns

`void`

Inherited from

[Box3.set](#)

Defined in

variant/box.ts:64

- ▶ `set(min, max): void`

Parameters

Name	Type
<code>min</code>	<code>Vector3</code>
<code>max</code>	<code>Vector3</code>

Returns

`void`

Inherited from

[Box3.set](#)

Defined in

variant/box.ts:65

- ▶ `set(...values): void`

Parameters

Name	Type
<code>...values</code>	<code>number[]</code>

Returns

`void`

Inherited from

[Box3.set](#)

Defined in

variant/box.ts:66

transform

- ▶ **transform**(`mat`): `BoundingBox`

Parameters

Name	Type
<code>mat</code>	<code>Matrix4</code>

Returns

`BoundingBox`

Defined in

variant/box.ts:192



unset

- ▶ **unset**(): `void`

Returns

`void`

Defined in

variant/box.ts:143

[ore.core](#) / [Exports](#) / [Quaternion](#)

Class: Quaternion

Hierarchy

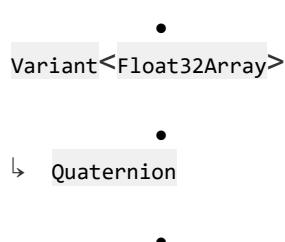


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[Variant.constructor](#)

Defined in

variant/quaternion.ts:25

Properties

m_data

- [Protected m_data: Float32Array](#)

Inherited from

[Variant.m_data](#)

Defined in

variant/variant.ts:43

Accessors

data

- `get data(): T`

Returns

T

Inherited from

Variant.data

Defined in

variant/variant.ts:50

- `set data(data): void`

Parameters

Name	Type
<code>data</code>	T

Returns

void

Inherited from

Variant.data

Defined in

variant/variant.ts:54

W

- `get W(): number`

Returns

number

Defined in

variant/quaternion.ts:41

- set **w**(v): void

Parameters

Name	Type
v	number

Returns

void

Defined in

variant/quaternion.ts:57



x

- get **x**(): number

Returns

number

Defined in

variant/quaternion.ts:29

- set **x**(v): void

Parameters

Name	Type
v	number

Returns

void

Defined in

variant/quaternion.ts:45

y

- `get y(): number`

Returns

`number`

Defined in

variant/quaternion.ts:33

- `set y(v): void`

Parameters

Name	Type
v	<code>number</code>

Returns

`void`

Defined in

variant/quaternion.ts:49

z

- `get z(): number`

Returns

`number`

Defined in

variant/quaternion.ts:37

- `set z(v): void`

Parameters

Name	Type
------	------

Name	Type
v	number

Returns

void

Defined in

variant/quaternion.ts:53

Methods

clone

- ▶ **clone(): Quaternion**

Returns

Quaternion

Inherited from

[Variant.clone](#)

Defined in

variant/variant.ts:65

compare

- ▶ **compare(other): boolean**

Parameters

Name	Type
other	Quaternion

Returns

boolean

Inherited from

[Variant.compare](#)

Defined in

variant/variant.ts:71



conjugate

- ▶ **conjugate()**: Quaternion

Returns

Quaternion

Defined in

variant/quaternion.ts:111



copy

- ▶ **copy(other)**: void

Parameters

Name	Type
other	Quaternion

Returns

void

Inherited from

[Variant.copy](#)

Defined in

variant/variant.ts:61



normalize

- ▶ **normalize()**: Quaternion

Returns

Quaternion

Defined in

variant/quaternion.ts:83



set

- ▶ **set**(other): void

Parameters

Name	Type
other	Quaternion

Returns

void

Defined in

variant/quaternion.ts:61

- ▶ **set**(array): void

Parameters

Name	Type
array	ArrayLike<number>

Returns

void

Defined in

variant/quaternion.ts:62

- ▶ **set**(axis, angle): void

Parameters

Name	Type

Name	Type
axis	Vector3
angle	number

Returns

void

Defined in

variant/quaternion.ts:63

- **set(x, y, z, angle): void**

Parameters

Name	Type
x	number
y	number
z	number
angle	number

Returns

void

Defined in

variant/quaternion.ts:64

setAxisAngle

- **setAxisAngle(axis, angle): Quaternion**

Parameters

Name	Type
axis	Vector3
angle	number

Returns

Quaternion

Defined in

variant/quaternion.ts:97

[ore.core](#) / [Exports](#) / Ray

Class: Ray

Hierarchy

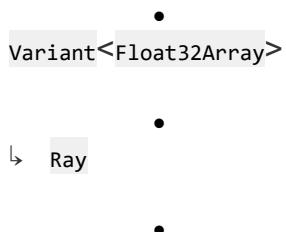


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Constructors

constructor

- [new Ray\(\)](#)

Overrides

[Variant.constructor](#)

Defined in

variant/ray.ts:26

Properties

m_data

- **Protected** **m_data**: `Float32Array`

Inherited from

[Variant.m_data](#)

Defined in

variant/variant.ts:43

Accessors

data

- **get** **data**(): `T`

Returns

`T`

Inherited from

[Variant.data](#)

Defined in

variant/variant.ts:50

- **set** **data**(`data`): `void`

Parameters

Name	Type
<code>data</code>	<code>T</code>

Returns

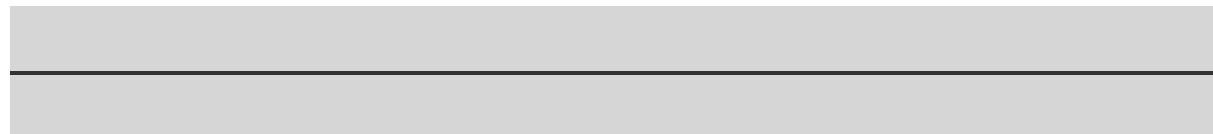
`void`

Inherited from

Variant.data

Defined in

variant/variant.ts:54



direction

- `get direction(): Vector3`

Returns

`Vector3`

Defined in

variant/ray.ts:38

- `set direction(dir): void`

Parameters

Name	Type
<code>dir</code>	<code>Vector3</code>

Returns

`void`

Defined in

variant/ray.ts:42



origin

- `get origin(): Vector3`

Returns

`Vector3`

Defined in

variant/ray.ts:30

- `set origin(origin): void`

Parameters

Name	Type
<code>origin</code>	<code>Vector3</code>

Returns

`void`

Defined in

variant/ray.ts:34

Methods

`clone`

- `clone(): Ray`

Returns

`Ray`

Inherited from

[Variant.clone](#)

Defined in

variant/variant.ts:65



`compare`

- `compare(other): boolean`

Parameters

Name	Type
<code>other</code>	<code>Ray</code>

Returns

`boolean`

Inherited from

[Variant.compare](#)

Defined in

variant/variant.ts:71



copy

- ▶ `copy(other): void`

Parameters

Name	Type
<code>other</code>	<code>Ray</code>

Returns

`void`

Inherited from

[Variant.copy](#)

Defined in

variant/variant.ts:61



getProjectedPoint

- ▶ `getProjectedPoint(point): Vector3`

Parameters

Name	Type
<code>point</code>	<code>Vector3</code>

Returns

`Vector3`

Defined in

variant/ray.ts:69



set

- ▶ **set**(`other`): `void`

Parameters

Name	Type
<code>other</code>	<code>Ray</code>

Returns

`void`

Defined in

variant/ray.ts:46

- ▶ **set**(`origin`, `dir`): `void`

Parameters

Name	Type
<code>origin</code>	<code>Vector3</code>
<code>dir</code>	<code>Vector3</code>

Returns

`void`

Defined in

variant/ray.ts:47



transform

- ▶ **transform**(`mat`): `void`

Parameters

Name	Type
mat	Matrix4

Returns

void

Defined in

variant/ray.ts:59

(二) Geometry

[ore.geometry](#) / Exports

ore.geometry

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Functions

arrow

- ▶ **arrow(nSlices?)**: JGeometry

Parameters

Name	Type	Default value
nSlices	number	12

Returns

JGeometry

Defined in

arrow.ts:22



capsule

- ▶ **capsule(slices?, stacks?, height?): JGeometry**

Parameters

Name	Type	Default value
slices	number	12
stacks	number	12
height	number	2

Returns

JGeometry

Defined in

capsule.ts:22



cone

- ▶ **cone(slices?): JGeometry**

Parameters

Name	Type	Default value
slices	number	12

Returns

JGeometry

Defined in

cone.ts:22



cube

- ▶ **cube**(`min?`, `max?`): `JGeometry`

Parameters

Name	Type
<code>min</code>	<code>Vector3</code>
<code>max</code>	<code>Vector3</code>

Returns

`JGeometry`

Defined in

cube.ts:22



cylinder

- ▶ **cylinder**(`slices?`): `JGeometry`

Parameters

Name	Type	Default value
<code>slices</code>	<code>number</code>	<code>12</code>

Returns

`JGeometry`

Defined in

cylinder.ts:22



disk

- **disk(slices?)**: JGeometry

Parameters

Name	Type	Default value
slices	number	12

Returns

JGeometry

Defined in

disk.ts:22



pipe

- **pipe(slices?)**: JGeometry

Parameters

Name	Type	Default value
slices	number	12

Returns

JGeometry

Defined in

pipe.ts:22



platonic

- **platonic(faces)**: JGeometry

Parameters

Name	Type
faces	4 6 8 12 20

Returns

JGeometry

Defined in

platonic.ts:22



quad

- ▶ **quad(v0, v1, v2, v3): JGeometry**

Parameters

Name	Type
v0	Vector3
v1	Vector3
v2	Vector3
v3	Vector3

Returns

JGeometry

Defined in

quad.ts:22



sphere

- ▶ **sphere(slices?, stacks?, radius?): JGeometry**

Parameters

Name	Type	Default value
slices	number	12
stacks	number	12
radius	number	1

Returns

JGeometry

Defined in

sphere.ts:22



torus

- ▶ **torus**(`radius?`, `tubeRadius?`, `sides?`, `rings?`): JGeometry

Parameters

Name	Type	Default value
<code>radius</code>	number	50
<code>tubeRadius</code>	number	10
<code>sides</code>	number	20
<code>rings</code>	number	30

Returns

JGeometry

Defined in

torus.ts:22



triangle

- ▶ **triangle**(`v0`, `v1`, `v2`): JGeometry

Parameters

Name	Type
<code>v0</code>	Vector3
<code>v1</code>	Vector3
<code>v2</code>	Vector3

Returns

JGeometry

Defined in

triangle.ts:22

(三) Color

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ore.color

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Functions

fromHex

- ▶ **fromHex(hex): Color3**

Parameters

Name	Type
hex	string

Returns

Color3

Defined in

convert/convert.ts:219



fromHsl

- ▶ **fromHsl(hsl): Color3**

Parameters

Name	Type
hsl	Hsl

Returns

Color3

Defined in

convert/convert.ts:179



fromHsv

- ▶ **fromHsv(hsv): Color3**

Parameters

Name	Type
hsv	Hsv

Returns

Color3

Defined in

convert/convert.ts:140



fromRgb

- ▶ **fromRgb**(`rgb`): `Color3`

Parameters

Name	Type
<code>rgb</code>	<code>Rgb</code>

Returns

`Color3`

Defined in

convert/convert.ts:135



fromYuv

- ▶ **fromYuv**(`yuv`): `Color3`

Parameters

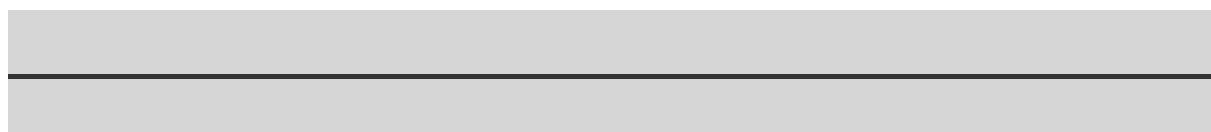
Name	Type
<code>yuv</code>	<code>Yuv</code>

Returns

`Color3`

Defined in

convert/convert.ts:211



scheme2ImageData

- ▶ **scheme2ImageData**(`scheme?`, `nLevels?`): `ImageData`

Parameters

Name	Type	Default value
scheme	ColorScheme	ColorScheme.rainbow
nLevels	number	256

Returns

ImageData

Defined in

scheme/scheme.ts:282



toHex

- ▶ **toHex(color): string**

Parameters

Name	Type
color	Color3 Color4

Returns

string

Defined in

convert/convert.ts:125



toHsl

- ▶ **toHsl(color): Hsl**

Parameters

Name	Type
color	Color3 Color4

Returns

Hsl

Defined in

convert/convert.ts:88



toHsv

- ▶ **toHsv(color): Hsv**

Parameters

Name	Type
color	Color3 Color4

Returns

Hsv

Defined in

convert/convert.ts:54



toRgb

- ▶ **toRgb(color): Rgb**

Parameters

Name	Type
color	Color3 Color4

Returns

Rgb

Defined in

convert/convert.ts:46



toYuv

- ▶ **toYuv(color): Yuv**

Parameters

Name	Type
color	Color3 Color4

Returns

Yuv

Defined in

convert/convert.ts:117