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# MovieTrackingCamera(bpy\_struct)

base class — `bpy_struct`

**class** `bpy.types.MovieTrackingCamera(bpy_struct)`

Match-moving camera data for tracking

## **brown\_k1**

First coefficient of fourth order Brown-Conrady radial distortion

### **TYPE:**

float in `[-inf, inf]`, default 0.0

## **brown\_k2**

Second coefficient of fourth order Brown-Conrady radial distortion

### **TYPE:**

float in `[-inf, inf]`, default 0.0

## **brown\_k3**

Third coefficient of fourth order Brown-Conrady radial distortion

### **TYPE:**

float in `[-inf, inf]`, default 0.0

## **brown\_k4**

Fourth coefficient of fourth order Brown-Conrady radial distortion

### **TYPE:**

float in `[-inf, inf]`, default 0.0

## **brown\_p1**

First coefficient of second order Brown-Conrady tangential distortion

### **TYPE:**

float in `[-inf, inf]`, default 0.0

## **brown\_p2**

Second coefficient of second order Brown-Conrady tangential distortion

### **TYPE:**

float in `[-inf, inf]`, default 0.0

## **distortion\_model**

Distortion model used for camera lenses

- `POLYNOMIAL` Polynomial – Radial distortion model which fits common cameras.
- `DIVISION` Divisions – Division distortion model which better represents wide-angle cameras.
- `NUKE` Nuke – Nuke distortion model.
- `BROWN` Brown – Brown-Conrady distortion model.

### **TYPE:**

enum in `['POLYNOMIAL', 'DIVISION', 'NUKE', 'BROWN']`, default `'POLYNOMIAL'`

## **division\_k1**

First coefficient of second order division distortion

**TYPE:**

float in  $[-\infty, \infty]$ , default 0.0

**division\_k2**

Second coefficient of second order division distortion

**TYPE:**

float in  $[-\infty, \infty]$ , default 0.0

**focal\_length**

Camera's focal length

**TYPE:**

float in  $[0.0001, \infty]$ , default 0.0

**focal\_length\_pixels**

Camera's focal length

**TYPE:**

float in  $[0, \infty]$ , default 0.0

**k1**

First coefficient of third order polynomial radial distortion

**TYPE:**

float in  $[-\infty, \infty]$ , default 0.0

**k2**

Second coefficient of third order polynomial radial distortion

**TYPE:**

float in  $[-\infty, \infty]$ , default 0.0

**k3**

Third coefficient of third order polynomial radial distortion

**TYPE:**

float in  $[-\infty, \infty]$ , default 0.0

**nuke\_k1**

First coefficient of second order Nuke distortion

**TYPE:**

float in  $[-\infty, \infty]$ , default 0.0

**nuke\_k2**

Second coefficient of second order Nuke distortion

**TYPE:**

float in  $[-\infty, \infty]$ , default 0.0

**pixel\_aspect**

Pixel aspect ratio

**TYPE:**

float in  $[0.1, \infty]$ , default 1.0

### **principal\_point**

Optical center of lens

#### **TYPE:**

float array of 2 items in  $[-1, 1]$ , default (0.0, 0.0)

### **principal\_point\_pixels**

Optical center of lens in pixels

#### **TYPE:**

float array of 2 items in  $[-\text{inf}, \text{inf}]$ , default (0.0, 0.0)

### **sensor\_width**

Width of CCD sensor in millimeters

#### **TYPE:**

float in  $[0, 500]$ , default 0.0

### **units**

Units used for camera focal length

- `PIXELS px` – Use pixels for units of focal length.
- `MILLIMETERS mm` – Use millimeters for units of focal length.

#### **TYPE:**

enum in  $['PIXELS', 'MILLIMETERS']$ , default 'PIXELS'

### **classmethod bl\_ma\_get\_subclass(id, default=None)**

#### **PARAMETERS:**

**id** (*str*) – The RNA type identifier.

#### **RETURNS:**

The RNA type or default when not found.

#### **RETURN TYPE:**

`bpy.types.Struct` subclass

### **classmethod bl\_ma\_get\_subclass\_py(id, default=None)**

#### **PARAMETERS:**

**id** (*str*) – The RNA type identifier.

#### **RETURNS:**

The class or default when not found.

#### **RETURN TYPE:**

type

## **Inherited Properties**

- `bpy_struct.id_data`

## **Inherited Functions**

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`

- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`

## References

- `MovieTracking.camera`

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