# OSVP Clip documentation

## Introduction

The OSVP Clip (clip) is a collection of metadata parameters sampled over a specified duration. Each parameter is either:

- static: the parameter has at constant value over the duration of the clip
- dynamic: the parameter is sampled at regular intervals over the duration of the clip

Each parameter is identified by a unique name. It also has a general description as well as a specific set of constraints.

## Parameters

### `activeSensorPhysicalDimensions`

#### Description

Height and width of the active area of the camera sensor

#### Units

micron

#### Sampling

Static

#### Constraints

The height and width shall be each be an integer in the range [0..2,147,483,647].

### `anamorphicSqueeze`

#### Description

Nominal ratio of height to width of the image of an axis-aligned square captured by the camera sensor. It can be used to de-squeeze images but is not however an exact number over the entire captured area due to a lens' intrinsic analog nature.

#### Units

0.01 unit

#### Sampling

Static

#### Constraints

The parameter shall be a integer in the range (0..2,147,483,647].

### `cameraFirmwareVersion`

#### Description

Version identifier for the firmware of the camera

#### Units

n/a

#### Sampling

Static

#### Constraints

The parameter shall be a Unicode string betwee 0 and 1023 codepoints.

### `cameraMake`

#### Description

Make of the camera

#### Units

n/a

#### Sampling

Static

#### Constraints

The parameter shall be a Unicode string betwee 0 and 1023 codepoints.

### `cameraModel`

#### Description

Model of the camera

#### Units

n/a

#### Sampling

Static

#### Constraints

The parameter shall be a Unicode string betwee 0 and 1023 codepoints.

### `cameraSerialNumber`

#### Description

Unique identifier of the camera

#### Units

n/a

#### Sampling

Static

#### Constraints

The parameter shall be a Unicode string betwee 0 and 1023 codepoints.

### `captureRate`

#### Description

Capture frame frate of the camera

#### Units

hertz

#### Sampling

Static

#### Constraints

The parameter shall be a rational number whose numerator and denominator are in the range (0..2,147,483,647].

### `duration`

#### Description

Duration of the clip

#### Units

second

**Sampling**

Static

**Constraints**

The parameter shall be a rational number whose numerator and denominator are in the range (0..2,147,483,647].

### `entrancePupilPosition`

**Description**

Position of the entrance pupil of the lens

**Units**

millimeter

**Sampling**

Regular

**Constraints**

The parameter shall be a rational number whose numerator and denominator are in the range (0..2,147,483,647].

### `fNumber`

**Description**

The linear f-number of the lens, equal to the focal length divided by the diameter of the entrance pupil.

**Units**

0.001 unit

**Sampling**

Regular

**Constraints**

The parameter shall be a integer in the range (0..2,147,483,647].

### `fdlLink`

**Description**

Unique identifier of the FDL used by the camera.

#### Units

n/a

#### Sampling

Static

#### Constraints

The parameter shall be a UUID URN as specified in IETF RFC 4122. Onlyu lowercase characters shall be used. Example: `urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6bf6`

### `focalLength`

#### Description

Focal length of the lens

#### Units

millimeter

#### Sampling

Regular

#### Constraints

The parameter shall be a integer in the range (0..2,147,483,647].

### `focalPosition`

#### Description

Focus distance/position of the lens

#### Units

millimeter

#### Sampling

Regular

#### Constraints

The parameter shall be a integer in the range (0..2,147,483,647].

### `isoSpeed`

#### Description

Arithmetic ISO scale as defined in ISO 12232

#### Units

unit

#### Sampling

Static

#### Constraints

The parameter shall be a integer in the range (0..2,147,483,647].

### `lensFirmwareVersion`

#### Description

Version identifier for the firmware of the lens

#### Units

n/a

#### Sampling

Static

#### Constraints

The parameter shall be a Unicode string betwee 0 and 1023 codepoints.

### `lensMake`

#### Description

Make of the lens

#### Units

n/a

#### Sampling

Static

#### Constraints

The parameter shall be a Unicode string betwee 0 and 1023 codepoints.

### `lensModel`

#### Description

Model of the lens

#### Units

n/a

#### Sampling

Static

#### Constraints

The parameter shall be a Unicode string betwee 0 and 1023 codepoints.

### `lensSerialNumber`

#### Description

Unique identifier of the lens

#### Units

n/a

#### Sampling

Static

#### Constraints

The parameter shall be a Unicode string betwee 0 and 1023 codepoints.

### `shutterAngle`

#### Description

Shutter speed as a fraction of the capture frame rate. The shutter speed (in units of 1/s) is equal to the value of the parameter divided by 360 times the capture frame rate.

#### Units

degrees (angular)

#### Sampling

Static

#### Constraints

The parameter shall be an integer in the range (0..360000].

`tNumber`

### Description

The linear t-number of the lens, equal to the F-number of the lens divided by the square root of the transmittance of the lens.

### Units

0.001 unit

### Sampling

Regular

### Constraints

The parameter shall be a integer in the range (0..2,147,483,647].

## JSON Schema


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"$schema": "https://json-schema.org/draft/2020-12/schema",
"type": "object",
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"anamorphicSqueeze": {
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```

```
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"fdlLink": {
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"focalPosition": {
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  "items": {
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    "minimum": 1,
    "maximum": 2147483647
  }
```

```
  },
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    }
  }
}
```

## Reader coverage

The following table indicates the camera parameters supported by each of the readers.

| Reader | activeSensorPhysicalDimensions | anamorphicSqueeze | cameraFirmwareVersion | |
|---|---|---|---|---|
| RED | | | | |
| ARRI | | | | |
| Venice | | | | |
| Canon | | | | |