V4L2_META_FMT_RK_ISP1_PARAMS ('rk1p'), V4L2_META_FMT_RK_ISP1_STAT_3A ('rk1s')

Configuration parameters

The configuration parameters are passed to the :ref:`rkisp1_params <rkisp1_params>` metadata output video node, using the :c:type:`v4l2_meta_format` interface. The buffer contains a single instance of the C structure :c:type:`rkisp1_params_cfg` defined in `rkisp1-config.h`. So the structure can be obtained from the buffer by:

> **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\(linux-master)(Documentation)(userspace-api)(media)(v4l)pixfmt-meta-rkisp1.rst, line 14); *backlink*`
>
> Unknown interpreted text role "ref".

> **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\(linux-master)(Documentation)(userspace-api)(media)(v4l)pixfmt-meta-rkisp1.rst, line 14); *backlink*`
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> Unknown interpreted text role "c:type".

> **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\(linux-master)(Documentation)(userspace-api)(media)(v4l)pixfmt-meta-rkisp1.rst, line 14); *backlink*`
>
> Unknown interpreted text role "c:type".

```
struct rkisp1_params_cfg *params = (struct rkisp1_params_cfg*) buffer;
```

3A and histogram statistics

The ISP1 device collects different statistics over an input Bayer frame. Those statistics are obtained from the :ref:`rkisp1_stats <rkisp1_stats>` metadata capture video node, using the :c:type:`v4l2_meta_format` interface. The buffer contains a single instance of the C structure :c:type:`rkisp1_stat_buffer` defined in `rkisp1-config.h`. So the structure can be obtained from the buffer by:

> **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\(linux-master)(Documentation)(userspace-api)(media)(v4l)pixfmt-meta-rkisp1.rst, line 29); *backlink*`
>
> Unknown interpreted text role "ref".

> **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\(linux-master)(Documentation)(userspace-api)(media)(v4l)pixfmt-meta-rkisp1.rst, line 29); *backlink*`
>
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> **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\(linux-master)(Documentation)(userspace-api)(media)(v4l)pixfmt-meta-rkisp1.rst, line 29); *backlink*`
>
> Unknown interpreted text role "c:type".

```
struct rkisp1_stat_buffer *stats = (struct rkisp1_stat_buffer*) buffer;
```

The statistics collected are Exposure, AWB (Auto-white balance), Histogram and AF (Auto-focus). See :c:type:`rkisp1_stat_buffer` for details of the statistics.

> **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\(linux-master)(Documentation)(userspace-api)(media)(v4l)pixfmt-meta-rkisp1.rst, line 40); *backlink*`

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The 3A statistics and configuration parameters described here are usually consumed and produced by dedicated user space libraries that comprise the important tuning tools using software control loop.

rkisp1 uAPI data types

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\(linux-master)(Documentation)(userspace-api)(media)(v4l)pixfmt-meta-rkisp1.rst`, **line 50**)

Unknown directive type "kernel-doc".

```
.. kernel-doc:: include/uapi/linux/rkisp1-config.h
```