



Openness Framework

Can we tell-apart some bytes from others?



Ricardo Ribalda / 12th May 2025

Pre-LPC 2024

```
struct isp_params_cfg {  
    __u32 en_update;  
    isp_configA configA;  
    isp_configB configB;  
} __packed;
```



Driver



u8 data[1024];

LPC 2024

No canonical ISP



RAW-Adapter: Adapting Pre-trained Visual Model to Camera RAW Images - Scientific Figure on ResearchGate.
Available from:
https://www.researchgate.net/figure/a-An-overview-of-basic-image-signal-processor-ISP-pipeline-b-ISP-and-current_fig1_383460940 [accessed 12 May 2025]

LPC 2024

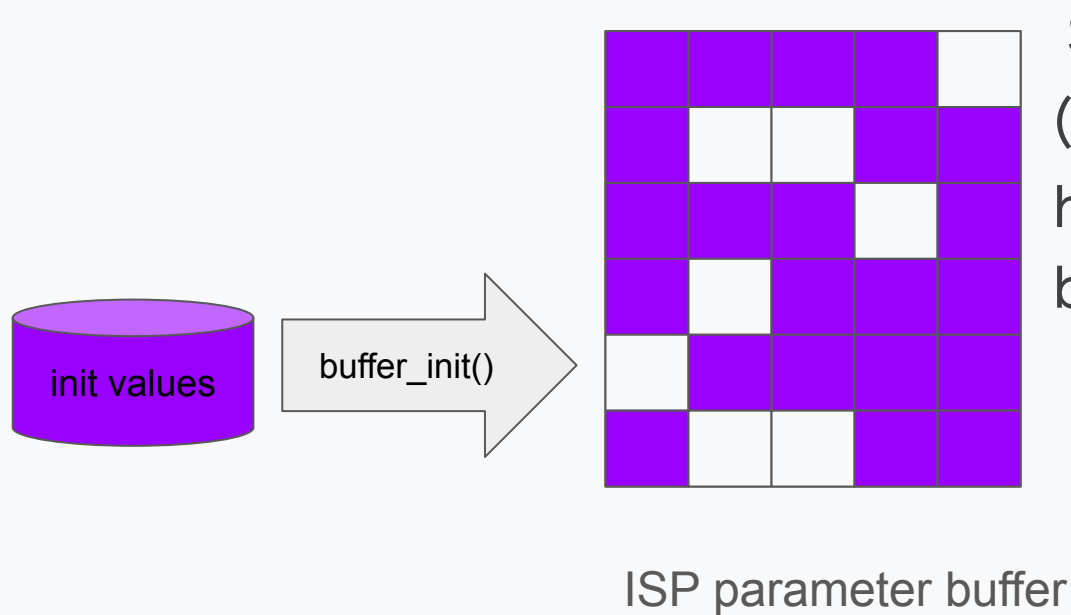
More permissive rules for data sent to the hardware

```
struct isp_params_cfg {  
    isp_raw_config configA;  
    isp_raw_configB configB;  
} __packed;
```



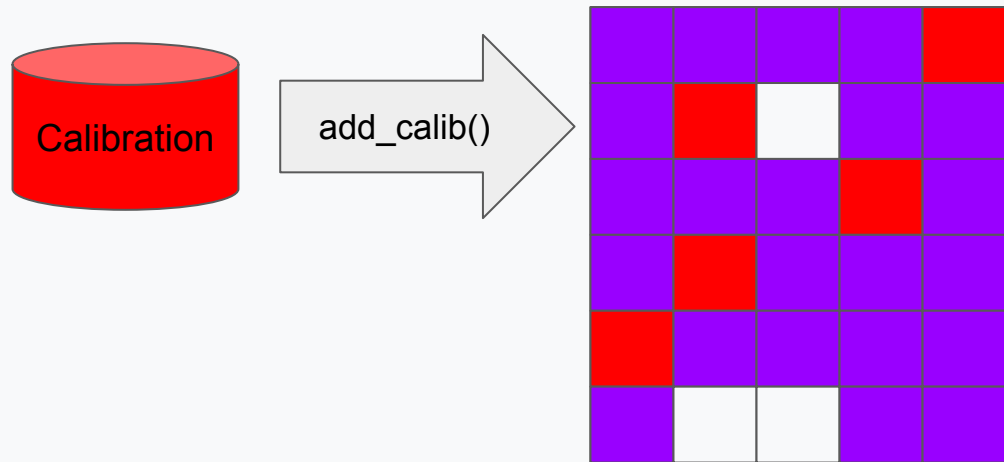
```
struct isp_params_cfg {  
    isp_raw_config configA;  
    isp_raw_configB configB;  
} __packed;
```

Constant values (AKA init values)



Same rules as firmware files
(vendor distribute it and share
how to write the value into the
buffer)

Calibration data



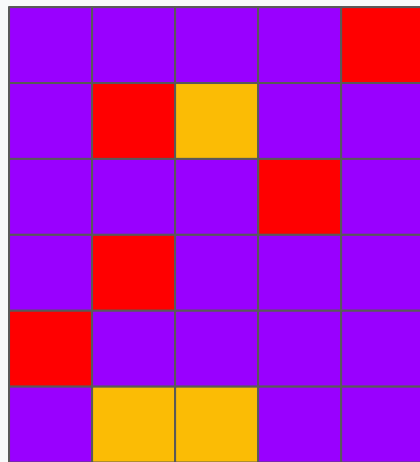
- Describe how to dump the calibration file into the buffer.

- If vendor support other OSs (as Windows), the calibration file needs to be importable to Linux

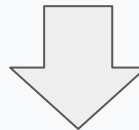
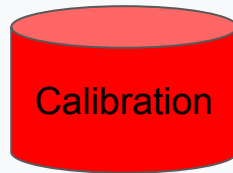
ISP parameter buffer

Algorithmic data

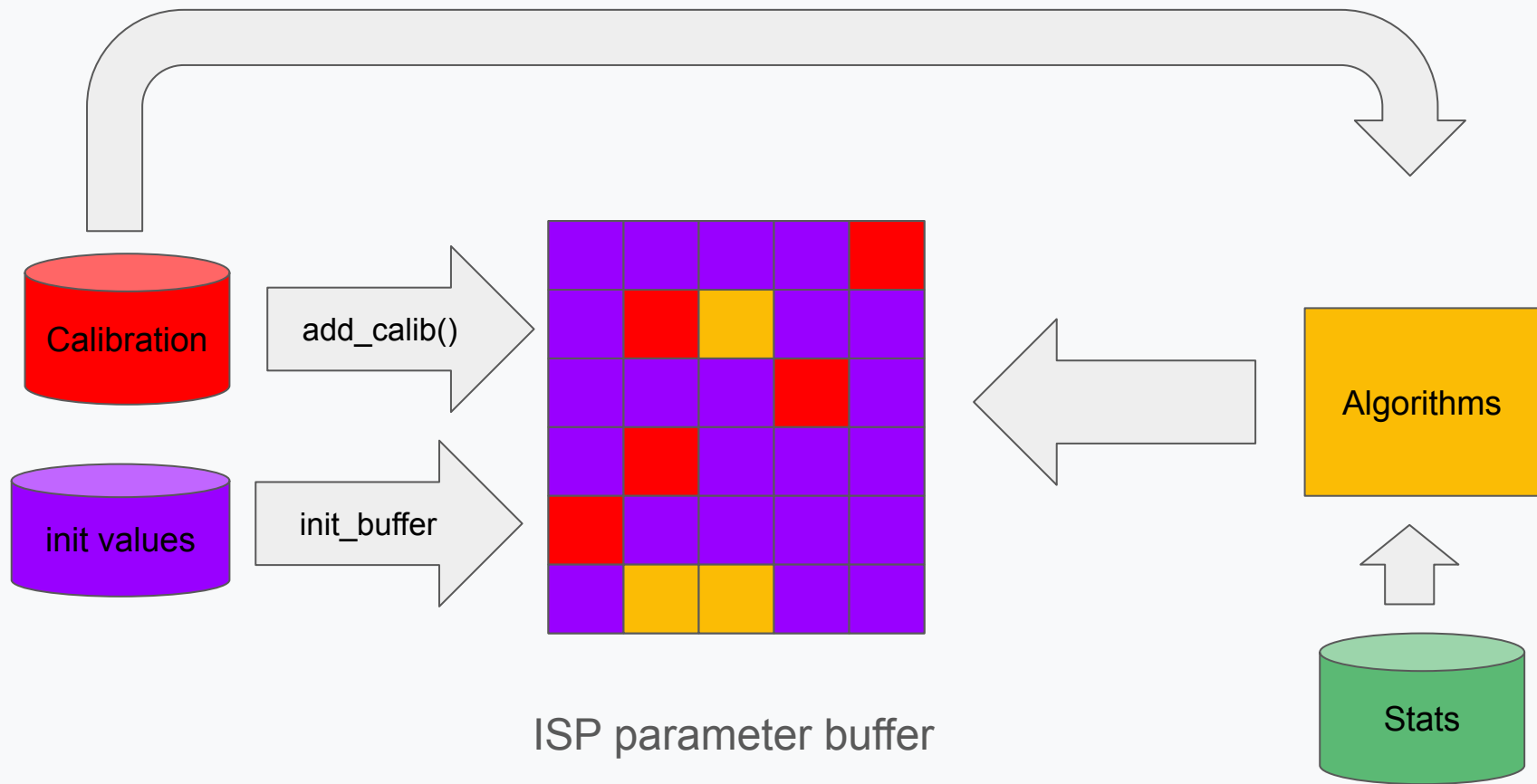
- Input and output to the algos is FULLY documented.



ISP parameter buffer



Overview





New toys for media-ci

Use reviewers time to review functionality not style



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Today

Alphabetical order please.
of includes as they can be

<https://lore.kernel.org/linux-media/20221101-easycam-v3->

Make sure the vid:pids are alphabetically ordered.

Regards!

The quirks are ordered by vid:pid. Please move this element to its
correct position

keep-sorted

- Annotate code with order expectations.
- Check during CI (or locally)
- Language agnostic

[Link](#)

```
diff --git a/drivers/media/usb/uvc/uvc_driver.c  
b/drivers/media/usb/uvc/uvc_driver.c
```

Proprietary + Confidential

```
@@ -2500,6 +2500,8 @@ static const struct uvc_device_info  
uvc_quirk_force_y8 = {
```

```
    * Sort these by vendor/product ID.
```

```
    */
```

```
static const struct usb_device_id uvc_ids[] = {
```

```
+ /* keep-sorted start block=yes */
```

```
/* Quanta ACER HD User Facing */
```

```
{
```

```
    .idVendor          = 0x0408,
```

```
@@ -3352,6 +3354,8 @@ static const struct usb_device_id  
uvc_ids[] = {
```

```
    .match_flags        = USB_DEVICE_ID_MATCH_DEVICE
```

```
    | USB_DEVICE_ID_MATCH_INT_INFO,
```

```
},
```

```
+ /* keep-sorted end */
```

```
/* Generic USB Video Class */
```