



## Alvium 1800 U

Alvium 1800 U-321

Alvium 1800 U-321 innovative USB camera with Sony IMX900 CMOS global shutter sensor provides industrial performance for cost effective embedded and machine vision applications.

### General

|                |                   |
|----------------|-------------------|
| Model          | Alvium 1800 U-321 |
| Product series | Alvium 1800 U     |
| Status         | Available         |

### Sensor

|                                |                                   |
|--------------------------------|-----------------------------------|
| Sensor type                    | Area scan                         |
| Chroma                         | Color, Mono                       |
| Spectrum                       | Visible                           |
| Spectral range                 | 300 nm to 1100 nm                 |
| Resolution                     | 2,064 × 1,552 (3.20 MP)           |
| Sensor model                   | Sony IMX900                       |
| Sensor architecture (material) | cmos                              |
| Shutter type(s)                | Global shutter (GS)               |
| Sensor size                    | 4.6 × 3.5 mm (5.8 mm, Type 1/3.1) |
| Pixel size                     | 2.25 µm × 2.25 µm                 |

### Pixel formats

|                     |                                                      |
|---------------------|------------------------------------------------------|
| Sensor bit depth    | 10-bit, 12-bit, 8-bit                                |
| YUV pixel formats   | YCbCr411_8_CbYYCrYY, YCbCr422_8_CbYCrY, YCbCr8_CbYCr |
| RGB pixel formats   | BGR8, RGB8 (default)                                 |
| Bayer pixel formats | BayerRG12                                            |

### Timing and gain

|                 |         |
|-----------------|---------|
| Max. frame rate | 111 fps |
|-----------------|---------|

## Timing and gain

|               |                   |
|---------------|-------------------|
| Exposure time | 7 $\mu$ s to 10 s |
| Gain          | 0.0 dB to 48.0 dB |

## I/Os and power

|                    |                                                          |
|--------------------|----------------------------------------------------------|
| Non-isolated lines | 4 programmable GPIOs                                     |
| Power supply       | Power over USB 3.1 Gen 1   External power 5.0 V          |
| Power consumption  | USB power: 2.0 W (typical)   Ext. power: 2.0 W (typical) |

## Operating conditions

|                                 |                             |
|---------------------------------|-----------------------------|
| Operating temperature (housing) | -20 °C to 65 °C ((housing)) |
|---------------------------------|-----------------------------|

## Mechanical properties

|                                   |                            |
|-----------------------------------|----------------------------|
| Body dimensions (L x W x H in mm) | 38 × 29 × 29               |
| Lens mount(s)                     | C-Mount, CS-Mount, S-Mount |
| Weight                            | 65 g                       |

## On-board memory and FPGA

|                             |            |
|-----------------------------|------------|
| Image buffer (RAM)          | 256 KByte  |
| Non-volatile memory (Flash) | 1024 KByte |

## Interfaces

|                   |             |
|-------------------|-------------|
| Digital interface | usb3.0      |
| Vision standard   | USB3 Vision |

## Technical Drawing

