



# Alvium FP3

## Alvium FP3-501 NIR

Alvium FP3-501 NIR innovative FPD-Link III camera with ON Semi AR0522 CMOS rolling shutter sensor provides industrial performance for cost effective embedded applications.

### General

|                |                    |
|----------------|--------------------|
| Model          | Alvium FP3-501 NIR |
| Product series | Alvium FP3         |
| Status         | Available          |

### Sensor

|                                |                                   |
|--------------------------------|-----------------------------------|
| Sensor type                    | Area scan                         |
| Chroma                         | Color, Mono                       |
| Spectrum                       | Visible NIR                       |
| Spectral range                 | 300 nm to 1100 nm                 |
| Resolution                     | 2,592 × 1,944 (5.00 MP)           |
| Sensor model                   | ON Semi AR0522                    |
| Sensor architecture (material) | cmos                              |
| Shutter type(s)                | Rolling shutter (RS)              |
| Sensor size                    | 5.7 × 4.3 mm (7.1 mm, Type 1/2.5) |
| Pixel size                     | 2.20 µm × 2.20 µm                 |

### Pixel formats

|                          |                                    |
|--------------------------|------------------------------------|
| Sensor bit depth         | 10-bit                             |
| Monochrome pixel formats | GREY, RAW10, RAW12, RAW8, Y10, Y12 |
| YUV pixel formats        | UYVY, YUV422 8-bit                 |
| RGB pixel formats        | RGB3, RGB888 (default)             |

### Imaging performance

|                             |      |
|-----------------------------|------|
| Quantum efficiency @ 529 nm | 84 % |
|-----------------------------|------|

## Timing and gain

|                 |                                                   |
|-----------------|---------------------------------------------------|
| Max. frame rate | Mainly depends on hardware and register settings. |
| Exposure time   | 8 $\mu$ s to 480.00 ms                            |
| Gain            | 0.0 dB to 24.1 dB                                 |

## I/Os and power

|                    |                                                                |
|--------------------|----------------------------------------------------------------|
| Non-isolated lines | 2 programmable GPIOs                                           |
| I/O connector      | Coax, STP                                                      |
| Power supply       | 5 VDC over MIPI CSI-2                                          |
| Power consumption  | Value for the integrated serializer adds to CSI-2 model value. |

## Operating conditions

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

## Mechanical properties

|                                   |                            |
|-----------------------------------|----------------------------|
| Body dimensions (L x W x H in mm) | 41 × 29 × 29               |
| Lens mount(s)                     | C-Mount, CS-Mount, S-Mount |
| Weight                            | 70 g                       |

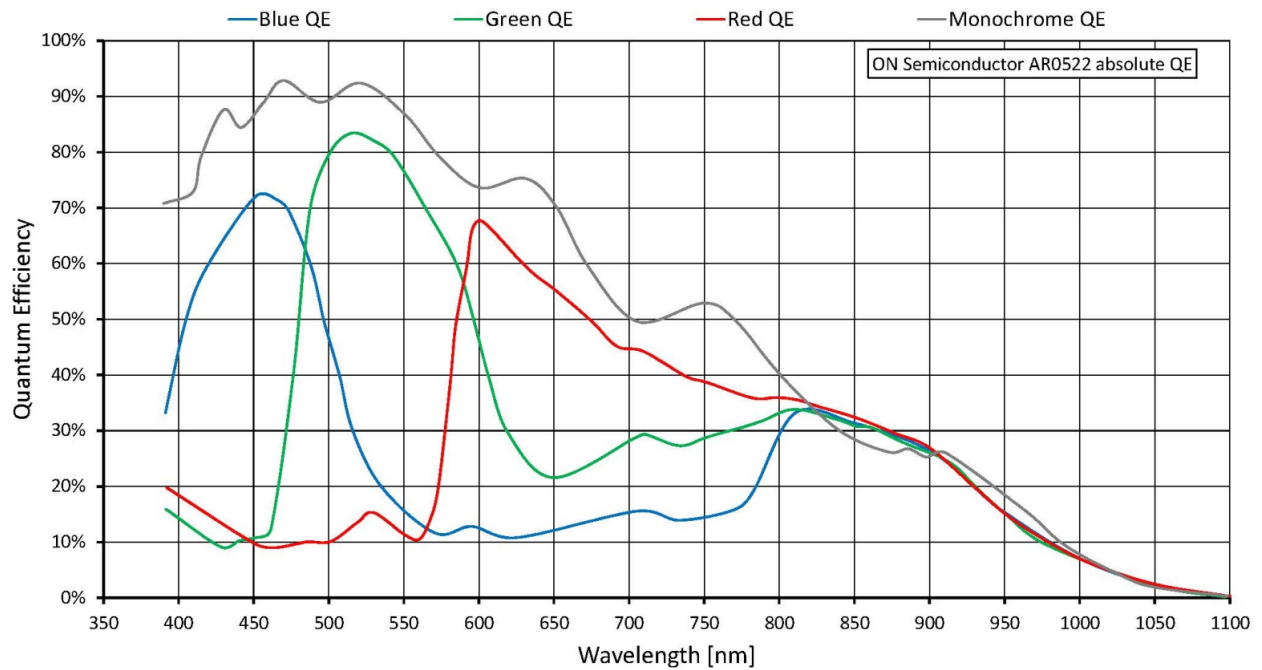
## On-board memory and FPGA

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

## Interfaces

|                   |                                                  |
|-------------------|--------------------------------------------------|
| Digital interface | FPD-Link III, based on MIPI CSI-2, up to 4 lanes |
|-------------------|--------------------------------------------------|

## Quantum Efficiency



## Technical Drawing

