

VAX-50C.I.NVX

5 Megapixel, Color, NVIDIA Jetson Xavier NX

Article number: 11702239

Overview

- Sony IMX250
- 2448 x 2048 px, 2/3" CMOS, 77 fps
- 6-Core NVIDIA Carmel ARM
- 384 Core NVIDIA Volta GPU
- 8 GB 128-bit LPDDR4x
- Gigabit Ethernet, USB 3.0, RS232



Technical data

Processor data

| | |
|-------------------------|-------------------------|
| Processor configuration | NVIDIA Jetson Xavier NX |
| GPU data | 384 Core Volta GPU |
| CPU data | 6-Core Carmel ARM |
| AI data | 2 x NVDLA Engines |
| Memory RAM | 8 GB LPDDR4x |
| Memory Flash | 16 GB eMMC 5.1 |

Sensor information

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|---------------|--------------------|
| Sensor | Sony IMX250 Gen2 |
| Mono/Color | Color |
| Sensor type | 2/3" CMOS |
| Shutter type | Global shutter |
| Resolution | 2448 × 2048 px |
| Pixel size | 3.45 × 3.45 μm |
| Exposure time | 0.001 ... 60000 ms |

Data quality (EMVA 1288 typical)

| | |
|-----------------------|---|
| Dark noise | 2.08 e- |
| Saturation capacity | 9360 e- |
| Dynamic range | 70.6 dB |
| Signal-to-noise ratio | 39.7 dB |
| Quantum efficiency | 45.9 % @ 465 nm 58.2 % @ 535 nm 53.8 % @ 630 nm |

Acquisition formats

| | |
|---|---|
| Image formats, interface frame rate max. | Full Frame, 2448 × 2048 px, max. 73 fps Binning 2×2, 1224 × 1024 px, max. 76 fps Binning 2×1, 1224 × 2048 px, max. 76 fps Binning 1×2, 2448 × 1024 px, max. 76 fps |
| Image formats, acquisition frame rate max. (Burst Mode) | Full Frame, 2448 × 2048 px, max. 77 fps |

Acquisition formats

| | |
|---------------|--|
| Pixel formats | BayerRG8 BayerRG10 BayerRG12 BayerRG12 Packed Mono8 Mono10 Mono12 Mono12 Packed RGB8 BGR8 |
|---------------|--|

Image preprocessing

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|-----------------|---|
| Analog controls | Gain (0 ... 48 dB) Offset (0 ... 255 LSB 12 Bit) |
|-----------------|---|

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|--------------|---------------------------------|
| Color models | Mono Raw Bayer RGB BGR |
|--------------|---------------------------------|

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|------------------|---|
| Color processing | Integrated color processor for high quality color calculation |
|------------------|---|

Camera features

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|----------------|---|
| Auto Functions | Exposure Auto Gain Auto White Balance Auto Color Transformation Auto |
|----------------|---|

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|----------------------|--|
| Image Pre-processing | Image Flipping (X/Y) Color Processing (RGB, BGR, Mono) Color Enhancement (with optimized ColorTransformationMatrix) LUT / Gamma |
|----------------------|--|

| | |
|-------------------------|---|
| Acquisition / Interface | Burst Mode Adjustable Framerate Short Exposure Time Enable Device Link Throughput Limit Internal Image Buffer |
|-------------------------|---|

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Camera features

| | |
|-------------------------|--|
| Synchronization | free running trigger |
| Trigger sources | Hardware Software ActionCommand |
| Trigger delay | 0 ... 2 sec, tracking and buffering of up to 256 trigger signals |
| Process Synchronization | Events Timer Trigger Delay Debouncer Counter Sequencer Trigger via Action CMD (GigE) Additional Output Modes (e.g. Trigger Ready) PWM (PWM Duration / PWM Duty Cycle) 4 power outputs with up to 120 W (max. 48 V / 2.5 A) Selectable Output format (e.g. Tri State, Push Pull) Chunk data inside transferred image Encoder support via Counter End trigger source |
| Additional Functions | User Set Integrated temperature sensor Readable additional information (e.g. sensor information) Save Custom Data |
| Internal image buffer | 445 MB 31 images (Trigger Mode) 1 image (Free Running Mode) |

Interfaces and connectors

| | |
|----------------|--------------------------|
| Data interface | GigE USB 3.0 RS232 |
|----------------|--------------------------|

Interfaces and connectors

| | |
|-------------------|--|
| Process interface | M12 / 12 pins a-coded (SACC-CI-M12MS-12CON-L180) |
| Power supply | via M12/12 pins a-coded |

Mechanical data

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|------------|-------------------------|
| Lens mount | C-mount |
| Width | 70 mm |
| Height | 70 mm |
| Depth | 120 mm |
| Weight | ≤ 650 g |
| Material | aluminum, hard-anodized |

Electrical data

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|-------------------|-------------------------|
| Power consumption | approx. 17,9 W @ 73 fps |
|-------------------|-------------------------|

Environmental conditions

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|-----------------------|--|
| Operating temperature | 0 ... +60 ° @ T = measurement point |
| Humidity | 10 ... 90 % (non-condensing) |
| Protection class | IP 65 (with mounted tube and cable) IP 67 (with mounted tube and cable) |

Digital I/Os

| | |
|---------------------|---|
| Lines | 1 input line 4 power output lines with pulse width modulation (PWM) (max. 48 V / max. 2,5 A) |
| Output line sources | Off Exposure Active Timer1 Readout Active User0 User1 User2 TriggerReady |

Conformity

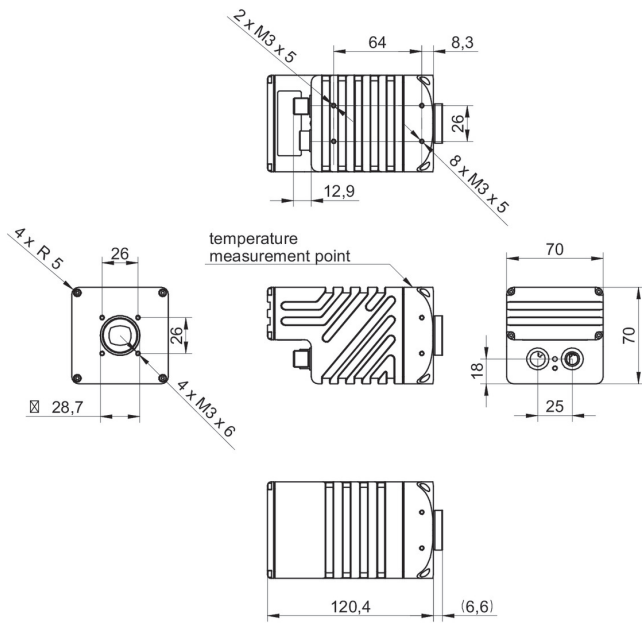
| | |
|------------|------------|
| Conformity | CE RoHS |
|------------|------------|

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Dimension drawing



Principle

