



# Tauri3 IMX 252 SDI

Full HD CMOS Camera Guaranteed Compatibility with 3G SDI output and adjustable output formats

|                                 |   |
|---------------------------------|---|
| Sensor                          |   |
| Sensor                          | IMX252 (Sony)   |
| Type                            | CMOS  |
| Shutter                         | global  |
| Color                           | RGB   |
| Optical format                  | 1/2.35" (HD-SDI output); 1/3.2" (PAL/NTSC output)   |
| Number of pixels (H x V)        | 1920 x 1080 pixels (2.1 MP)   |
| Pixel size (H x V)              | 3.45 $\mu$ m x 3.45 $\mu$ m   |
| Image size (H x V)              | 6.6 mm x 3.7 mm; diagonal 7.6 mm (HD-SDI output)<br>5.0 mm x 3.7 mm; diagonal 5.0 mm (PAL/NTSC output)                |
| Expected performance (EMVA1288) |   |
| Quantum efficiency              | 45 % (465 nm); 56 % (530 nm); 49 % (630 nm)   |
| Dynamic range                   | 71 dB   |
| Saturation                      | 10000 e-  |
| Maximum SNR                     | 40 dB   |
| Temporal dark noise             | 2 e-  |
| DSNU                            | 1 e-  |
| PRNU                            | 0.7 %   |
| Sensitivity threshold           | 6 p (530 nm)  |
| Nonlinearity                    | 0.25 %  |
| Interface                       |   |
| Data interface                  | 3G-SDI / HD-SDI (SMPTE 274M:2008, SMPTE 292M:2008, SMPTE 424:2012)<br>Optional: composite video NTSC/ PAL (CCIR, EIA) |
| Control interface               | Factory preset to RS485, RS422 or RS232 full duplex, 115200 baud  |
| Protocol                        | Kappa Extended GenCP Protocol   |
| Output format                   | factory preset to<br>A) 1080p60 and optional NTSC<br>B) 1080p50 and optional PAL<br>C) 1080p30<br>D) 1080p25          |
| Image resolution                | 1920 x 1080 pixel (3G-SDI, HD-SDI); 720x576 pixel (PAL); 720x484 pixel (NTSC)   |
| Frame rate                      | 60p / 50p / 30p / 25p (3G-SDI, HD-SDI); 50i (PAL); 60i (NTSC)   |
| Latency                         | < 1 ms for HD-SDI and 3G-SDI, < 22 ms NTSC and PAL  |
| Software                        | KDC-A GenICam   |



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| Function                                  |  |
|---|--|
| Exposure                                  | manual/ automatic<br>25fps: 50 µs to 39.8 ms in steps of 36 µs<br>30fps: 44 µs to 33.2 ms in steps of 30 µs<br>50fps: 32 µs to 19.9 ms in steps of 18 µs<br>60fps: 29 µs to 16.6 ms in steps of 15 µs  |
| Gain                                      | manual/ automatic<br>0 dB to 24 dB (analog gain) in steps of 0.1 dB; 24.1 dB to 48 dB (digital gain) in steps of 0.1 dB  |
| Measuring window                          | position and size adjustable for automatic exposure and gain control, automatic white balance  |
| Trigger mode                              | free running   |
| Image flip                                | vertical (up-down), horizontal (left-right)  |
| Corrections                               | correction of up to 255 defect pixels (factory preset, not changeable)   |
| Color processing                          | white balance (automatic / manual / illuminant A / illuminant D55 / illuminant D65) saturation adjustment  |
| Enhancement                               | sharpening; histogram stretching   |
| Gamma                                     | adjustable between 0.3 to 1.0 (linear); predefined gamma (ITU-R.BT709/ SMPTE-240M/ sRGB)   |
| Diagnostics                               | integrated self-test (power supply, temperature)   |
| Test pattern                              | color bar/ gray bar/ resolution/ color ramp/ pathological test pattern   |
| Overlay                                   | two reticles; position and color adjustable  |
| Update                                    | firmware upload  |
| General Data                              |  |
| Dimensions                                | 55 mm x 55 mm x 60 mm  |
| Weight                                    | 400 g  |
| Power supply                              | 9 - 36 V DC, 6 W   |
| Connectors                                | Hirose HR10A-10R-10PB (71) connector, BNC connector 75Ω  |
| Lens mount                                | C-mount  |
| Filter                                    | NIR-cut filter   |
| Sensor position                           | lateral accuracy < 50 µm; tilt accuracy < 1°   |
| Temperature                               | 33 °C to 71 °C (MIL STD 810 G 501.5 - High Temperature Procedure II- operation)<br>-51 °C (MIL STD 810 G 502.5 - Low Temperature Procedure II- operation)<br>33 °C to 71 °C (MIL STD 810 G 501.5 - High Temperature Procedure I- storage)<br>-51 °C (MIL STD 810 G 502.5 - Low Temperature Procedure I- storage) |
| Relative humidity                         | MIL STD 810 507.5-5 Natural Cycles B2- Cyclic high humidity  |
| Altitude                                  | not specified  |
| Shock                                     | MIL STD 810 G 516.6 Procedure I - Functional Shock (40 g/ 11 ms)   |
| Vibration                                 | MIL STD 810 G 514.6 Vibration (5 Hz to 2000 Hz)  |
| Compliance                                | ROHS, REACH (certified at time of product completion)  |
| Acceptability (for electronic assemblies) | IPC-A610 Class 3   |
| EMI (emissions)                           | Electric field emissions: RE102-4 (MIL-STD-461G), Conducted emissions: CE102-1, basic curve (MIL-STD-461G)   |
| EMI (susceptibility)                      | 61000-4-3 RF Level 2 (3 V/m) field 80-2000 MHz (1kHz 80% AM, 1% increment) Criteria A<br>61000-4-3 RF Level 1 (1 V/m) field 2 – 2.7 GHz (1kHz 80% AM, 1% increment) Criteria A   |
| EMI (burst)                               | not specified  |
| Order-no.                                 | 963-1117   |

We are constantly checking the accuracy of the technical data. We are prepared to provide more detailed information on request. Technical data are subject to change without notice!