

SU320KTSX-1.7RT

High Sensitivity InGaAs SWIR Camera

The compact **SU320KTSX-1.7RT** is an InGaAs video camera featuring high-sensitivity and wide dynamic range. It provides real-time night-glow to daylight imaging in the Short Wave Infrared (SWIR) wavelength spectrum for passive surveillance and use with lasers. The camera delivers clear video at every lighting level from partial starlight to direct sunlight due to **on-board** Automatic Gain Control (AGC), image enhancement and built-in non-uniformity corrections (NUCs). Simultaneous Camera Link® digital output provides high quality 12-bit images for image processing or transmission. Low-power and light-weight with compact size enables easy integration into surveillance systems, whether hand-held, mobile or aerial.

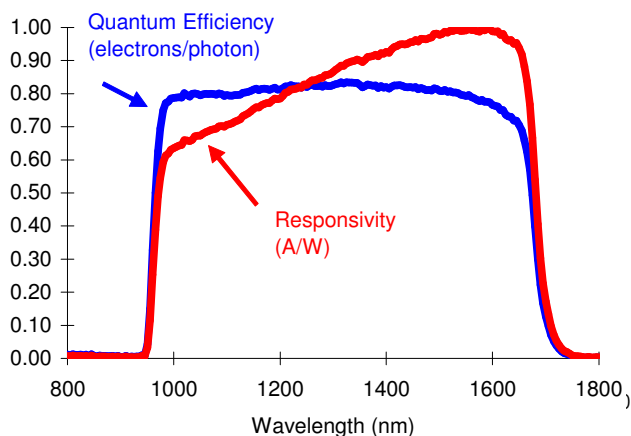


GOODRICH



APPLICATIONS

- Low-light level imaging
- Covert surveillance with passive 24 hr/7 day operation
- Emission microscopy
- Imaging spectroscopy
- Astronomy



FEATURES

- Highest sensitivity available in 0.9 to 1.7 μm spectrum; NIR/SWIR, from 0.7 to 1.7 μm
- Images under partial starlight to direct sun illumination
- 320 x 256 pixel format, 25 μm pitch
- Compact OEM module size < 3.94 in³
- Enclosed module size < 9.5 in³
- Low power < 2.5 W at 20°C
- All solid state InGaAs imager
- On-board non-uniformity corrections
- Simultaneous digital & analog outputs
- Room temperature FPA operation
- Includes a threaded 42 mm lens mount
- OEM version for easy integration into UAV, handheld or robotic systems
- Improved AGC algorithms with adjustable thresholds
- Adjustable contrast enhancement mode

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MECHANICAL SPECIFICATIONS

Model:	Enclosed	OEM
Module (no lens)	53 x 53 x 65 mm	42 mm x 38 mm x 41 mm
Width x Height x Depth ¹	2.1 x 2.1 x 2.55 inches	1.64 in. x 1.5 in. x 1.60 in.
Weight (no lens)	< 270 g	< 90 g
Lens Mount	C-mount adapter in M42x1 mount	C-mount bracket
Included Lens	f/1.4, 25mm, 18° FOV width, C-mount	none
Camera Link Connector	3M SDR26 Connector	none
I/O Connector	3M SDR14 Connector	none
Interface Connector	Not applicable	Samtec QSH-030-01-L-D-A
Pixel Pitch	25 μ m	
Focal Plane Array Format	320 x 256 pixels	
Active Area	8 mm x 6.4 mm x 10.2 mm diagonal	

¹Depth Includes Cable Mount Hardware for Enclosed Version

ENVIRONMENTAL & POWER SPECIFICATIONS

Operating Case Temperature	-10°C to 40°C
Storage Temperature	-10°C to 60°C
Humidity	Non-condensing
Power Requirements:	
AC Adapter Supplied	100-240 VAC, 47-63 Hz
DC Voltage	+9-16 V
Typical Power	2.2 W at 20°C ambient, <4.5 W @ 40°C

ELECTRICAL SPECIFICATIONS

Optical Fill Factor	100%
Spectral Response	0.9 μ m to 1.7 μ m
Quantum Efficiency	> 65 % from 1 μ m to 1.6 μ m
Mean Detectivity, D* ¹	> 1 x 10 ¹³ cm \sqrt Hz/W
Noise Equivalent Irradiance ¹	< 1.4 x 10 ⁹ photons/cm ² ·s
Noise (RMS) ¹	< 85 electrons (typical)
Full Well (typical) ¹	70k electrons
True Dynamic Range ¹	> 800:1
Operability ²	> 99%
Exposure Times	60 μ s to 16.57 ms in 16 steps
Image Correction	2-point (offset and gain) pixel by pixel, user selectable
Digital Output Format	12 bit Camera Link [®] (optional for OEM version)
Analog Output Format	Buffered EIA170 compatible video, 60 fields/s, independent 320 x 256 frame readout per field
Digital Output Frame Rate	60 fps
Scan Mode	Continuous or 3 externally triggered modes

¹ λ = 1.55 μ m, exposure time = 16.57 ms, in Highest Gain OPR setting, (no lens) with gain and offset corrections off.

² The fraction of pixels with responsivity deviation less than +/-35% from the mean.

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