

# Technical Specifications

Camera Model	IRSX-I336		IRSX-I640		
Detector Resolution	336 x 256 px		640 x 512 px		
Detector Type	Focal Plane Array (FPA), uncooled microbolometer				
Spectral Range	7.5–13 $\mu\text{m}$				
Pixel Size	17 x 17 $\mu\text{m}$		17 x 17 $\mu\text{m}$		
Frame Rate	9 Hz	60 Hz*	9 Hz	30 Hz*	50/60/200 Hz (w/ windowing)*
<b>Measurement</b>					
Object Temperature Range	Range 1: -25 to 135 °C, range 2: -40 to 550 °C, optional high-temperature range: 200–1,200 °C (w/ ND filter)				
Accuracy	$\pm 2$ °C ( $\pm 3.6$ °F) or $\pm 2$ % of reading (10–100 °C @ 10–35 °C amb)				
NETD	< 30 mK (f/1.0, range 1)				
<b>Lenses</b>					
Fixed Lenses	7.5 mm, 9 mm, 13 mm, 19 mm, 25 mm, 35 mm				
Interchangeable Lenses	6 mm, 10 mm, 12 mm, 18 mm, 25 mm, 60 mm, 100 mm, zoom lens 35–105 mm, microscopy lens 20 $\mu\text{m}$				
<b>Image Processing</b>					
Configuration	Web interface				
Areas of Interest	Spot, line, polyline, elliptical line, rectangular area, elliptical area, polygon area				
Smart Realignment	Intelligent search and compensation algorithm to guarantee accurate temperature readings independent of e.g. machine or part tolerances				
Temperature Evaluation	Min, max, mean, range, variance, standard deviation				
Comparison Functions	Equal, less, greater, in range, out of range				
Script Interface	Scripting w/ Lua				
<b>Interfaces</b>					
Ethernet Protocols	DHCP, DNS, GigE Vision, HTTP(S), mDNS, NTP, FTP, SSH, Modbus TCP, (MQTT (TLS), OPC-UA, PTP IEEE1588, Profinet (CC-A, RT-1), ONVIF)**				
Ethernet Type	10/100/1,000 MBit/s	Ethernet connector	8-pin A-coded M12 connector		
Image Streaming Protocol	GigE Vision w/ GeniCam, (RTSP)**	Ethernet image streaming	16-Bit, 14-Bit, 8-Bit		
Video out	Available on request				
<b>Input/Output</b>					
Digital Input	2x electrically isolated; 5–24 VDC (max. 27 VDC)	Encoder/resolver input	A+, A-, B+, B-; high-speed, dual RS-422/RS-485 receiver		
Digital Output	2x electrically isolated; 5–24 VDC	Analog output	0–5 VDC		
Digital I/O, Supply Voltage	4.5–30 VDC, max. 100 mA	Analog input	0–5 VDC		
<b>Environmental</b>					
Protection Class	IP67 (IEC 60529)	Bump	200 g (IEC 60068-2-29)		
Operating Temperature Range	-40 to 60 °C (non condensing)	Vibration	4.3 g (IEC 60068-2-6)		
Storage Temperature Range	-50 to 80 °C (IEC 68-2-1 and IEC 68-2-2)	RoHS	Compliant		
Humidity	0–95 % relative humidity (IEC 60068-2-30)				
<b>Mechanical</b>					
Dimensions	155 x 55 x 77 mm (w/o lens, w/ connectors)	Lens mount	M34x0.5, M34x0.75, M46x0.75		
Weight	270 g (w/o lens)	Base mounting	4x M3 threaded holes (at all 4 sides)		
<b>Accessories</b>					
Adjustable mounting bracket, mounting adaptors, lens protection cap w/ Ge window, air barrier, terminal panel, protective enclosures (IRCamSafe series), focus tool					

\* Subject to dual use export regulations (for frame rates > 9 Hz).  
 (\*\*) Coming soon.

Version 1.4 | Status: February 2019 | Subject to modifications and errors