

# 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*
<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 1.5 | Status: May 2020 | Subject to modifications and errors