

	Feature	R450Pro	R450Pro-D	R450	R450-D		
Basic Performance	Infrared Detector	Uncooled Focal Plane Array (Microbolometer)					
	Spectral Range	8 to 14 μ m					
	Measuring Range	-40 to 1500°C		-40 to 650°C			
	Sensitivity (NETD)	0.025°C at 30°C (with S/N improvement)					
	Accuracy	$\pm 1^\circ\text{C} \times 1$					
	Frame Rate	40Hz	8.0Hz	40Hz	8.0Hz		
	Detector Pixels	480(H) \times 360(V) pixels					
	Recording Pixels	Standard mode: 480(H) \times 360(V) , Super Resolution (SR) mode: 960(H) \times 720(V) *2					
	Field of View	24'(H) \times 18'(V) (with standard lens)					
	Spatial Resolution	Standard mode: 0.87mrad , Super Resolution (SR) mode :0.58mrad equivalent *3					
	Focal Distance	10cm to infinity (with standard lens) *4					
Focus	Auto/ Manual						
Image Display	Auto Function	Auto Scale, Auto Focus, Full Auto					
	Color Palettes	7 palettes (Rainbow, Brightness, Hot-white, Hot-black, etc.)					
	Gradation	256 / 32 / 16 / 8 grade					
	Visible Camera	CMOS camera 5M pixels					
	Visible/Thermal Fusion	Side-by-side, Fusion (transparency changeable), Picture-In-Picture (transparency changeable)					
	Display Functions	1 to 8 times continuous zoom (with display positioning scroll), Grid Overlay, 9 images multi-display (replay mode)					
	Image Quality Improvement	Denoising, Averaging (with ghost rejection), Edge enhancement					
Measuring Functions	Point Temperature	10 Movable Points, Temperature search: MAX/MIN \times 1 each, Delta T					
	Temperature Display in Assigned Region	MAX, MIN and AVG in BOX (Up to 5 boxes)	N/A				
	Line Profile	Horizontal, Vertical, Horizontal & Vertical					
	Alarm Function	Alarm Display, Alarm Sound, Color Alarm, Alarm Recording,					
		Alarm Signal Output	N/A				
	Temperature Correction	Emissivity, Environmental/Background, Distance					
		Emissivity	Multi-point Correction, Emissivity Table				
		Emissivity Reverse Calculation	N/A				
	Drift Stabilizer	Yes	N/A				
Storage & Output	Storage Device	SD card, Conforms to SDHC					
	Data Format	Still image : JPEG with temperature data,14bit (with visible image) Movie : SVX file (Dedicated format)					
	Data Storage	Still image(JPEG with temperature data,14bit) , Recorded with visible image					
		Super Resolution (SR)	Yes				
		Quick Panorama	Horizontal equivalent to 75' / Vertical equivalent to 56'				
		SD Movie Recording	Max 5Hz	Max 4Hz	N/A		
		Interval Recording	3 sec to 60 min interval, with Visible image recorded				
		External Trigger Recording	Yes	N/A			
		Voice Recording	30sec Recording, replay per a Thermal image				
		Text Annotation	Annotate up to 128 Characters per a Thermal Image. Characters imported from SD Card				
		USB2.0					
			Mass Storage	Yes			
			Movie Data Transfer	Thermal image: Max: 40Hz, Recorded with visible image *5	Thermal image: Max: 8Hz, Recorded with visible image *5	Thermal image: Max: 40Hz, Recorded with visible image *5	Thermal image: Max: 8Hz, Recorded with visible image *5
			External Trigger Input	Automatic recording function by external trigger input		N/A	
		Video Output	NTSC / PAL Switchable				
		Alarm Output	Contact Signal. No Voltage		N/A		
		External Trigger Input	Pulse Signal		N/A		
Others	Display	3.5" LCD Monitor (with tilt and brightness adjustment), Color View Finder (with tilt adjustment)					
	Auxiliary	Laser Pointer (Red, class 2, IEC 60825-1 2007/2014), LED Light, Remote Controller					
	Environment Resistance	Operating Temperature & Humidity	-15° C to 50° C, 90%RH (non-condensing)				
		Storage Temperature & Humidity	-40° C to 70° C, 90%RH (non-condensing)				
		Vibration & Shock	29.4m/sec ² (3G) 、 294m/sec ² (30G)				
		EMC	Conform to CE regulations (Class A)				
		Dust & splash proof	Protection class IP54 equivalent				
	Battery Operation	2.5hours (Typ), Rechargeable Li-Ion battery					
	AC Power	100V - 220V AC, 50/60Hz					
	Dimensions	Approx. H121mm \times W105mm \times D195mm (excluding projection)					
	Weight	Approx. 1.3kg (including Battery Pack)					
Standard Accessories	Wired remote Controller x 1, SD Card x 1, USB Cable x1, Neck Strap x 1, Grip Belt x 1, Rechargeable Li-Ion Battery x 1, Software x 1, Operation Manual x 1, and Carrying Case x 1						
Standard Software	InfReC Analyzer NS9500Professional		InfReC Analyzer NS9500Standard *6				

*1 Only the Range 1 at the environmental temperature from 20 to 30°C (In other condition, it is $\pm 2^\circ\text{C}$ or $\pm 2\%$.)

*2 Still Image Only

*3 This increased resolution results from detecting characteristic within all frames acquired by the SR process and removing such effects as those caused by hand vibration.

*4 For temperature accuracy : 30cm to infinity

*5 Thermal image only when image transfer speed at 40Hz

*6 In order to transfer thermal image movie data by R450 /R450-D, you need to upgrade to " InfReC Analyzer NS9500 Professional " (optional software).