InfReC
InfraRed Camera

Infrared Thermal Imaging Camera

High Resolution Infrared Image for Professional Thermographer

InfReC R500 series

1.2 M pixels Infrared Thermal Imaging Camera

- Super Resolution Mode : 1280×960 pixel
- Spatial Resolution : equivalent to 0.58mrad※

High Sensitivity and High Measurement Accuracy

- Sensitivity (NETD) : 0.03℃
- Temperature accuracy : ±1℃

Spatial Resolution 58μm with Standard Lens

- Minimum Spatial Resolution:equivalent to 58μm at 10cm distance <in Super Resolution(SR) Mode>※

A Wide Viewing Angle Lens increases Working Efficiency

- Field of view(F.O.V.) : 32°(H)×24°(V)

5 M pixels visual camera

- Thermal and Visual "Split-screen Images" and "Fusion Images."

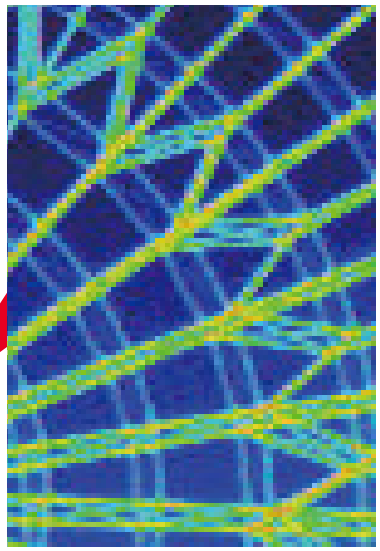
Selectable 2models for your application

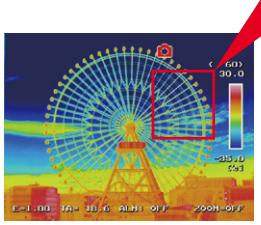
- R500Pro : Measuring range: -40 to +2000℃
  Suitable for use in R&D, for making high temperature measurements, and for measuring sequential data.
- R500 : Measuring range: -40 to +500℃
  Excellent choice for inspection of electrical facilities and remotely located pipes.

1.2 M pixels Super Resolution Thermal Image Technology

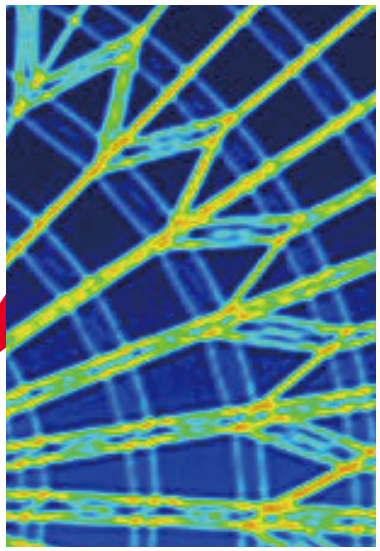
High Resolution Infrared Thermal Imaging Camera backgrounded by Avio SR Technology!

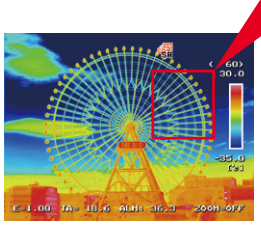
SR Mode OFF (0.3 M pixels)





SR Mode ON (1.2 M pixels)





4x Pixels Enhanement

- Quickly capture Super Resolution (SR) image without PC
- Realize even Higher Sensitivity by "Multi-Flame Super Resolution Image Processing"

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

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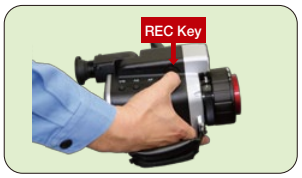
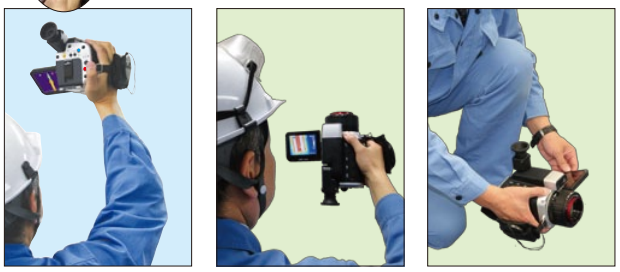
User-Friendly Operation

Easy to shoot from Any Angle

Multi-angle Tilting LCD Display and 2 Shutter-buttons enable flexible and comfortable one-hand operation.



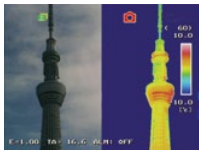


Easy to use at various angle or height

Various mixing mode

Easy to compare 1.2M pixels thermal image with 5M pixels visual image.

Picture-in-Picture



Split-Screen

Alpha Blerding

Various Measurement functions

Automatically calculate Emissivity by inputting object temperature

Emissivity Reverse Calculation
Emissivity of an object can be calculated by inputting known temperature of object.
it is very convenient when measuring temperature of an object of the same material.

Multi-Point Correction
Each point's emissivity can be set independently.

Measuring Distance and F.O.V

Field of View and Spatial Resolution are the same magnification with measuring distance.

Lens Type			2x Telephoto Lens	Standard Lens	0.5x Wide Angle Lens
L=1m	Field of View (H)× (V)		29×22cm	57×42cm	128×92cm
	Spatial Resolution	Normal Mode	0.45mm	0.9mm	2.0mm
		Super Resolution (SR mode)*3	0.3mm	0.6mm	1.3mm

Specifications

	Feature	R500Pro	R500Pro-D	R500	R500-D
Basic Performance	Infrared Detector	Uncooled Focal Plane Array (Microbolometer)			
	Spectral Range	8 to 14 μm			
	Measuring Range	−40 to 2000°C		−40 to 500°C	
	Sensitivity (NETD)	0.03° C at 30°C (with S/N improvement)			
	Accuracy	±1°C *1			
	Frame Rate	30Hz	7.5Hz	30Hz	7.5Hz
	Detector Pixels	640(H)× 480(V) pixels			
	Recording Pixels	Standard : 640(H) × 480(V) Super Resolution (SR mode) : 1280(H) × 960(V) *2			
	Field of View	32°(H) × 24°(V) (with standard lens)			
	Spatial Resolution	Standard : 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 Pallets	7 pallets (Rainbow, Brightness, Hot-white, Hot-black, etc.)			
	Gradation	256 / 32 / 16 / 8 grade			
	Visual Camera	CMOS camera 5M pixels			
	Visual/Thermal Fusion	Fusion, Picture-In-Picture, Split-Screen, Alpha Blending (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	Averaging (with ghost rejection), Filtering, Edge enhancement			
Measuring Functions	Point Temperature	10 Movable Points, Temperature search: MAX/MIN x 1 each, Delta T			
	Line Profile	Horizontal, Vertical, Horizontal & Vertical			
	Temperature Display in Assigned Region	MAX, MIN and AVG in Box (for up to 5 Boxes)		—	
	Alarm Function	Alarm Display, Alarm Sound, Color Alarm, Alarm Recording,			
		Alarm Signal Output		—	
	Temperature Correction	Emissivity, Environmental/Background, Distance, NUC			
	Emissivity	Multi-point Correction, Emissivity Table			
		Emissivity Reverse Calculation		—	
	Drift Stabilizer	Provided		—	
Storage & Output	Storage Device	SD card, Conforms to SDHC			
	Data Storage	Still Image : JPEG with Temperature Data (14 bit), Recorded,			
		Movie : SVX file (exclusive), Visual Image Simultaneously			
	Super Resolution (SR)	Provided			
	Quick Panorama	Horizontal equivalent to 100° / Vertical equivalent to 75°			
	SD Movie Recording	Max 3Hz		—	
	Interval Recording	3 sec to 60 min interval, Visual image Simultaneously Recorded			
	External Trigger Recording	Provided		—	
	Voice Annotation	30sec Recording/Replay per Image			
	Text Annotation	Annotate up to 256 Characters with each Thermal Image Import Characters from SD Card			
	Interface				
	USB2.0	Mass-Storage, movie transfer (Thermal Image Max 15Hz with Visual Image) *5			
	Video Output	NTSC / PAL Changeover			
	Alarm Output	Contact Closure. No Voltage		—	
	External Trigger Input	Pulse Signal		—	
Other	Display	3.5" LCD Monitor (with Tilt and Brightness Adjustment Available),Color View Finder (with Tilt Mechanism)			
	Auxiliary	Laser Pointer (red, class 2, PSC compliant), LED Light, Remote Controller			
	Environment Resistance: Operating Temperature & Humidity	−15°C to 50°C, 90%RH (non-condensing)			
	Environment Resistance: Storage Temperature & Humidity	−40°C to 70°C, 90%RH (non-condensing)			
	Environment Resistance: Vibration & shock	29.4m/sec² (3G), 294m/sec² (30G)			
	Environment Resistance: EMC	Conforms to CE regulations (Class A)			
	Environment Resistance: Dust & splash proof	Protection class IP54 equivalent			
	Battery Operation	2.5h (Typ), Rechargeable Li-Ion battery, (7.5 hours with optional long time battery) *6			
	AC Power	100V – 220V AC, 50/60Hz			
	Dimensions	Approx. H121mm×W105mm×D195mm (excluding projection)			
	Weight	Approx. 1.3kg (including Battery Pack)			
	Standard Software	InfReC Analyzer NS9500Pro		InfReC Analyzer NS9500Std *5	

Options

Options		Model	Specification/remarks
Lens	2x Telephoto Lens	IRL-TX02D	16° (H)×12° (V)
	0.5x Wide Angle Lens	IRL-WX02D	64° (H)×48° (V)
Accessory	Rechargeable Battery Pack	T2UR18650F-5928	2500mAh Driving Hours: 2.5 Hours (typical)
	Battery Charger	NC-LSC05-110V/220V	110v or 220v
	LCD Hood	IRU-F01A	
	Portable Power	TVB-C501	Contains of 2 batteries. Battery not included

*1 Only the Range 1 at the environmental temperature of 20 to 30°C.In other range, it is ±2°C or±2%.
*2 Still Image Only
*3 This increased resolution results from detecting characteristic points within all frames acquired by the SR process and removing such effects as those caused by hand vibration.
*4 For defined Temperature Accuracy supported : 30 to cm to infinity
*5 To Transfer thermal image movie data by R500 is required to up grade to "InfReC Analyzer NS9500 Professional" (optional software)
*6 2 extra batteries (optional parts) are required for 7.5 hours operation.

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WARNINGS & CAUTIONS

- Before using this product, please carefully read the provided Operation Manual "WARNINGS" & "CAUTIONS" section to ensure proper operation.
- Please do not place the product in high temperature, high humidity or high inert gas environments.

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