InfReC
InfraRed Camera

Infrared Thermal Imaging Camera

High Resolution Infrared Image for Professional Thermographer

InfReC R500EX series

1.2 M pixels Infrared Thermal Imaging Camera

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

Real Time Transfer and Movie Recording into PC

- Real time transfer of 640 x 480 pixel image at 30Hz in high speed (conventional ratio 2 times)
- Software makes movie recording start automatically by external trigger input to R500EX-Pro

Temperature Resolution Upped by the Latest Noise Elimination Processing Technology

- Temperature resolution : 0.025℃ by denoising feature (the highest level of this class)
- Temperature accuracy : ±1℃※1 (the highest level of this class)

Variety of Lens Lineup Makes Play an Active Role in Various Measuring Scene

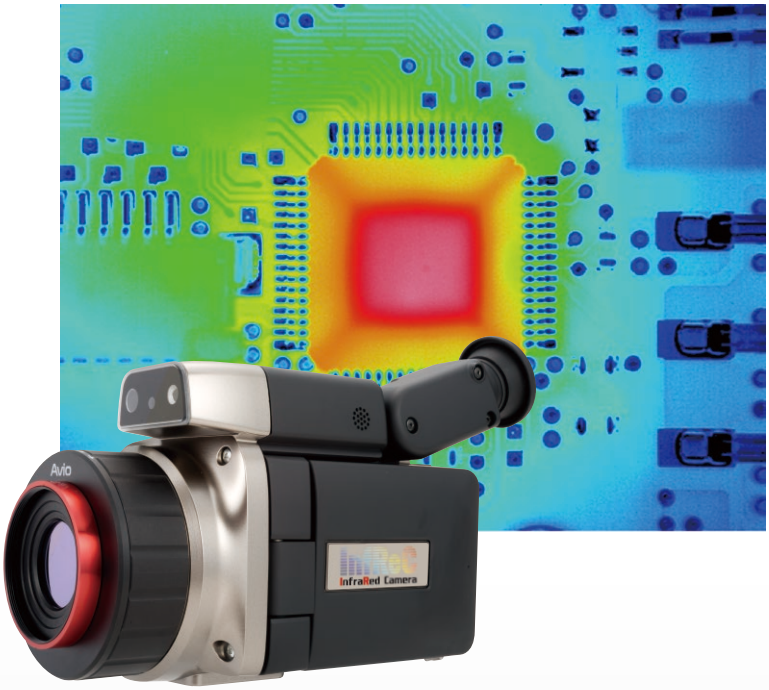
- 21μm Closeup Lens
- 52μm Closeup Lens
- 2x Telephoto Lens
- 2x Wide Angle Lens
- 3x Wide Angle Lens

Selectable 2 models for Your Application

- R500EX-Pro : Measuring range: -40 to +2000℃
  Suitable for use in R&D, for making high temperature measurements, and for measuring sequential data.
- R500EX : Measuring range: -40 to +500℃
  Excellent choice for inspection of electrical facilities and remotely located pipes.

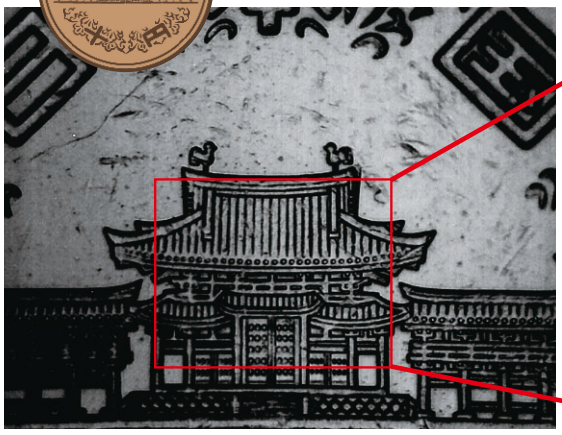
※1 An internal investigation as of December 2015.

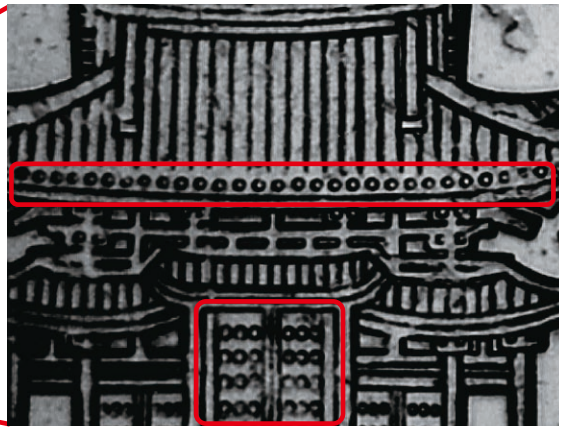
1.2 M pixels Super Resolution Thermal Image Technology



Measuring From Wide Angle To Micro Area Clearly By Combination with Optional Lenses

Using 21μm Closeup Lens (Resolution 21μm)





Detailed pattern can be taken sharply

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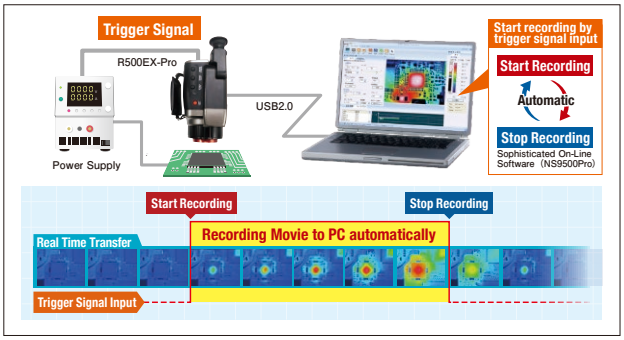
Automatic Movie Recording Feature Built In

■Recording movie to connected PC automatically by external trigger input to R500EX-Pro
■Data recording linked with test equipment and field facility is available without configuring I/O system



User-Friendly Operation

Easy to shoot from any angle

Multi-angle Tilting LCD Display and 2 REC Key-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　Side-by-side　Fusion

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	2x Wide Angle Lens	3x Wide Angle Lens
L=1m	Field of View (H) × (V)		29×22cm	57×42cm	128×92cm	211×149cm
	Spatial Resolution	Normal Mode	0.44mm	0.9mm	1.74mm	3.1mm
		Super Resolution (SR mode)*3	0.30mm	0.6mm	1.16mm	2.1mm

Specifications

	Feature	R500EX-Pro	R500EX-Pro-D	R500EX	R500EX-D
Basic Performance	Infrared Detector	Uncooled Focal Plane Array (Microbolometer)			
	Spectral Range	8 to 14μm			
	Measuring Range	−40 to 2000°C		−40 to 500°C	
	Sensitivity (NETD)	0.025°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 mode : 640(H) × 480(V) , Super Resolution (SR mode) mode : 1280(H) × 960(V) *2			
	Field of View	32°(H) × 24°(V) (with standard lens)			
	Spatial Resolution	Standard mode : 0.87mrad , Super Resolution (SR mode) 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			
	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 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)		N/A	
	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 Storage	Still Image : JPEG with temperature data (14 bit) Recorded with, Visible Image			
		Movie (only for R500EX-Pro/R500EX-Pro-D): SVX file (Avio original file)			
	Super Resolution (SR)	Yes			
	Quick Panorama	Horizontal equivalent to 100° / Vertical equivalent to 75°			
	SD Movie Recording	Max 3Hz		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			
	Interface				
	USB2.0	Mass-Storage, Image transfer (Thermal Image with visible image. Max imum transfer speed is 30Hz) *5			
		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)			
	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	2.5hours (Typ), Rechargeable Li-Ion battery			
	AC Power	100V – 220V AC, 50/60Hz			
	Dimensions	Approx. H121mm×W105mm×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 Beltx 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 ±2°C or ±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 30Hz
*6 In order to transfer Thermal image movie data by R500EX / R500EX-D, you need to upgrade to "InfReC Analyzer NS9500 Professional" (optional software).

Power Kit

R500EX series is not including AC adapter, battery charger and AC cables.
Please order below Power Kit with R500EX series main unit.

Item	Model	Specification/remarks	
Power Kit	PKA-110VGM(US)	For 100 to 120V region (US)	AC adapter x 1, battery charger x 1 and AC cable x 2
	PKA-110VGM	For 100 to 120V region (Taiwan)	
	PKA-220VGM	For 220 to 240V region (Europe and Asia)	

Options

Options		Model	Specification/remarks
Lens	2x Telephoto Lens	IRL-TX02D	16° (H)×12° (V)
	2x Wide Angle Lens	IRL-WX02D	64° (H)×48° (V)
	3x Wide Angle Lens	IRL-WX03D	93° (H)×73° (V)
	21μm Closeup Lens	IRL-C021UB20	13mm(H)×10mm(V), Working Distance 22mm
	52μm Closeup Lens	IRL-C052UB	33mm(H)×25mm(V), Working Distance 56mm
Accessory	AC adaptor	RC60G-09D-110V(US)/110V/220V	110V(US), 110V or 220V
	Rechargeable Battery Pack	2UR18650F	2500mAh Driving Hours : 2 Hours (typical)
	Battery Charger	NC-LSC05-110V(US)/110V/220V	110V(US), 110V or 220V
	LCD Hood	IRU-F01A	

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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.

Distributor:

Catalog ref : AV017 I1711B3