

Infrared Thermal Imaging Camera

High Resolution Infrared Image for Professional Thermographer

**InfReC R550series**

**High speed sampling at maximum speed 120Hz (R550Pro)**

- 120Hz : 640x120 with windowing
- 60Hz : 640x240 with windowing
- 30Hz : 640x480 at full window

**Automatic movie recording function by PC**

- Software makes movie recording start automatically by external trigger input.

**1.2M pixels Infrared Thermal Imaging Camera**

- Super Resolution Mode (SR MODE) :1280x960 pixel  
(Standard MODE) :640x480 pixel
- Spatial Resolution: equivalent to 0.58 mrad

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

- 21um Closeup Lens    ■ 52um Closeup Lens    ■ 2x Telephoto Lens
- 2x Wide Angle Lens    ■ 3x Wide Angle Lens

**Selectable 2 models for your application**

- R550Pro: Measuring range: -40 to 2000°C  
Suitable for use in R&D, for making high temperature measurements, and for measuring high temperature
- R550: Measuring range: -40 to 650°C  
Excellent choice for inspection of electrical facilities and remotely located pipes.

**Realizes the highest speed sampling<sup>(\*)</sup> in the portable VGA class equipment**

\*Research by Avio in August 2018

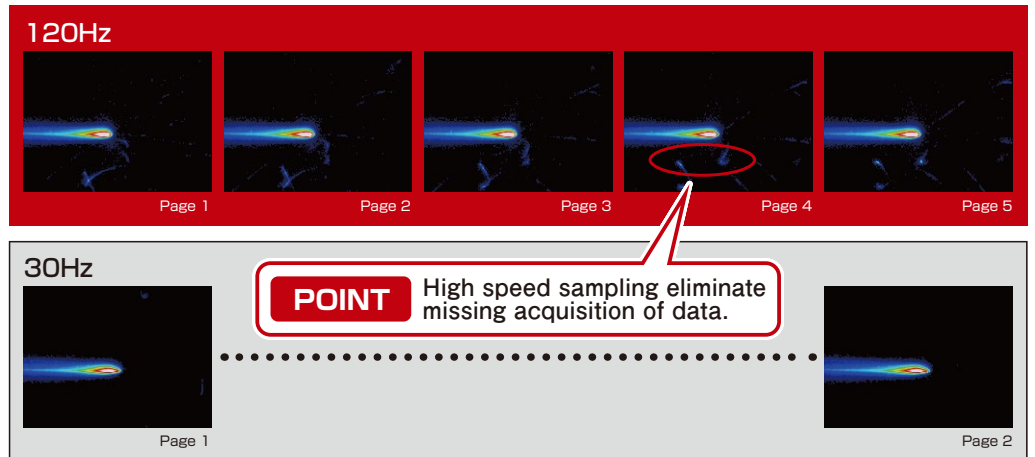


**For monitoring of welding process.**

By high speed sampling time of 120Hz (R550Pro), occurrence of small spatter and thermal affection can be checked.



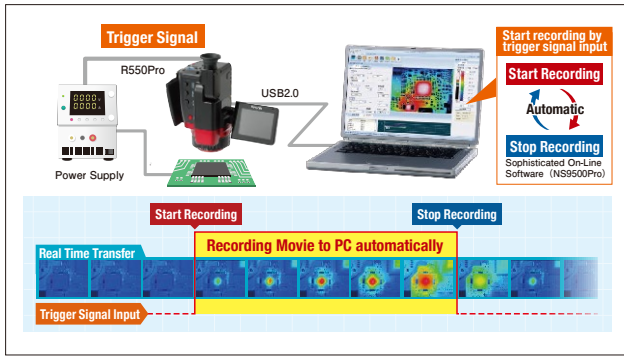
Image of laser welding



Example of laser welder monitoring (Object: Stainless steel, Laser output: 250W, Scan 50mm)

**Automatic Movie Recording Feature Built In**

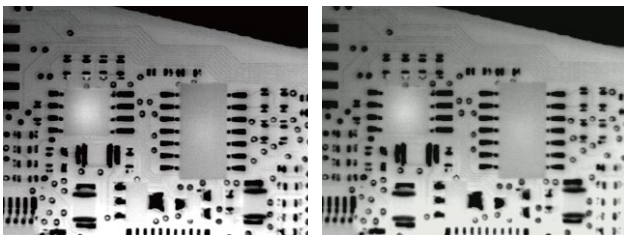
- Recording movie connected PC automatically by external trigger input to R550Pro
- Data recording linked with test equipment and field facility is available without configuring I/O system



**Maximum 1.2million pixel recoding (SR mode)**

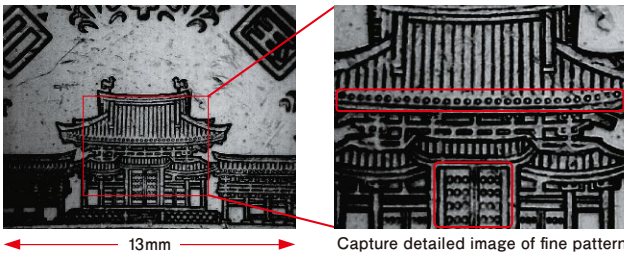
1.2 million pixels  
(Taken by SR mode with digital zoom x2.0)

0.3 million pixels  
(Take by standard mode with digital zoom x2.0)



**Clear imaging and measurement from wide to micro with use of option lens**

With use of 21um close up lens (Spatial resolution 21um)



**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) x (V)	29x22cm	57x42cm	128x92cm	211x149cm	
	Spatial Resolution	Normal Mode	0.44mm	0.9mm	1.74mm	3.1mm
		Super Resolution (SR mode) <sup>3</sup>	0.30mm	0.6mm	1.16mm	2.1mm

■ Listed specifications, appearance and design are subject to change without notice. ■ Company and commodity names are trade names or registered trade marks of each company. ■ NIPPON AVIONICS Co., Ltd. will not be responsible for any damage of infrared detectors due to incoming strong light (e.g. laser) through lens(es). ■ This product is subject to Japanese Export Control Law. Depending on its destination, prior assessment and authorization may be required. When exporting from country of initial purchase destination, please be sure to follow that country's export regulations as it may require an export permit beforehand.

**Specifications**

Feature	R550Pro	R550Pro-D	R550	R550-D
<b>Basic Performance</b>	Infrared Detector: Uncooled Focal Plane Array (Microbolometer) Spectral Range: 8 to 14 μm Measuring Range: -40 to 2000°C Sensitivity (NETD): 0.025°C at 30°C (with S/N improvement) -40 to 650°C Accuracy: ±1°C *1 Frame Rate: 30Hz / 60Hz <sup>2</sup> / 120Hz <sup>3</sup>   7.5Hz   30Hz   7.5Hz Detector Pixels: 640(H) x 480(V) pixels Recording Pixels: Standard mode : 640(H) x 480(V) . Super Resolution (SR mode) mode : 1280(H) x 960(V) <sup>4</sup> Field of View: 32° (H) x 24° (V) (with standard lens) Spatial Resolution: Standard mode : 0.87mrad , Super Resolution (SR mode) mode : 0.58mrad equivalent <sup>5</sup> Focal Distance: 10cm to infinity (with standard lens) <sup>6</sup> Focus: Auto/Manual			
<b>Image Display</b>	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 Point Temperature: 10 Movable Points, Temperature search: MAX/MIN x 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			
<b>Measuring Functions</b>	Temperature Correction: Emissivity, Environmental/Background, Distance Emissivity: Multi-point Correction, Emissivity Table Emissivity Reverse Calculation:   N/A Drift Stabilizer: Yes   N/A			
<b>Storage &amp; Output</b>	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 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 Mass Storage: Yes Movie Data Transfer: Thermal image: Max : 30Hz, Recorded with visible image <sup>7</sup> Windowing Data Transfer: Thermal image   N/A W1 : 640x240   W2 : 640x120 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			
<b>Others</b>	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 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 <sup>2</sup> (3G), 294m/sec <sup>2</sup> (30G) EMC: Conforms 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 x W105mm x D195mm (excluding projection) Weight: Approx. 1.3kg (including Battery Pack) Standard Accessories: Wired remote controller x 1, SD Card x 1, USB Cable x 1, 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 <sup>8</sup>			

\*1 Only the Range 1 at the environmental temperature from 20 to 30°C (In other condition, it is ±2°C or ±2%).  
 \*2 Windowing : Mode W1 (640x240) \*3 Windowing : Mode W2 (640x120) \*4 Still image Only  
 \*5 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.  
 \*6 For temperature accuracy : 30cm to infinity \*7 Thermal image only when image transfer speed at 30Hz  
 \*8 In order to transfer thermal image movie data by R550 /R550-D, you need to upgrade to "InfReC Analyzer NS9500 Professional" (optional software).

**Power Kit**

R550 series is not including AC adapter, battery charger and AC cables. Please order below Power Kit with R550 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) x 12" (V)
	2x Wide Angle Lens	IRL-WX02D	64" (H) x 48" (V)
	3x Wide Angle Lens	IRL-WX03D	93" (H) x 73" (V)
	21μm Closeup Lens	IRL-C021UB20	13mm(H) x 10mm(V), Working Distance 22mm
	52μm Closeup Lens	IRL-C052UB	33mm(H) x 25mm(V), Working Distance 56mm
Accessory	AC adaptor	RC60G-090-110V/110V/220V	110V(US), 110V or 220V
	Rechargeable Battery Pack	2UR18650F	2500mAh Driving Hours : 2 Hours (typical)
	Battery Charger	NC-LSC05-110V/110V/220V	110V(US), 110V or 220V
	LCD Hood	IRU-F01A	



**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.

Per maggiori informazioni contattare:



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