NEWS RELEASE

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Nippon Avionics Co., Ltd.
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Nippon Avionics Co., Ltd. releases “InfReC R450 series”, a versatile infrared thermography camera which is useful in wide variety of scenes

Nippon Avionics Co., Ltd. (Headquarters: Shinagawa-ku , Tokyo. President: Katsuhiko Akitsu) will release “InfReC R450 series (hereinafter “Product”)”, a versatile thermography camera (hereinafter “IR Thermography”) which is useful from structures diagnosis to micro component.

R450 series

In recent years, application of IR Thermography is expanding to include search in disaster area and access control of staffs under HACCAP (Hazard Analysis and Critical Control Point = international standard for maintenance of food safety) regulations for staff’s physical condition control. Furthermore, increase of demand for IR Thermography is expected in connection with the enhancement of preventive action against pandemic at airports.

In the area of diagnosis of structures, including buildings, too, Ministry of Land, Infrastructure, Transport and Tourism is considering the use of IR Thermography for inspection of bridges and tunnels under the supervision of central and local governments. By changing the method of inspection from visual to IR Thermography, improvement of work efficiency, safety and defect detection ratio is expected to improve which contributes to cost reduction.

Because Product can clearly distinguish minute temperature difference by high resolution of 480x360 pixels and 0.87mrad spatial resolution, defect detection ratio can be improved in inspection of buildings, bridges and other structures. In addition to that, Product is equipped with a display mode whereby visible image and thermal image can be compared which enables easy identification of defect spot. Furthermore, by employment of an angle adjustable viewfinder to avoid difficult-to-see monitor screen due to reflection of sunlight, which is often a problem when working outdoor, measurement and observation can be made more comfortably.

On top of that, we are offering a model in the InfReC 450 series which is capable of measu ring

from low temperature to high temperature continuously at a frame rate of 40Hz. As a result, InfReC 450 series is an IR Thermography which can be used not only for inspection of road and other infrastructures but also for wide fields of applications including facility maintenance, research and development, quality control, medical research and screening of people with high fever.

Nippon Avionics is determined to continue satisfying various requirements of society by offering "IR Thermography of high image quality and high functionality at reasonable price".

■ Major characteristics

1. Two models are available for different applications.

A model most suitable for your application can be selected out of the following three models.

◆R450 : Measurable temperature range is -40~+650℃.

By raising the upper limit of measurable temperature range to +650℃ from the conventional 500℃, this model can be used for evaluation test/operation of heat resistant paint (mostly resistant to 600℃) or high temperature heater (used in the range of 500~600℃). Furthermore, this model is also suitable for inspection of highly elevated electric facility or plant piping.

◆R450Pro : Full function model for R&D.

Measurable temperature range is -40~+1500℃.

This model is suitable for R&D field where measurement is made in time-series or analysis of heat accumulation or heat dissipation process during welding where an object of room temperature is heated and continuous change of temperature is observed.

2. Defect detection ratio is improved by high basic functions and high resolution due to Super Resolution Processing.

Minimal temperature difference is clearly displayed by 480(H) x 360(V) pixels and high temperature resolution of 0.025℃. Furthermore, defect detection accuracy in inspection of structures, such as buildings, roads and bridges, is enhanced by enhancement of resolution to 960(H) x 720(V) pixels equivalent level in super resolution mode. In addition, image synthesis mode and parallel display mode, where visible image of 5 million pixels and thermal image can be easily compared, help easy identification of defective spot.

◆Detector Pixels

Super resolution mode: 960(H) x 720(V)

Standard mode: 480(H) x 360(V)

◆Spatial resolution

Super resolution mode: 0.58mrad

Standard mode: 0.87mrad

◆Visible / Thermal Fusion

Side-by-Side, FUSION, Picture-in-Picture

Side-by-Side

FUSION

Picture-in-Picture

3. Viewfinder indispensable for outdoor observation.

In outdoor observation, the screen becomes difficult to see due to the sunlight reflection on the LCD monitor. Angle adjustable viewfinder makes the observation comfortable.

4. Multi-angle monitor which enables measurement in your relaxed posture.

LCD monitor with a tilt mechanism enables photographing in a free angle from the top to the bottom while you are taking a relaxed posture.

5. Measurable temperature range of 100℃～1500℃ is realized, which enables measurement of continuous temperature change without changing the measuring range. (R450Pro)

Comparing to our conventional products, dynamic range is expanded and SN ratio is improved, enabling continuous measurement of temperature change from 100℃ to 1500℃. As a result, continuous data in heating or heat dissipation process can be obtained and analyzed.

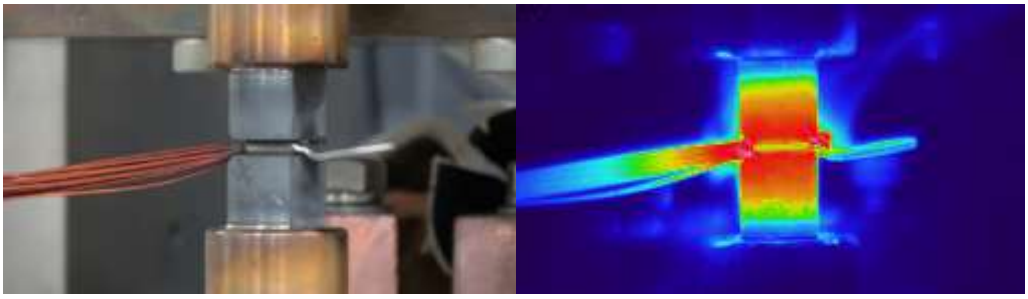

Image of resistance welding

Observation of heat storage / heat release

6. External trigger recording enables auto moving image recording to a PC. (R450Pro)

Auto recording can be made to a PC by entering an external trigger signal. Because a system can be configured without using an I/O device, data recording in linkage to a test equipment or a factory floor facility can be made. It is most suitable for temperature monitoring in production lines, such as the metal mold monitoring.

7. Three types of lens option.

We are offering 2x telephoto lens, 2x wide field-of-view lens and 52μm close up magnification lens for the following applications.

- 2x telephoto lens: Inspection of highly elevated electric facility or plant piping.
- 2x wide field-of-view lens: Separation diagnosis of bridges, concrete structures or external walls of buildings.
- 52μm close up magnification lens: Thermal analysis of miniature components.

Inquiries:

For Further Information, Please Contact;
Nippon Avionics Co., Ltd.
Overseas Sales Department, Industrial Electronic Products Sales Division
Phone: Yokohama-shi, Japan +81-45-930-3596
E-mail: Product-irc-e@ml.avio.co.jp