New-Style Thermal Imaging Camera With Removable Unit

FREE STYLE

THERMAL IMAGING CAMERA "Thermo FLEX F50"

InfraRed Camera

INPROTEC IRT

TOUCHSCREEN

Intuitive & Easy Operation
for beginners

REMOVABLE

Removable camera head
for various styles & scenes

NIPPON AVIONICS CO.,LTD.

“Angle-Free” Camera-Head to Visualize the Invisible Risks

- Tilt the camera head to measure high angle position...
- Remove the camera head to turning around the backside of the equipment...

We realized “Angle-Free” thermal imaging camera can be freely used “Rotation Style” and “Separation Style”, which innovates the measurement operation. “Thermo FLEX F50” contributes to the visualization of invisible risks and the efficiency of measurement work.

“Free Style” thermal imaging camera offers various camera styles

A new style of thermal imaging camera “Thermo FLEX F50” has a removable camera-head and controller. You can take various measurement styles in a wide variety of measurement scenes!

Rotation Style: Camera-head can be tilted and can be mounted on the both joint of controller.

Separation Style: Removed camera-head from controller. Camera-head can be freely operated.

The camera-head and controller can be mounted on tripod by screw.

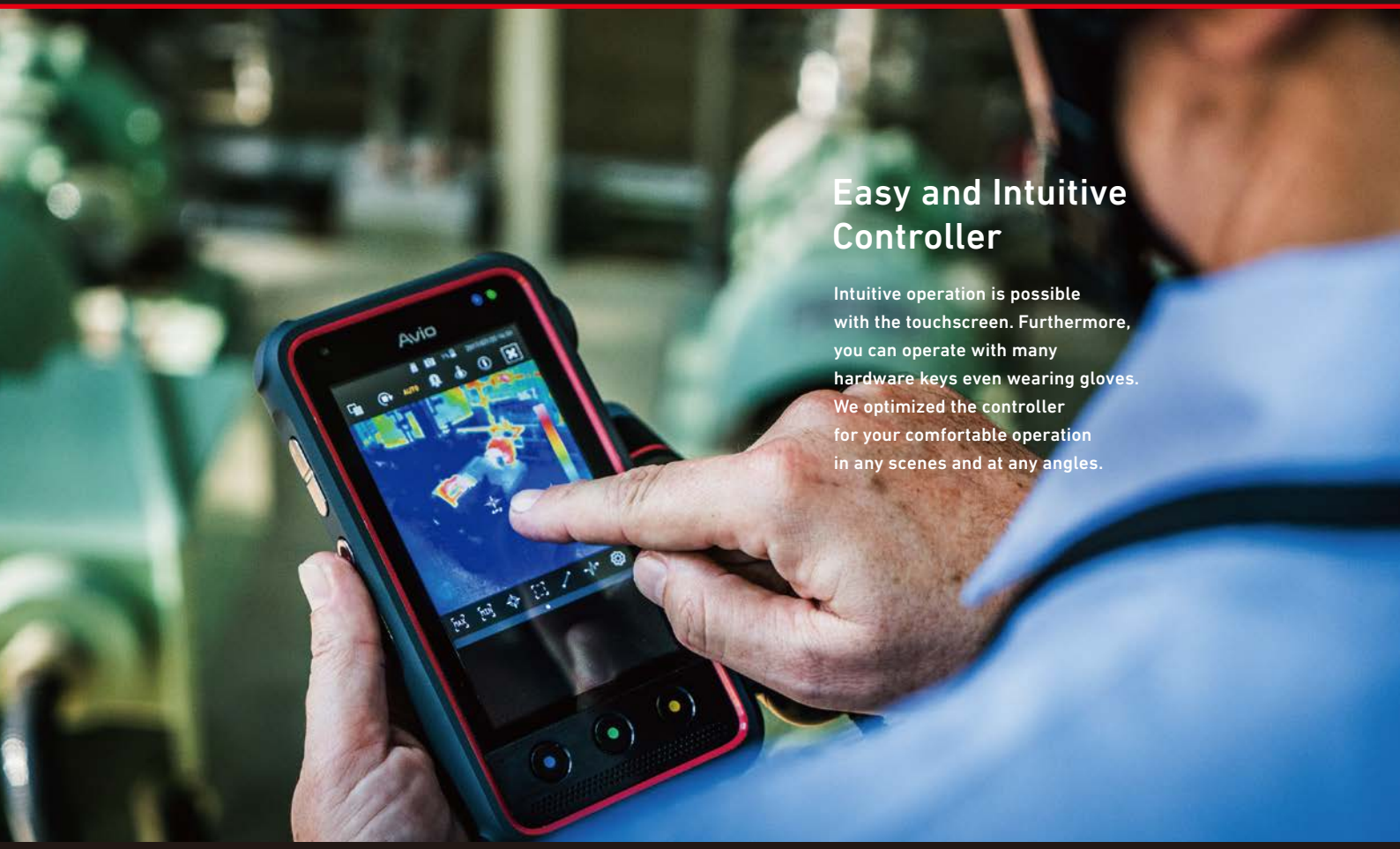
“Look Up”, “Look Down”, “Turn Around”, “Attach On”, “Put In” — Shoot Freely in Any Styles!

Efficient measurement is possible even in the place such as narrow space and inside a device, etc.

Rotating camera-head by tilting sense provides you comfortable shooting without facing upward to the high angle.

You can shoot from any angle comfortably by the removable camera-head while watching the controller.

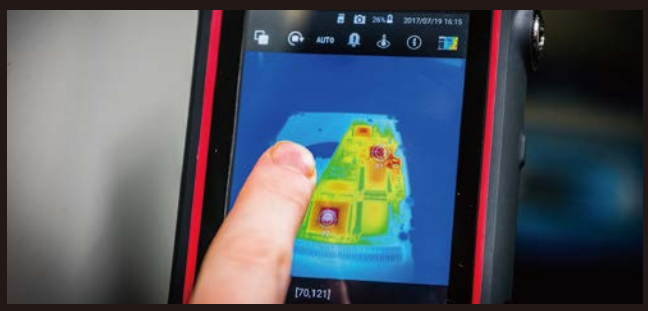
The camera-head can be attached to a helmet with a sense of wearable or the controller, and can be attached to a pole as camera stick.



Easy and Intuitive Controller

Intuitive operation is possible with the touchscreen. Furthermore, you can operate with many hardware keys even wearing gloves. We optimized the controller for your comfortable operation in any scenes and at any angles.

Easy Touch Operation even Beginners

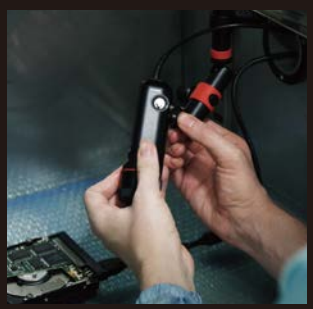


The function such as “Temperature Scale Setting” and “Point Measurement” by touch operation are equipped. Intuitive operation makes the thermal measurement easy and efficient.

Easy Hardware Key Operation even wearing gloves

Frequent operation such as “Temperature Scale Setting” and “Recording” can be performed by hardware key. Comfortable one-hand measurement is possible even wearing gloves.

Up to 70°C heat-resistant camera-head



The small camera-head can be put into a device such as thermostatic chambers. You can operate remotely by touchscreen of the external controller while checking the measurement status.

Attachable camera to tripod and wall

The camera-head and controller can be mounted on a tripod or fixed on a wall for stable and easy measurement. The camera can be supported various usages with many combinations of commercial accessories freely.

Thermo FLEX F50

Customize button

Customized buttons for more efficient measurements

You can set frequently used functions to three buttons.

Assignable functions

- Light ON / OFF • Image rotation • Composite display switching
- Auto scale ON / OFF • Temperature alarm ON / OFF
- Color alarm ON / OFF • Information ON / OFF
- Menu display ON / OFF • Switch to preview
- Thumbnail switching • Live mode switching

Default

- Blue: LED light ON / OFF • Green: Auto scale • Yellow: image rotation

Infrared Thermal Imaging Camera InfReC F50 series: Specification BAS: Basic, STD: Standard, ONL: Online

			Basic model (with main basic functions)		Standard model		Online model	
			F50A-BAS	F50B-BAS	F50A-STD	F50B-STD	F50A-ONL	F50B-ONL
Basic Performance	Field of View*1		35°×35°	70°×70°	35°×35°	70°×70°	35°×35°	70°×70°
	Spatial Resolution		2.8mrad	5.3mrad	2.8mrad	5.3mrad	2.8mrad	5.3mrad
	Focal Distance		30cm to infinity*2	10cm to infinity*3	30cm to infinity*2	10cm to infinity*3	30cm to infinity*2	10cm to infinity*3
	Focus		Focus Free					
	Infrared Detector		Uncooled Focal Plane Array (Microbolometer)					
	Spectral Range		8 to 14μm					
	Recording Pixels		240×240 pixels					
	Frame Rate		7.5Hz					
	Measuring Range		-20°C to 350°C*4					
	Sensitivity (NETD)		0.05°C at 30°C					
	Accuracy		±2°C or ±2% (Indicated Value)*5					
Image Display	Auto Function		Auto Scale / Auto MAX / Auto point					
	Color Pallets		7 pallets (Olive, Rainbow, Brightness, Hot-white, Hot-black, etc.)					
	Gradation		256 / 128 / 64 / 16 grade					
	Visible Camera		CMOS camera 5M pixels					
	Visible/Thermal Fusion		Picture-In-Picture (with trimming function), Blending (transparency changeable, size & position adjustable)					
	Display Functions		1 to 4 times continuous digital zoom (Thermal, Visible, Fusion)					
Measuring Functions	Alarm Function		Alarm Display, Alarm Sound, Color Alarm, Alarm Recording					
	Temperature Correction		Emissivity (Full image, Multi-point), Environmental/Background, Emissivity Table					
	Point Temperature		5 Movable Points, Temperature Search:MAX/MIN ×1 each					
	Temperature Display in Assigned Region		—		BOX × 1 (MAX, MIN and AVG in Box)			
	Line Profile		—		Line × 1			
	Delta Temp		—		Delta T × 1			
Storage & Output	Storage Device		micro-SD Card, Conforms to SDHC					
	Data Storage	Data Form	Still Image : JPEG with temperature data (14 bit) Recorded with, Visible Image					
		Continuous Recording	—		Max 7.5Hz (Up to 10 sec.)			
		Interval Recording	—		3 sec to 60 min interval, with Visible Image recorded			
		Trend Graph	—		csv format			
		Line Profile	—		csv format			
		Voice Recording	30 sec Recording, replay per a Thermal image					
		Text Annotation	Annotate up to 128 Characters per a Thermal Image. Characters imported from SD Card					
	Interface	File Transfer	USB2.0 (MTP)					
		Real Time Transfer	—		—		USB2.0 Image transfer (Thermal Image with visible image. Maximum transfer speed 7.5Hz)*6	
Others	Display		4.8 inch HD (720 × 1280 pixels), Touch Panel					
	Auxiliary		LED Light (equipped Camera Unit)					
	Environment Resistance	Operating Temperature & Humidity	Camera Unit : -20°C to 70°C, 90%RH (non-condensing) / Controller Unit : -20°C to 50°C, 90%RH (non-condensing)					
		Storage Temperature & Humidity	Camera Unit : -40°C to 60°C, 90%RH (non-condensing) / Controller: Unit : -40°C to 60°C, 90%RH (non-condensing)					
		Drop, Vibration & Shock	Engineered to withstand 1m drop, 29.4m/s² (3G), 294m/s² (30G)					
		Dust & splash proof	Protection class IP64 equivalent					
		EMC	Conforms to CE regulations (Class A)					
	Power Supply	Battery	Lithium-ion (built-in) ,Battery Operation: 4 hours (Typ.) (with power saving mode)					
		AC Adapter	100V - 240V AC,50/60Hz (AC Adapter by USB cable, micro B connector)					
	Dimensions		Camera Unit : Approx. 30mm×40mm×130mm (excluding projection and cable) / Controller Unit : Approx. 169mm(H)×92mm(W)×24.5mm(D)(excluding projection and cable)					
	Weight		Camera unit : Approx. 100g / Controller unit : Approx. 400g (excluding cable)					
	Accessory		Carrying case, micro SD Card, micro SD Card Adapter, USB AC Adapter, micro USB cable (for power feeding and connection), Neck Strap, Operation Manual, Software(NS9500LT)					

*1 Tolerance : ±5% *2 For temperature accuracy : 100cm to infinity *3 For temperature accuracy : 30cm to infinity *4 Only camera Unit at the environmental temperature from 0 to 70°C. Condition at the environmental temperature from -40 to less than 0°C, measuring range is -20 to 300°C. *5 Environmental temperature : 0 to 40°C (other conditions : ±4°C or ±4%) *6 In order to transfer Thermal motion image by F50A-ONL/F50B-ONL, it is required to upgrade to "InfReC Analyzer NS9500 Professional" (optional software) ★This product is subject to the United States' Export Administration Regulations (EAR) for the reason that it incorporates U.S.-made components and parts. Depending on its destination or subsequent user's purpose or business, U.S. Government assessment and authorization prior to re-exporting, reselling or retransferring might be required. For details please consult our sales staff. • Company names and product names used are trademarks or registered trademarks of each company. The screen in the catalog is a fitting synthesis. • Description of specifications, designs, prices, etc. may be changed without notice for improvement. The color of the photograph may differ slightly from the actual product color because of printing.

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WARNINGS & CAUTIONS

- Before using 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.

• This catalog uses recycled paper for environmental protection.

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