

**Professional Thermal Imaging Camera  
With Optical Zoom – Wide-Angle to 2X Telephoto**

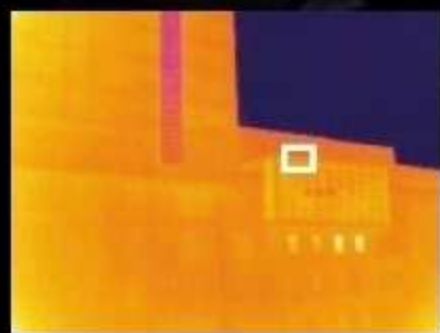
**NEW**

**R300Z**

**ECHTER OPTISCHER ZOOM  
VIER OBJEKTIVE IN EINEM**



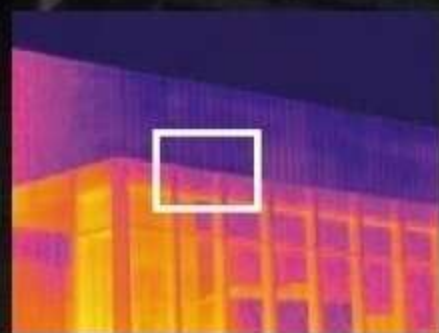
**Superb Zoom Optics, Ergonomic Design, and a Japan-made IR Detector Quickly Capture the Big Picture and Close-up Details.**



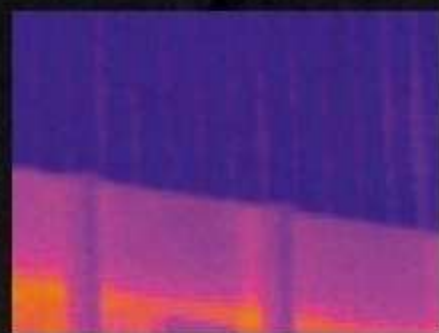
f10mm Wide-angle



f20mm



f40mm 2x Tele



f40mm + 4x digital zoom

**Zoom In & Out with a Single Lens  
Optics: 0.5x to 2x, FOV(H): 11° to 43°  
Max. Zoom: 16x including digital zoom**



**Outstanding Image Quality:  
IFOV (0.59mrad~), Sensitivity(60mk),  
Accuracy(±2°C) \***



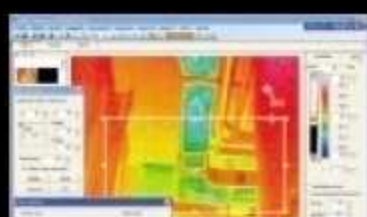
**Onboard ΔT, BOX, Max/Min Auto-tracking,  
Measurement Correction and Analysis**



**Radiometric Movie Shooting – Stored in  
Camera or to a connected PC**



**Viewfinder PLUS  
Tilting LCD Monitor Display**



**Powerful PC Software Included for  
Capture, Post-analysis and Reporting**



**Ergonomically Balanced for Comfort;  
30% lighter than previous Model  
TVS-500EX**

\*Refer overleaf for further details



ebs Automatisierte Thermographie und Systemtechnik GmbH  
**NEC/Avio** Service- & Calibration Center Zentraleuropa

<http://www.nec-avio.eu>



## Specifications

Model		R300Z/ R300ZD			
Basic Performance	Temperature Range	-40°C to +500°C, in 3 Ranges			
	Thermal Sensitivity (N.E.T.D.)	0.06°C at 30°C, Range1			
	Accuracy	±2°C or ±2%, whichever is greater (f10, f20 and f40mm) (*1)			
	Detector Type	320(H) x 240(V) Uncooled Focal Plane Array (Microbolometer)			
	Spectral Range	8 to 12µm			
	Frame Rate	60Hz (R300ZD: 8.5Hz)			
	Focal Length	f10mm	f20mm	f30mm	f40mm
	Field of View (H) x (V)	43° x 32°	22° x 16°	14° x 11°	11° x 8.1°
	Spatial Resolution (I.F.O.V.)	2.4mrad	1.2mrad	0.78mrad	0.59mrad
	Focusing range	30cm to infinity	1m to infinity	3m to infinity	
A/D Resolution	14bit				
Operating & Set-up Controls	Focus	Manual			
	Setting of Level/Sense/Span	Auto / Manual			
	Multiple Language Menu	16 Languages (English, Danish, Dutch, Finish, French, German, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Swedish, Simplified Chinese and Traditional Chinese)			
	Correcting Function	Correction for Emissivity, Distance, Environmental Reflection, Background and Drift : black body source aided auto drift correction			
Display Performance	Image Quality Improvement	Average, Median Filter, Edge Enhancement			
	Thermal / Visual Image Integrated Display	Fusion and Picture-In-Picture with Alpha Blending, and Split-Screen Display of Thermal / Visual Image (*2)			
	Color Palette	Rainbow, Iris, Brightness, Hot Iron, Hot Black, Hot White			
	Gradation	256, 16 and 8 tones			
	Grid Overlay	Provided			
Measurement & Analysis Mode	Digital Zoom	1-4x Continuous			
	Multipoint Temperature Display	10 Points (Emissivity Correction Capable)			
	Emissivity Back-calculation Function	Entering known temperature of a point to calculate emissivity back			
	ΔT (Delta Temperature)	Temperature Difference Between Two Points			
	BOX Temperature Analysis	Temperature Display of Max/ Min/ Average in Assigned Region (for up to 5 Boxes)			
	Profile	Horizontal / Vertical			
Image File Storage	Temperature Search Function	Searching Max/ Min Temperature, Automatic Display of Each Position			
	Alarm Function	Alarm Sound, Alarm Display, Color Alarm, External Alarm Output			
	Storage Medium	SD Card, compatible to SDHC			
	Thermal Image Movie	Provided (1~10fps). Storage in SD Card (R300ZD: 1~8.5fps)			
Interfaces	Still Image	Radiometric JPEG, 14bit & Visible simultaneously recorded			
	Interval Recording	3 sec to 60 min, Automatic Recording of Thermal/ Visible Image			
	Event Trigger Recording	External and Alarm-Programmed Trigger Saving			
	USB	USB2.0 : Fully Radiometric 14bit Thermal/ Visible, Mass Storage Function, Real-Time Transfer to PC			
Others Specifications	External Input/ Output	Alarm Output/ Trigger Signal Input (Contact closure, no voltage)			
	Remote Control	Wired Remote Control Unit Provided			
	Video Output	NTSC / PAL Changeover			
	Laser Pointer	Provided (Class-2 Red Color)			
	Visual Camera	3.1mega Pixels CMOS Camera (*2)			
	LED Light	Provided (*2)			
	Voice Annotation	30 sec Recording / Replay per Image			
	Text Annotation	Up to 256 Characters to Each IR Image, Import Characters from SD Card			
	Display Unit	Viewfinder, 3.5 Inch Tilting LCD Monitor (320 x 240)			
	Software (Analysis/ Reporting)	InfRec Analyser NS9500PRO (Online)			
Power Source	Standard Accessories	Hard Case, AC Adaptor, Battery Pack, Battery Charger, SD Card, USB Cable, Gripbelt, Carrying (Neck) Strap, Lens-Cap, Wired Remote Control Unit, Operation Manual, PC Software (See Above)			
	Rechargeable Battery	Lithium-Ion Battery Pack (2,500mAh), 2 Hours of Continuous Use (Typical)			
Environment	AC Power (AC Adaptor)	AC100V to 220V, 50/60Hz			
	Operating Temperature/Humidity	-10°C to 50°C, at< 90%Rh			
	Vibration / Shock	29.4m/sec2(3g), 294/sec2(30g)			
	EMC	Compliant to CE (Class-A)			
Dimensions		Approx.121mm(H)x105mm(W)x285mm(D) excl projections			
Weight		1.9 kg (Including Battery Pack)			

\*1: At f=30mm: ±3°C or ±3%, whichever is greater. Temperature accuracy may be compromised by slight corner vignetting.  
\*2: Lens tube affects F.O.V. of visible light camera and LED illuminator to some extent.

## Options

Description	Model	Description	Model
AC Adaptor	RC45-09-110V/220V	LCD Hood	IRU-F01A
Rechargeable Battery Pack	T2UR18650F5928B	Portable Power (Container of 2 batteries)	TVB-C501
Battery Charger	NC-LSC05-110V/220V	Tripod (medium)	104118

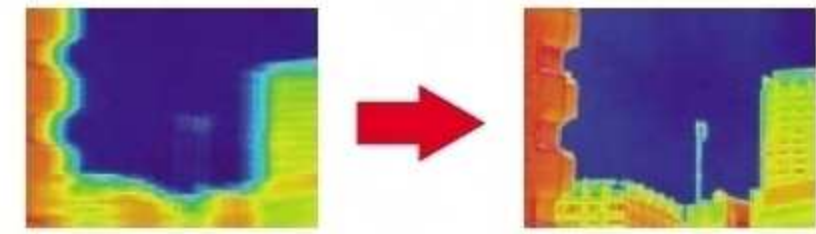
■ Listed specifications, appearance and design are subject to change without notice. ■ Company and commodity names are trade names or registered trade marks of each company. ■ NEC Avio Infrared Technologies Co., Ltd. will not be responsible for any damage of infrared detectors due to incoming strong 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.

## Multi-Purpose, High Quality R300/R300S/R300Z

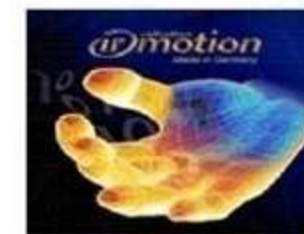
Advanced features of the R300 series IR cameras, including the high resolution R300S and R300Z, offer professional performance for a wide variety of applications. Visit our website for details.

## Improved Image Enhancement

Blurring effect of moving objects and telephoto images is minimized when using the averaging S/N improvement feature: "AVE(Σ) Improvement".



## irMOTION collection Infrared Software



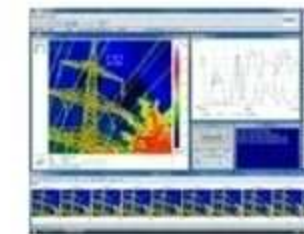
### irMOTION PREMIUM

PREMIUM Infrared image processing and documentation software for thermal single shots and sequence analysis with multitude adjustment functions and various color palettes. Field oriented Hot/Coldspot detection and converter to the most common publishing formats as AVI, JPG, BMP, TIFF for easy integration into report documents are provided. The internal data quantitative cutting studio characteristic permits a comfortable editing, allocation, reduction and chaining of relevant thermal image information, measurement data and events. It is easy to process embedded JPEG-photographs from the daylight camera and WAV speech annotations. Data consistency to other MS-Windows based applications is provided.



### irMOTION PREMIUM plus

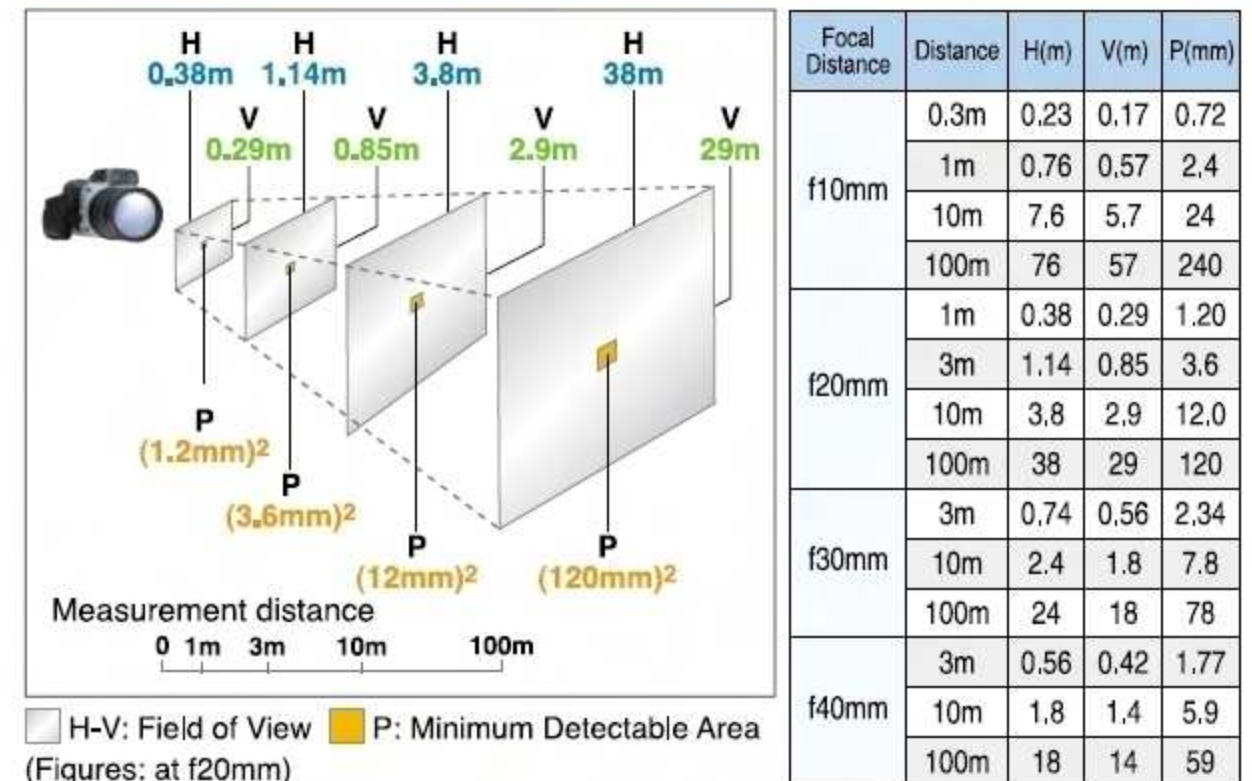
PREMIUM plus provides extended more in-depth analysis features as line profiles and histogram chart. Setting numerous measurement points, line profiles, poly lines and multiple area figures regarding their individually emissivity and local reflected temperatures are standard. Illustrating of corrected local temperature conditions, automatic span calculation for object-related temperature scales, xT-diagram as time plotting and minimized statistical evaluation are obligatory ISO-Themes view, dew point and atmospherically calculation model, selective filtration of relevant temperatur events, distribution chart for lines and areas and statistic image analysis function. Image subtraction and daylight photography transparency representation of Infrared images in a semi-transparent Mixedmode-condition. Further there is project-related object administration as custom form based (Templates) Reporting-kit with export function to RTF or PDF Documents.



### irMOTION PROFESSIONAL

PROFESSIONAL predominantly stays for a remarkable FireWire (LAN, HDCP, USB2, RS-422...) On-line based burst recording software class. Distinguishing feature is the extensive Trigger-package (TriggerBox for external I/O) with ultra-high-speed digital Processing. The Multi-Thread Technology allows simultaneous displaying, digital stores, data retrieves, trigger access and analyzes of live infrared images scenarios. Contemporaneously executes multiple local emissivity setting with live color indications, animated distribution charts and uncompressed digital recording to HDD in 60 Hertz independent of any RAM Memory limitation.

## FOV by Distance by Focal Length



## Service & Calibration Center Germany

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