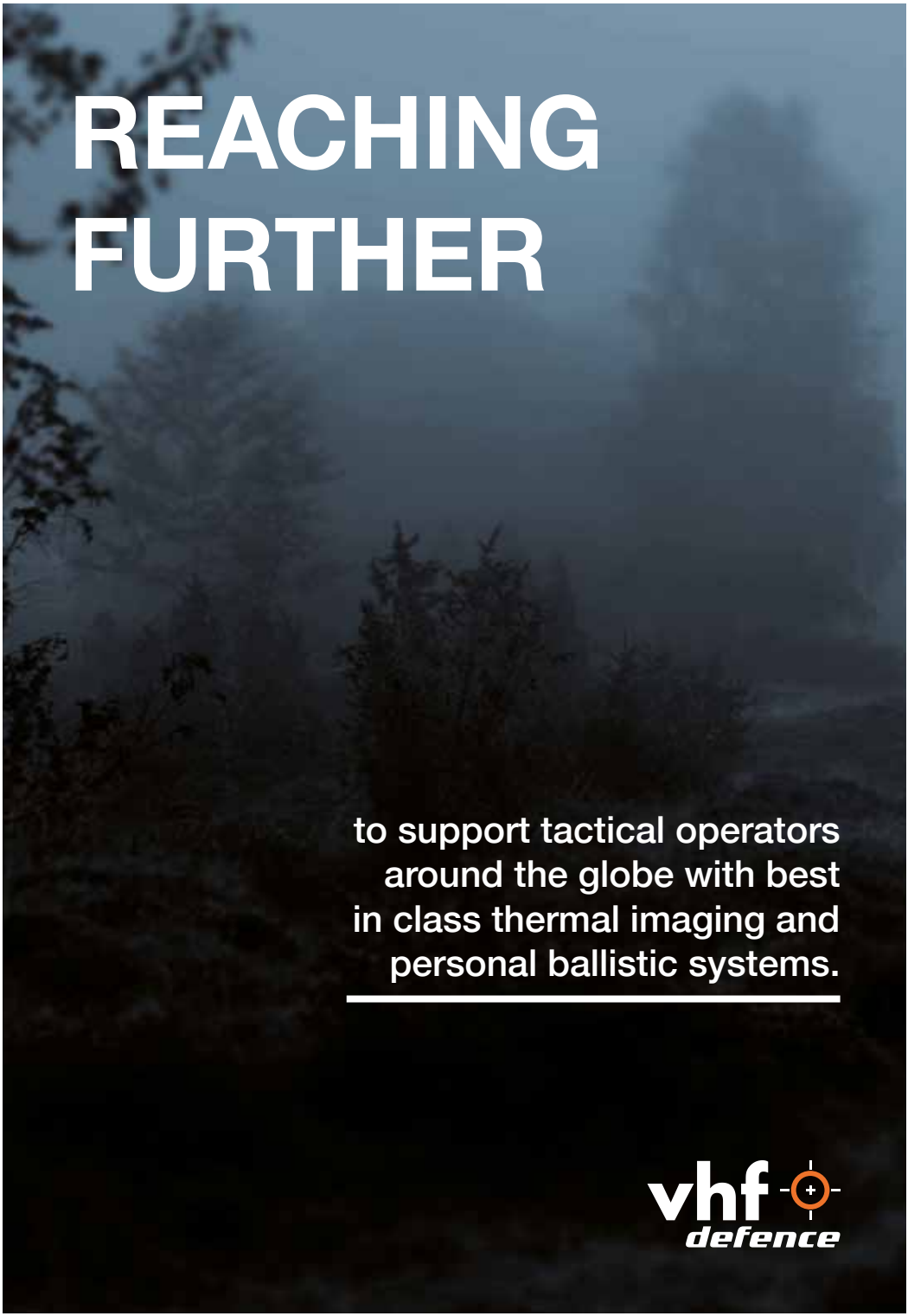

REACHING
FURTHER
to support tactical operators
around the globe with best
in class thermal imaging and
personal ballistic systems.
vhf
defence

PRODUCTS AND SOLUTIONS

Our products focus on thermal imaging and exterior ballistics. Both requiring core competences in processing intensive real time computations. Competences we gained not only in defence but as well throughout numerous projects for industrial, medical and automotive customers.
With this strong basis and our broad range of intellectual property, we are able to adapt to customers needs and offer the best package for your application.

ENGINEERING SOLUTIONS

An extensive portfolio of intellectual property and our design expertise allows us to rapidly adjust our products to customer's requirements or offer comprehensive engineering solutions. All our products are developed in-house by a team of dedicated engineers, covering the complete design flow from construction to electronic and software design.

EXTERIOR BALLISTICS

Without precise exterior ballistic computations the best weapon system could not perform at its best. A fact long known in the defence industry! But even though vehicle based weapon systems have been using integrated ballistic computation for decades, tactical operators are still left with paper- and guesswork or some barely usable electronics.

We aim to provide integrated and easy to use solutions throughout the complete range of devices in use by operators nowadays.

Please address us for a demonstration of benefits you can get from our products or those from partner companies integrating our intellectual property.

THERMAL IMAGING

As camouflaging techniques are evolving, thermal imaging is getting more and more important at night and day. Independent of lighting conditions it allows an operator to easily detect partially covered or camouflaged objects and will also work in fogged or smoke filled environments.

Our growing selection of thermal imaging devices covers operating distances from short to long ranges. All devices are designed for flawless operation and best in class usability.

They have been engineered entirely by vhf defence GmbH with key components sourced in Europe (sensor, microdisplay, optics, etc.). By using our own intellectual property we can react swiftly to user feedback and offer a high degree of customizability; user interface, false colors or customized reticles to name a few.


raubtier
THERMAL IMAGING SOLUTIONS

THERMAL IMAGING DEVICES

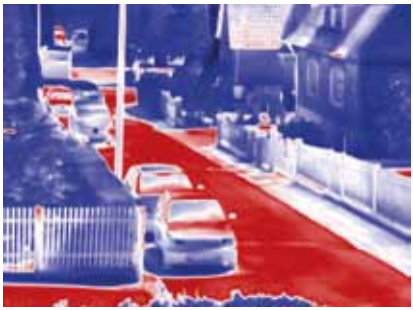
The line-up of our thermal imaging devices is distinguished by sensor and objective size, which directly relates to a device's working range.

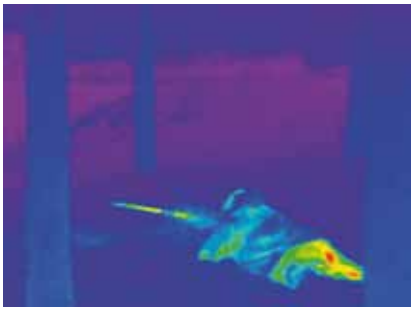
Objective Size	Sensor Size		
	320 × 240	640 × 480	1024 × 768
17 mm	**340m* / 34° FOV** TS-320-17 TV-320-17 Q4 2014	**500m* / 45° FOV** TS-640-17 TV-640-17 Q4 2014	we are currently working on it
25 mm	**500m* / 23° FOV** TS-320-25 TV-320-25 in production	**750m* / 31° FOV** TS-640-25 TV-640-25 in production	
75 mm	**1500m* / 7.5° FOV** TS-320-75 TV-320-75 Q2 2014	**2200m* / 10.5° FOV** TS-640-75 TV-640-75 Q2 2014	
100 mm	on special request only	**2950m* / 7.8° FOV** TS-640-100 TV-640-100 Q4 2014	

* Detection range for human sized target (dependent on athmospheric conditions)

TS: Thermal Sight (with reticle and stadimeter)

TV: Thermal View (without reticle)





All devices feature a rugged but lightweight design and are available with sensor resolution of 320 × 240 and 640 × 480 pixel at 60 Hz. The intelligent processing algorithms constantly analyze the captured scene and adjust the camera's parameters to provide a naturally looking image, similar to that of a black & white camera, and ensures no information is lost in an over- or under-exposed representation. This reduces the amount of interaction required by the user to a minimum.

All devices are also available without reticle for civilian use.

Raubtier TS-640-25
medium range thermal imager

Raubtier TS-640-75
long range thermal imager

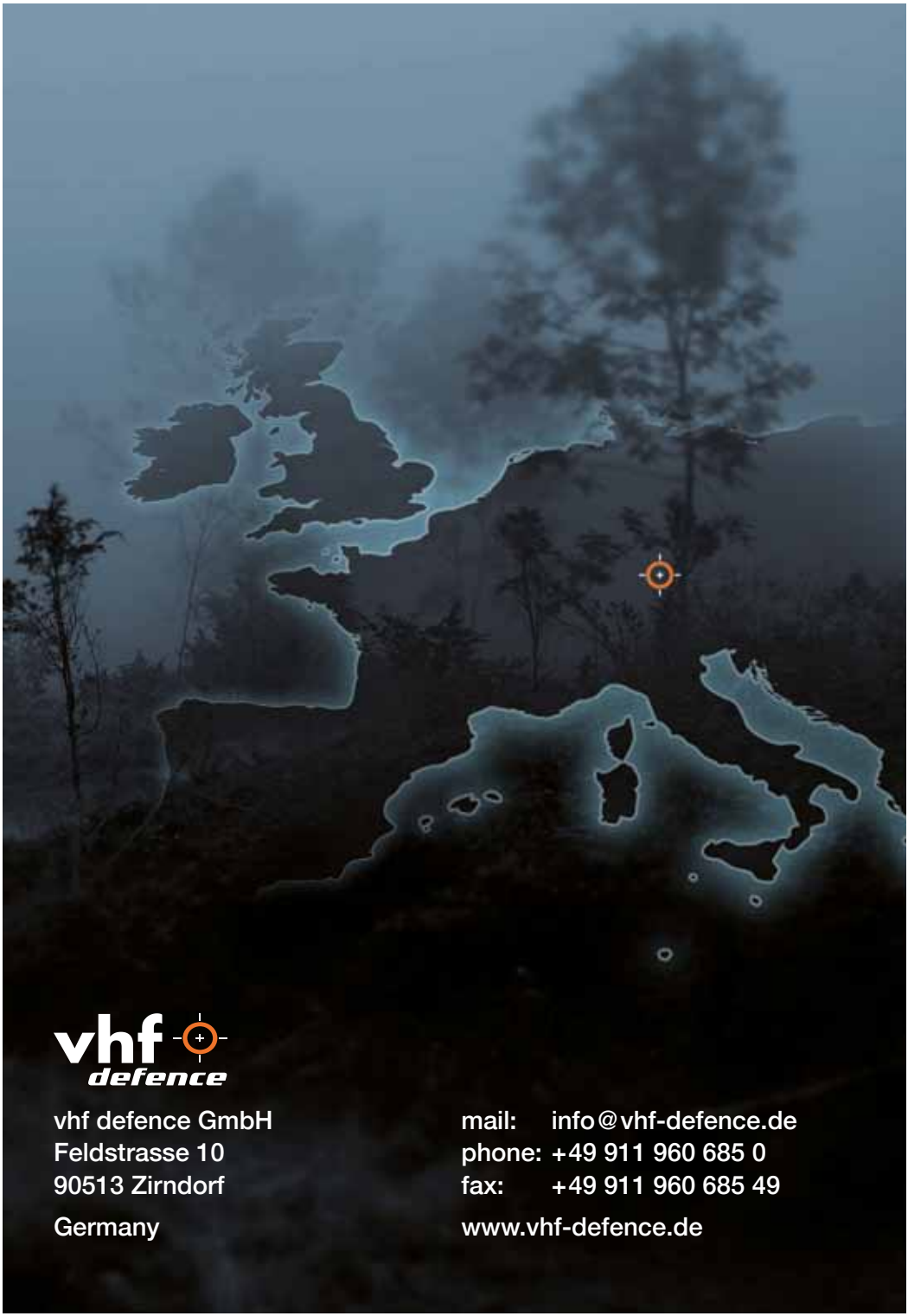
KEY FEATURES

- Modular, compact and lightweight system design
- Un-cooled α-Si thermal sensor designed for high reliability and long life
- 640 × 480 or 320 × 240 resolution at 60 Hz
- Shutterless adaptive non-uniformity correction
- Adaptive local contrast enhancement
- Digital 2× /4× zoom
- Image capturing with USB download interface
- External composite video output
- Short startup-time
- Made in Germany with European key components

TECHNICAL SPECIFICATIONS

	TS-640-25	TS-320-25	TS-640-75	TS-320-75
Physical				
Weight with batteries	< 420 grams		< 890 grams	
Length	143 mm		175 mm	
Height	54 mm		89 mm	
Width	67 mm		89 mm	
System				
Frame Rate	60 Hz		60 Hz	
Detection Range *	750 m	500 m	2200 m	1500 m
Boresight Accuracy	within 0.3 mrad		within 0.3 mrad	
Start-Up Time	2 seconds max		2 seconds max	
Video Output	PAL composite video		PAL composite video	
Optical				
Field of View (diagonal)	31°	23°	10.5°	7.5°
Eye Relief	25 mm minimum		25 mm minimum	
Diopter	+5 to -5 adjustable		+5 to -5 adjustable	
Focus Range	0.5 m to infinity		8 m to infinity	
Sensor (FPA)				
Technology	uncooled α-Si		uncooled α-Si	
Format (pixel)	640 x 480	320 x 240	640 x 480	320 x 240
NETD	< 55 mK		< 55 mK	
Environmental				
Operating Temperature	-30°C to +70°C		-30°C to +70°C	
Storage Temperature	-40°C to +80°C		-40°C to +80°C	
Protection	MIL-STD 810g		MIL-STD 810g	
Operational				
Batteries	2 CR123 Lithium		2 CR123 Lithium	
Battery Life	approx. 4.5 hours		approx. 4.5 hours	

* moving man (approx.)



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