



PRODUCT
BROCHURE
2025

SHORT, MEDIUM & LONG RANGE CAMERA SOLUTIONS

T25-SERIE

Evve Long Range B.V. (ELR) is manufacturer of short, medium and long range (multi) sensor solutions with visual cameras, thermal cameras, laser range finders and/or search lights. ELR offers state-of-the-art cameras with superior sensors, setting high standards in the market for Detection, Recognition and Identification (DRI) performance.

ELR creates and manufactures it's own solutions, specifically designed to meet the costumer's requirements, whether it considers a product or a total integrated system. The T25-serie camera systems comes with an extensive option list.

All cameras are turn-key solutions, completely pre-assembled and set-up at the factory. This will reduce the installation time to an absolute minimum.

The cameras use an open protocol, like ONVIF S and Pelco D Extended and are fully integrated with radar systems and Vessel Tracking Monitoring & Information System (VTMIS).

All the ELR products are built according to the MIL-810F standards and are suitable for all weather conditions and harsh environments.

APPLICATIONS

- ✓ MEDIUM & LONG RANGE SURVEILLANCE
- ✓ PORT PROTECTION - VESSEL TRAFIC MONITORING (VTMIS)
- ✓ BORDER PROTECTION
- ✓ CRITICAL INFRASTRUCTURE PROTECTION
- ✓ AIRPORT PERIMETER SURVEILLANCE
- ✓ PIPELINE SECURITY

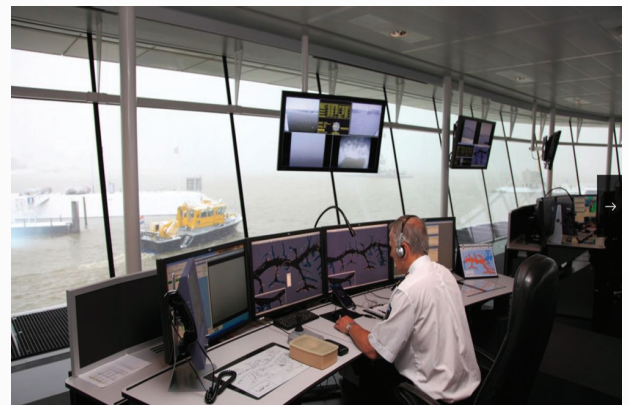
2/11

MARITIME SOLUTIONS (VTMIS)

The VTMIS is a proven solution for safe, efficient and secure flow of traffic in ports, waterways and coastal regions. Easily scalable from single radar, single camera, single display solutions to multiple traffic centers with extensive radar and AIS networks at national levels.

The VTMIS provides authorities with the means to guide, assist and manage all shipping within their areas of interest. High availability redundant configurations, integrated recording & replay, training simulator and unparalleled target tracking make the VTMIS the most complete system on the market.

ELR camera systems provide the software with eyes to observe traffic on long distances. The VTMIS will pass along the command to the camera systems in order to follow the vessels when they enter and leave the harbour.



- The information is transferred by the radars and cameras to the operator.
- For ISPS certification of a port, long range cameras are required.
- The camera systems are adjustable to your integration requirements

BORDER PROTECTION

Securing land and coastal borders requires round-the-clock, all weather, long distance surveillance technology. Border protection systems need to scan wide areas and identify targets in real time, assessing whether the intruders are illegal immigrants or refugees, smugglers, terrorists or enemy forces.

The ability of our camera systems to detect human-sized targets many km/miles away makes them ideal for land and coastal border surveillance and protection. ELR has developed the systems so that a critical application as the border can be provided with a reliable turn-key solution.

KEY FEATURES T25-SERIE

3/11

- ✓ Ranges up to 23 km for human detection and 27 km for vehicle detection
- ✓ Long range thermal lens options (up to 1,500 mm), including HD thermal sensor
- ✓ Long range lenses (up to 2,066 mm with extender), including HD visual sensor
- ✓ Option to add AI software, transforming the camera into a smart camera
- ✓ Integrated with multi-sensors and radars
- ✓ Anti fog and image stabilization capabilities
- ✓ Absolute positioning feedback for radar control
- ✓ 360° continuous rotation for pan and 180° for tilt
- ✓ Virtually zero backlash with automatic self position correction
- ✓ Optical encoders for preset accuracy (0.015° repeatability)
- ✓ Unique foresight positioning for fast alignment
- ✓ Pay-load up to 120 kg
- ✓ Ultra slow pan speeds, selectable from 0.01° per second to 120° per second
- ✓ Unique rapid release mechanism allows cameras to be quickly changed in the field
- ✓ ONVIF Profile S compliant
- ✓ Ultra-rugged for extreme/marine use: Teijin carbon fiber housing, 8 strings, 24,000 fibers/string, optimally angled for max resistance.
- ✓ An ultrasonic process makes the lens vibrate subtly, repelling water and de-icing if needed.

GENERAL SPECS

SYSTEM

IP Rating (dust & water ingress)	IP67
Operating temperature range	- 32 °C to + 55 °C
MIL STD	461G (CE101, CS102, RE101, RE102), 810H (High/ low temperatures, shock/ vibration), IP67, IK10
Sealed	Yes, perged with Nitrogen
Connectors	Amphenol
Weight	42 - 85 kg
Input Voltage	Selectable 24 VDC / 110 VAC / 230 VAC
Output	Data, Optional: Fiber Optic
Power Consumption	65 W

PAN & TILT UNITS

Pay-load	Up to 120 kg
Pan angle	Continuous 360° 0.01° to 120°/sec
Tilt angle	Up to ± 90° 0.01° to 48°/sec
Backlash	Zero Backlash (Strain wave gearbox compliance <0.01°)
Accuracy	Optical controlled

VISUAL CAMERA SPECS

VC

Video type	12MP (4K UHD) CCTV camera
Sensor type	1/2.3-inch CMOS
Min. subject illumination in 1,080 mode	Color: 0.09 lx, B/W: 0.03 lx
Day & Night (W/B Switching) Video output	Color, Monochrome, Auto (adjustab. switchover points)
Menu	Through IP/ webpage or Bosch camera tool
Fog & smoe reduction	Intelligent Defog automatically adjusts parameters in foggy/ misty scenes (switchable)
Video noise control	Intelligent Dynamic Noise Reduction Intelligent Streaming
Pixel size	UHD 3,840 x 2,160 (at 30 fps)
Resolution - total	4,000 x 3,000 (at 20 fps)
Sensitivity	3,200K, 89% reflectivity, 30% IRE, F1.2
Remote backfocus adjustment	Yes, through webpage
Frame rate	5-30 fps per second

4/11

LENS SPECS

The customer can choose between a medium zoom and a super zoom lens.

LENS TYPE	MEDIUM ZOOM (MZ)	SUPER ZOOM (SZ)
Zoom	33 x zoom, 12 - 500 mm	66 x zoom, 16 - 2,060 mm
Zoom speed	4 sec	6 sec
Internal extender	No	Yes
Day/night filter	No	Yes
F/Number	F 1.4	F 1.2
Auto focus	Yes: automatic (short/long) & manual	Yes: automatic (short/long) & manual



DRI RANGES VISUAL CAMERA

JOHNSONS CRITERIA *

How far can the camera detect a target? This a good criterion to qualify one sensor from another, considering the final application. The answer to this question typically include "DRI ranges", which stands for Detection, Recognition and Identification, in this brochure expressed in meters.

In order to select the right sensor, meeting the application requirements, these DRI ranges have to be perfectly defined, but also assessed with regards to globally adopted industrial standards. Johnson's model provides definitive criteria for calculating the maximum range at which Detection, Recognition, and Identification could take place, with a 50% probability of success. Although newer methodologies for DRI exist today, the Johnson's Criteria system is still widely used in the security industry today.

5/11

EXAMPLES OF DRI RANGES (NARROW LENS)

CAMERA / LENS TYPE	VCMZ			VCMZ		
	D	R	I	D	R	I
Human	11,000 m	7,000 m	3,000 m	23,000 m	20,000 m	12,000 m
RIB Size	14,000 m	8,500 m	5,000 m	27,000 m	23,000 m	20,000 m

* Human 1.8 m², vehicle 2.3 m², Detection at 2 px, Recognition at 8 px and Identification at 13 px.
50% probability subject to environmental conditions.



IMAGE 18 KM



IMAGE WITH SUPER ZOOM LENS, EXTENDER ENABLED



NORMAL IMAGE WITH FOG



IMAGE WITH FOG FILTER

FURTHER OPTIONS

6/11

ACTIVE INTERNAL TEMPERATURE CONTROL (T)

ELR cameras are specially built for surveillance in challenging environments. Our heat and cold technology without moving parts is unique and ensures that the temperature inside always stays between 20 and 25 °C. This is advantageous, i.e. in the desert border area. Our systems are the most rugged in the world.

VIDEO STABILIZATION & STREAMING (VSS)

Our video enhancement and stabilization software will give a stable and enhanced picture because of adaptive, real-time, video enhancement and analysis technology. The ELR video streaming solution takes care of converting the HD SDI video signal into a compressed IP signal without losing the video resolution/quality.

ARTIFICIAL INTELLIGENCE (AI)

Option to add AI software, transforming the camera system into a smart system.

SEARCH LIGHT (SL)

ELR produces the most advanced high-intensity search lights used in military, border and law enforcement applications. Our patented Galilean-telescope optical system is capable of uniform illumination of targets at over 5 km in visible light and over 2.4 km in invisible infrared for use with night vision devices.



LASER RANGE FINDERS (LRF)

The most reliable and powerful diode laser range finders (LRF) are ours. Our diode LRF modules efficiently measure distances to non-cooperative targets up to 5 km, 10 km or 20 km away (dependent on the type of LRF) with very high precision. With their compact and robust design and very low weight, starting at just 33 grams, they are the smallest and most lightweight modules in their performance class.



GYRO STABILIZATION (G)

Gyro stabilization works by mounting a state-of-the-art FOG (Fiber Optic Gyroscope) or MEMS (micro-electro-mechanical systems) gyroscope to the camera base that measures any movements that might occur. When the gyroscope senses movement, it then sends a command to the pan/tilt unit to counteract that movement by applying the opposite rotation to the camera. This keeps the image on target, even with massive shifts in movement (up to the rotation limits of the pan/tilt). ELR custom configures the camera system for the needs of the specific situation.

OPTIONS SHORTLIST

MZ	Medium zoom lens
SZ	Super zoom lens
T	Temp. control
VS	Video enhancement & stabilization
S	Video streaming
AI	Artificial Intelligence
SL	Search light
LRF	Laser range finder
G	Gyro stabilization
O	Optical tracking
UTF	Uncooled thermal camera - Fixed lens
UTZ	Uncooled thermal camera - Zoom lens
CTZ	Cooled thermal camera - Zoom lens

FURTHER OPTIONS

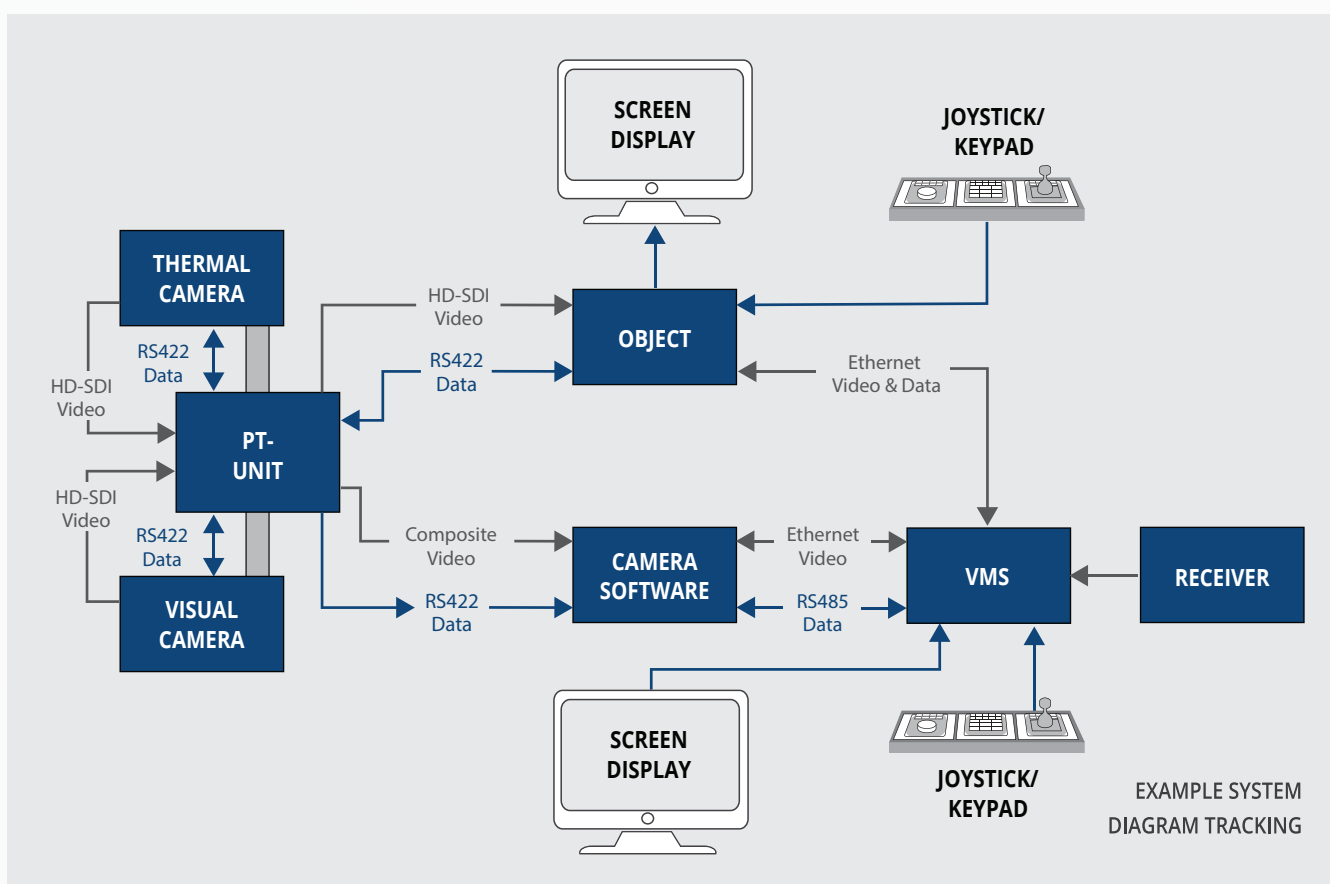
OPTICAL TRACKING (O)

Tracking functionalities need to be split into two categories:

1. Tracking of vessels or aircrafts that are sending a transmitting signal (AIS or ADS-b), which can be picked up by an AIS or ADS-b receiver. The receiver will detect the absolute position of the vessel or aircraft. Thereafter the converter can slew-to-cue the camera to the correct position. The transponder will automatically keep sending its information to the receiver so that the camera
2. Tracking of vessels or aircrafts that don't have such a transponder. These vehicles can be tracked manually (see further) or by means of a radar. When tracking manually, only limited information about the object is available. When tracking by radar, the radar will detect the absolute position of the object. Thereafter, the converter can slew-to-cue the camera to the the correct position so that the automatic object tracker will be able to track the object.

With the ELR optical tracking system, both categories can be tracked: automatic and manual.

7/11



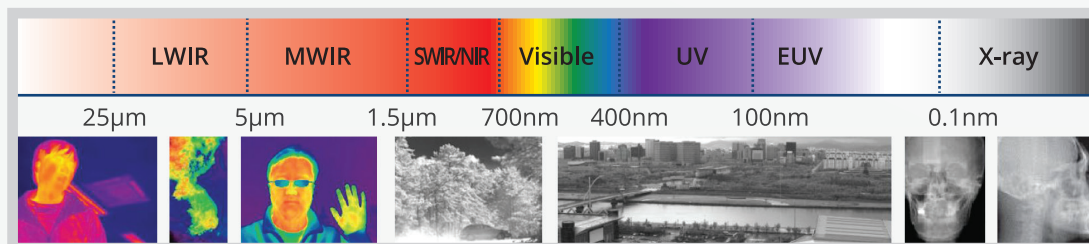
THERMAL CAMERAS

ELR makes use of the best partners for our thermal cameras, together with them developing the best thermal solution for the end user.

- ✓ Cooled and uncooled thermal cameras for medium and long range distances.
- ✓ Different detectors and lense sizes.
- ✓ ITAR/ETAR controlled cameras or only EXPORT LICENSE controlled cameras, cooled and uncooled.
- ✓ Technology for long life coolers up to 50.000 hours.
- ✓ The menu is controlled by a standard Pelco D keyboard.
- ✓ ELR writes all interfaces and develops its own software for controlling the cameras and all their options inhouse.

THERMAL CAMERAS

EXPLANATION OF WAVE LENGTH (PIXEL PITCH):



8/11

UNCOOLED THERMAL CAMERAS - ZOOM LENS (UTZ):

	UTZ-75LRB	UTZ-150LRB
Pixel pitch	12µ	12µ
Sensor size	640 x 480	640 x 480
Camera type	Uncooled LWIR continuous zoom	Uncooled LWIR continuous zoom
F/Number	F# 1.2	F# 1.4
Lens	15 - 75 mm (28.7° - 5.9°)	25 - 150mm (17.5° - 2.9°)
Vehicle D	7,500 m	14,200 m
R	3,100 m	6,200 m
I	2,100 m	4,200 m
Human D	3,900 m	7,800 m
R	800 m	1,700 m
I	500 m	1,000 m
	UTZ-225LRB	UTZ-300LRB
Pixel pitch	12µ	12µ
Sensor size	640 x 480	640 x 480
Camera type	Uncooled LWIR continuous zoom	Uncooled LWIR continuous zoom
F/Number	F# 1.4	F# 1.5
Lens	24 - 225 mm (17.5° - 2°)	40 - 300 mm (11° - 1.5°)
Vehicle D	16,400 m	18,800 m
R	8,500 m	11,000 m
I	5,900 m	7,700 m
Human D	10,100 m	12,000 m
R	2,300 m	3,100 m
I	1,400 m	1,900 m



THERMAL CAMERAS

COOLED THERMAL CAMERAS - ZOOM LENS (CTZ):

	CTZ-275	CTZ-300
Pixel pitch	15μ	15μ
Sensor size	640 x 512	640 x 512
Camera type	Cooled MWIR continuous zoom	Cooled MWIR continuous zoom
F/Number	F# 5.5	F# 4.0
Lens	19 - 275 mm (28.4° - 2.0°)	15 - 300 mm (35.5° - 1.8°)
Cooling	10,000 hrs. (optional: 20,000 hrs.)	10,000 hrs. (optional: 20,000 hrs.)
Vehicle	D 16,500 m	20,100 m
	R 7,100 m	8,800 m
	I 4,900 m	6,000 m
Human	D 8,800 m	11,000 m
	R 1,900 m	2,400 m
	I 1,200 m	1,400 m

	CTZ-700	CTZ-900
Pixel pitch	15μ	15μ
Sensor size	640 x 512	640 x 512
Camera type	Cooled MWIR continuous zoom	Cooled MWIR continuous zoom
F/Number	F# 5.5	F# 4.0
Lens	48 - 700 mm (11.1° - 1.0°)	45 - 900 mm (11.4° to 0.61°)
Cooling	10,000 hrs. (optional: 20,000 hrs.)	10,000 hrs. (optional: 20,000 hrs.)
Vehicle	D 28,200 m	31,200 m
	R 17,300m	22,700 m
	I 12,100 m	16,800 m
Human	D 20,000 m	24,200 m
	R 4,400 m	7,000 m
	I 3,000 m	4,300 m

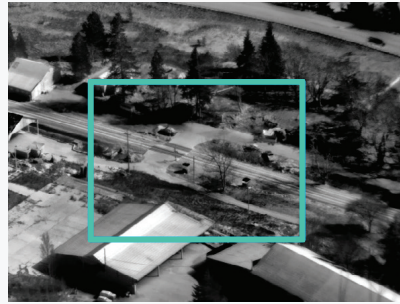
	CTZ-HD180	CTZ-HD450	CTZ-HD1000
Pixel pitch	6μ	6μ	10μ
Sensor size	1,280 x 960	1,280 x 960	1,280 x 1,024
Camera type	Cooled MWIR continuous zoom	Cooled MWIR continuous zoom	Cooled MWIR continuous zoom
F/Number	F# 2.6	F# 2.6	F# 4.0
Lens	18 - 180 mm (24.1° - 2.4°)	25 - 450 mm (17.5° - 1.0°)	66.7 - 1,000 mm (10.5° - 0.6°)
Cooling	70,000 hrs.	70,000 hrs.	70,000 hrs.
Vehicle	D 22,500 m	31,000 m	60,000 m
	R 10,700 m	22,600 m	45,000 m
	I 7,300 m	17,000 m	22,500 m
Human	D 13,100 m	23,000 m	33,000 m
	R 2,900 m	7,000 m	10,000 m
	I 1,800 m	4,400 m	7,000 m



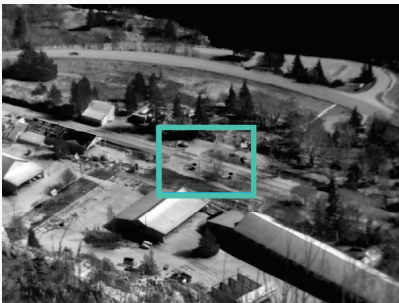
THERMAL CAMERA EXAMPLE



WIDE

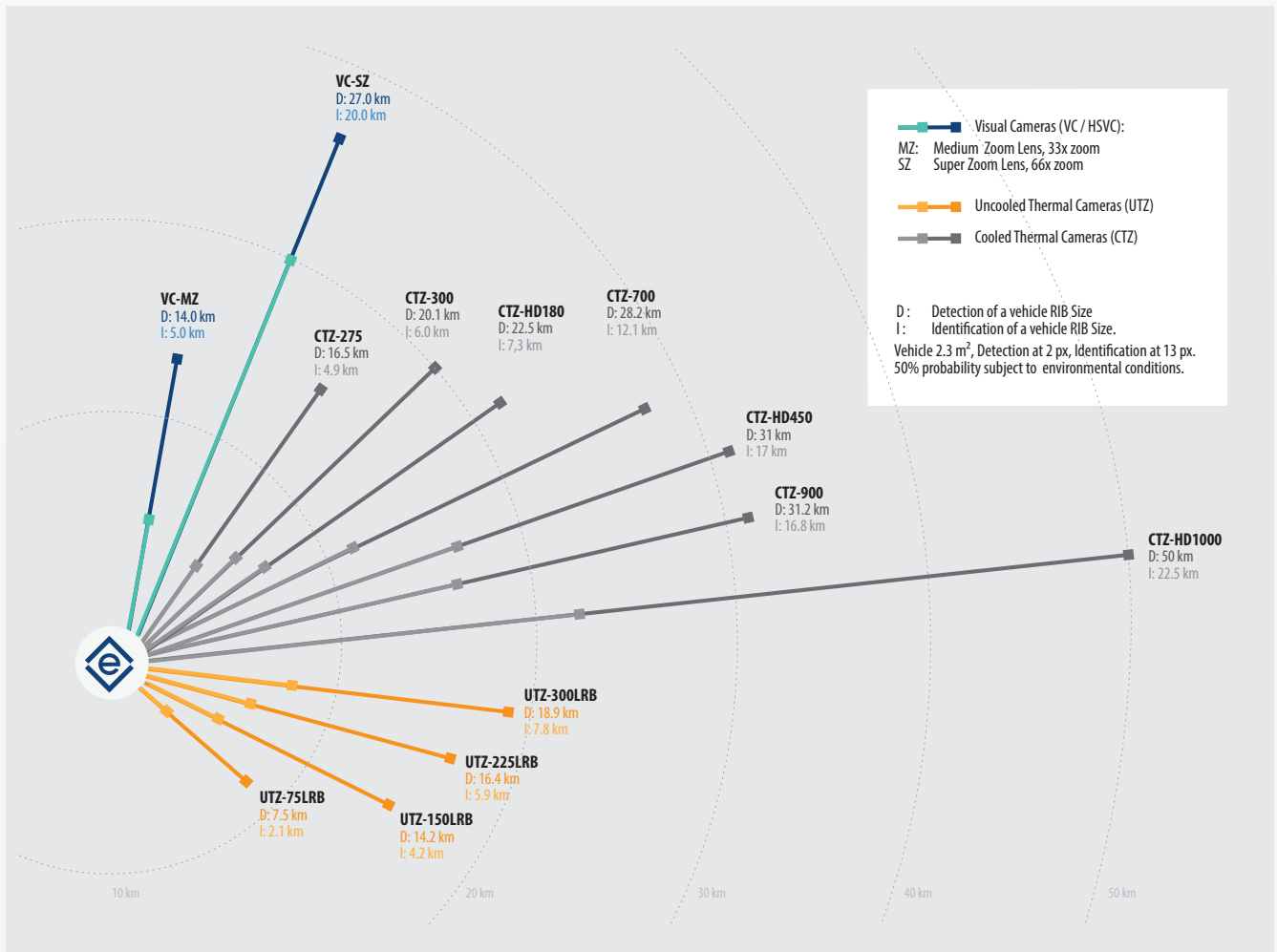


NARROW



10/11

OVERVIEW DRI RANGES





📍 De Wel 20
3871MV Hoevelaken
The Netherlands

📞 +31 (0) 85 303 76 59 (NL)
✉️ info@evvelongrange.com
🌐 www.evvelongrange.com

CONTACT
US