



# OTUS – MONOCHROME

*Full-HD camera for armored vehicles*



The OTUS M-Series is a series of Military Off The Shelf (MOTS) full-HD monochrome cameras. The OTUS has been developed to ensure that drivers of military vehicles can safely navigate and manoeuvre during both day and night in poor-visibility conditions without the use of lighting equipment on vehicles, supplementary infra-red lighting, or lasers.

Suitable for any application where reliability is a must, OTUS is housed in a weatherproof, hermetically sealed enclosure to withstand extreme environmental conditions.



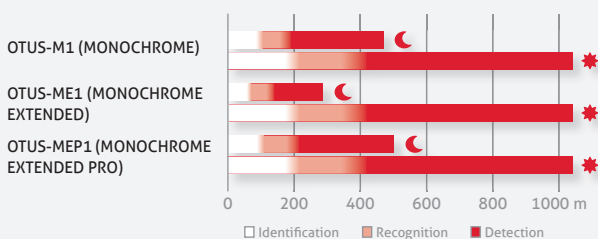
## KEY FEATURES

- Safe driving: excellent vision
- Military Off The Shelf product, no ITAR components involved
- Multiple fusion modes
- Plug & Play, user friendly module
- Integrated driving and distance lines
- Low system latency  $\leq 25$  ms
- Optional motorized protection cover

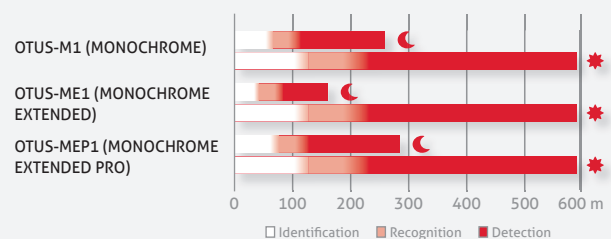
## DETECTION | RECOGNITION | IDENTIFICATION



NATO standard test target (2.3 x 2.3 m)



MAN (1.8 x 0.9 m)



## TECHNICAL SPECIFICATIONS – OTUS MONOCHROME

	OTUS-M1 Monochrome	OTUS-ME1 Monochrome Extended	OTUS-MEP1 Monochrome Extended Pro
<b>OPTICAL – DAY SIGHT</b>			
Field Of View - HxV		85° x 51°	
Image size (pixels)		1920 x 1080	
F#		2	
Sensor type		CMOS Monochrome	
Sensitivity		< 0.02 lx (full moon)	
Wavelength		400-1000 nm	
<b>OPTICAL – THERMAL</b>			
Field of View by night - HxV	60° x 43°	85° x 51°	85° x 51°
Sensor size (pixels)	640 x 480	640 x 480	1024 x 768
F#		1.4	
Sensor (LWIR)		uncooled 17 µm	
NETD		< 50 mK	
<b>SYSTEM SPECIFICATIONS</b>			
Latency		≤ 25 ms (720p60 / 1080i60)	
Driving direction lines		Yes	
Driving distance lines		5, 10, 20, 50 m	
Fusion modes		0 - 100% blending false color 0 - 100% blending monochrome Edge fusion Auto (enhanced fusion)	
Thermal mode		White hot / black hot	
Temperature - Operational high - MIL-STD-810G, method 501.5, procedure III, A1		+63°C	
Temperature - Operational low- MIL-STD-810G, method 502.5, procedure II, C1		-46°C	
Ingress protection		IP-67	
Shock/vibration		MIL-STD-810	
EMC		MIL-STD-461	
Communication		RS485/CAN	
Supply voltage		18-32 VDC	
Power	8 W	8 W	10W
<b>MECHANICAL DIMENSIONS</b>			
Camera (WxHxL)		195 x 95 x 200 mm (7.7 x 3.7 x 7.9 inch)	
Monitor (optional)		See Technical Specifications OTUS Monitor	
Weight <sup>(3)</sup>	3.0 kg (6.6 lb)	3.0 kg (6.6 lb)	3.4 kg (7.5 lb)



## TECHNICAL SPECIFICATIONS – OTUS MONITOR

	7" FFT	10.6"FFT	13.3"FFT
MECHANICAL DIMENSIONS			
Weight	3 kg (6.6 lb)	5 kg (11 lb)	7 kg (15.4 lb)
Dimensions (WxHxL)	245 x 165 x 35 mm (9.6 x 6.5 x 1.4 inch)	300 x 210 x 35 mm (11.8 x 8.3 x 1.4 inch)	360 x 245 x 40 mm (14.2 x 9.6 x 1.6 inch)
GRAPHICS			
Resolution	1920 x 1080		
Brightness	500 cd/m² (typical)	400 cd/m² (typical)	300 cd/m² (typical)
Viewing angles	85/85/85/85°		
Functions	Brightness, contrast, etc		
Latency	≤ 25 ms typical		
INPUT, OUTPUT & CONTROL			
Input	2 x HD-SDI (1080p30 minimal)		
Output	1 x HD-SDI		
Communication	RS485		
Supply Voltage	18 - 32 VDC		
Power	20 W (< -30°C: +20W)	30 W (< -10°C: +40W)	40 W (< -20°C: +40W)
ENVIRONMENTAL			
Shock/Vibration	MIL-STD-810		
EMC	MIL-STD-461		
Operational temperature	-46°C...+63°C (< -30°C with heater)	-46°C...+63°C (< -10°C with heater)	-46°C...+63°C (< -20°C with heater)
Storage temperature	-46°C...+71°C		
Ingress protection	IP-65		



# OTUS – COLOR

*Full-HD camera for armored vehicles*



The OTUS-C Series is a series of Military Off The Shelf (MOTS) full-HD, colour cameras. The OTUS-C has been developed to ensure that drivers of military vehicles can safely navigate and manoeuvre during both day and night in poor-visibility conditions without the use of lighting equipment on vehicles, supplementary infra-red lighting, or lasers.

Suitable for any application where reliability is a must, OTUS is housed in a weatherproof, hermetically sealed enclosure to withstand extreme conditions.



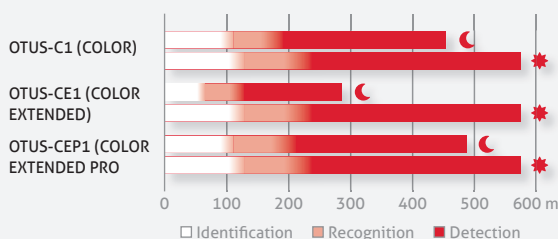
## KEY FEATURES

- Safe driving in difficult visibility conditions
- Military Off The Shelf, ITAR free
- Multiple fusion modes
- Plug & Play, user friendly module
- Integrated driving and distance lines
- Low system latency  $\leq 25$  ms
- Optional motorized protection cover & wiper

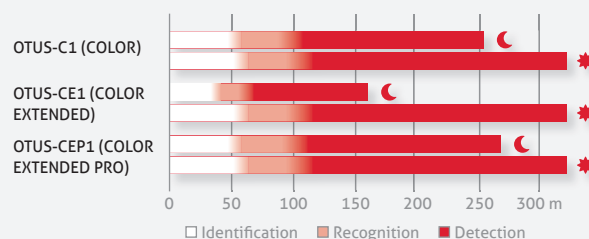
## DETECTION | RECOGNITION | IDENTIFICATION



NATO standard test target (2.3 x 2.3 m)



MAN (1.8 x 0.9 m)



## TECHNICAL SPECIFICATIONS – OTUS COLOR

	OTUS-C1 (Color)	OTUS-CE1 (Color Extended)	OTUS-CEP1 (Color Extended Pro)
<b>OPTICAL – DAY SIGHT</b>			
Field Of View - HxV		85° x 51°	
Image size (pixels)		1920 x 1080	
F#		2	
Sensor type		CMOS Color	
Sensitivity		< 0.02 lx (full moon)	
Wavelength		400-700 nm	
<b>OPTICAL – THERMAL</b>			
Field of View by night - HxV	60° x 43°	85° x 51°	85° x 51°
Sensor size (pixels)	640 x 480	640 x 480	1024 x 768
F#		1.4	
Sensor (LWIR)		uncooled 17 µm	
NETD		< 50 mK	
<b>SYSTEM SPECIFICATIONS</b>			
Latency		≤ 20 ms (720p60 / 1080i60)	
Driving direction lines		Yes	
Driving distance lines		5, 10, 20, 50 m	
Fusion modes		0 - 100% blending false color 0 - 100% blending monochrome Edge fusion Auto (enhanced fusion)	
Thermal mode		White hot / black hot	
Temperature - Operational high - MIL-STD-810G, method 501.5, procedure III, A1		+63°C	
Temperature - Operational low- MIL-STD-810G, method 502.5, procedure II, C1		-46°C	
Ingress protection		IP-67	
Shock/vibration		MIL-STD-810	
EMC		MIL-STD-461	
Communication		RS485 / CAN	
Supply voltage		18-32 VDC	
Power	8 W	8 W	10W
<b>MECHANICAL DIMENSIONS</b>			
Camera (WxHxL)		195 x 95 x 200 mm (7.7 x 3.7 x 7.9 inch)	
Monitor (optional)		See Technical Specifications OTUS Monitor	
Weight <sup>(3)</sup>	3.0 kg (6.6 lb)	3.0 kg (6.6 lb)	3.4 kg (7.5 lb)





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