www.orlaco.no

Vision is our mission®

111



DEFENSE VISION SOLUTIONS



+47 63 96 76 00 post@orlaco.no



Militairy trucks	6
Armored Personnel Carrier (APC)	8
Armored Fighting Vehicles (AFV)	10
Riot Control Vehicle	12
Light Tactical Vehicle	13



Why Orlaco?

Welcome to the Orlaco product brochure. We are personally committed to bringing you the best camera and monitor solutions possible. To help create safer and more secure workplaces around the world. Our professional team has spent over twenty-five years designing and manufacturing a variety of certified, reliable and complete camera display solutions that effectively eliminate the blind spots around vehicles, machinery and vessels. We are confident that the options offered in this brochure will not only help you to improve the safety, security and efficiency of your fleet, but also to enhance the ergonomics and comfort for your operators. That is what Orlaco stands for. We invite you to share your ideas and experiences with us.

On behalf of the entire team, Henrie van Beusekom Executive Director Orlaco



Thaťs why!

3





Improved Safety and Efficiency

Military vehicles are complex machines that require clear vision. An instant overview that allows the operation to progress smoothly and safely. Especially when the vehicles are maneuvering in small alleys and crowded environments. Drivers have minimal vision around the vehicle, and that is why it is essential to solve large blind spots in a professional manner. This is where Orlaco's camera monitor solutions could help to improve your operational efficiency and safety. Together with our IR NightView cameras and illumination, the driver can analyze the overall situation and operate the vehicle faster and more efficiently. As a Dutch Manufacturer Orlaco is also your Offset partner.

Enhanced Ergonomics and Comfort

At Orlaco, we understand that military vehicle drivers are required to take in what is happening around the vehicle at all times. Vehicles which mostly have very small windows and any number of blind spots. The driver has to turn their body this way and that to get a relative overview the situation, possibly leading to short or even long term ergonomic injuries. By viewing the Orlaco monitor located on the dashboard, the driver can maintain correct posture and work more comfortably. The driver then feels more safe, secure and in control of the vehicle, which could reduce stress and provide comfort.

Why Orlaco



Quality always wins. Orlaco lies a heavy focus on customer satisfaction through servicing and consistent manufacturing of high quality products in various custom designed formats. Quality control is an important priority at Orlaco. We work at the topmost achievable automotive levels within **TS16949**, **ISO9001 with AQAP** and **ISO14001** certification. By investing in continuous improvement, we aim for long term, satisfied customers. We firmly believe that compatibility in products, systems, and operations is a key component to creating a reliable partnership. All aspects of our products are documented clearly to achieve a zero-defect and first-time-right operation. As an official NATO Supplier (**NCAGE H1H24**) most of our quality products also include a Nato Stock Number.

5

Why Orlaco

Frontview



0400511 / 0400920 - PAGE 14 - 15

The Frontview camera provides the required visibility at the front of the truck. A guick look at the monitor and you will know whether you can drive off safely without overlooking a cyclist, pedestrian or object.

The monitor can be integrated or surface-mounted, depending on the vehicle. It is also equipped with handy options, such as automatic brightness adjustment. No matter how brightly the sun is shining or how dark it is, you always have good visibility.



INFORMATION

The new EU mirror directive came into force in 2006 and was extended in January 2007. It includes front view mirrors for all new trucks in Europe. Only an approved camera system may replace the front view mirror. The front camera provides a perfect view of the blind spot in front of the cab. This makes it possible to notice cyclists and pedestrians in time.



The front view mirror may be replaced by a front camera provided it meets, among others, the following requirements:

Mandatory front vision at forward speeds of between 0 and 10 km per hour.

• It must be possible to see the class VI field of vision. (2 m in front of and 2m across the entire width of the cab)

• The monitor and camera must meet all technical requirements.

The EG*2003/97*2005/27 directive describes the specifications that a truck's mirrors must comply with. Orlaco's front view system meets all these requirements. (See page 39)



Front-Rearview 0401971 - PAGE 15

The Frontview system can be expanded with a Rearview camera. A perfect complement to the driver's vision. It provides a comfortable field of vision to the front and rear of the truck.





Surround view



Blind spots are a thing of the past thanks to surround view. Surround view offers 360 degrees visibility around a vehicle. When manoeuvring through narrow streets or busy areas, surround view gives the driver maximum visibility on all sides of the truck via a single, central monitor. Because the camera images overlap, the driver is able to see every person and object around his vehicle.

Contact Orlaco for more information about surround view and the EU standards.

1 INFORMATION



For more information about our vision solutions for on road trucks: check our website and download our other brochures (pdf).

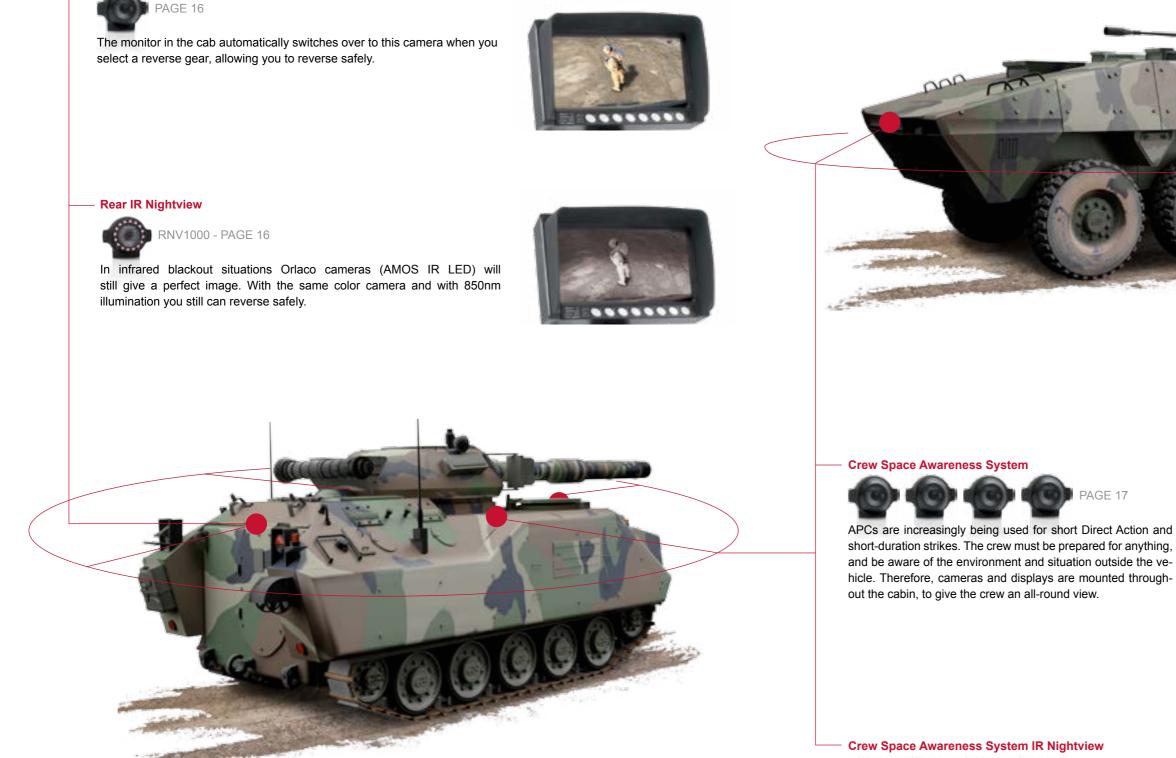
Vision solutions

Military trucks 7



Are you looking for something else? All kinds of configurations are possible! The systems described here can be combined to suit customers' requirements and can be expanded with additional cameras and monitors. Find out about the various options and configurations that are already in use and benefit from Orlaco's 25 years of experience!

Rearview



1 INFORMATION

The Orlaco assortment includes COTS and many other vision solutions. The 0507300 (page 32) provides a small, highly robust civil IR illumination, available in 870nm with a reach of 40m and the IR LED cameras have a range of 15m. We can also provide switching, video distribution, and MultiView solutions in PAL or NTSC for your safety around the vehicle. Ask us about recording, zoom, thermal imaging, and ruggedized displays.

PAGE 17

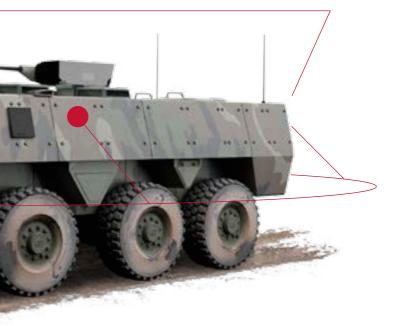
short-duration strikes. The crew must be prepared for anything, and be aware of the environment and situation outside the vehicle. Therefore, cameras and displays are mounted throughout the cabin, to give the crew an all-round view.



Of course these actions do not just take place in daylight. The same awareness is needed in the dark. Our MILMOS COTS cameras and IR illumination provide the solution, along with integrated rear-view cameras for the driver.

Vision solutions

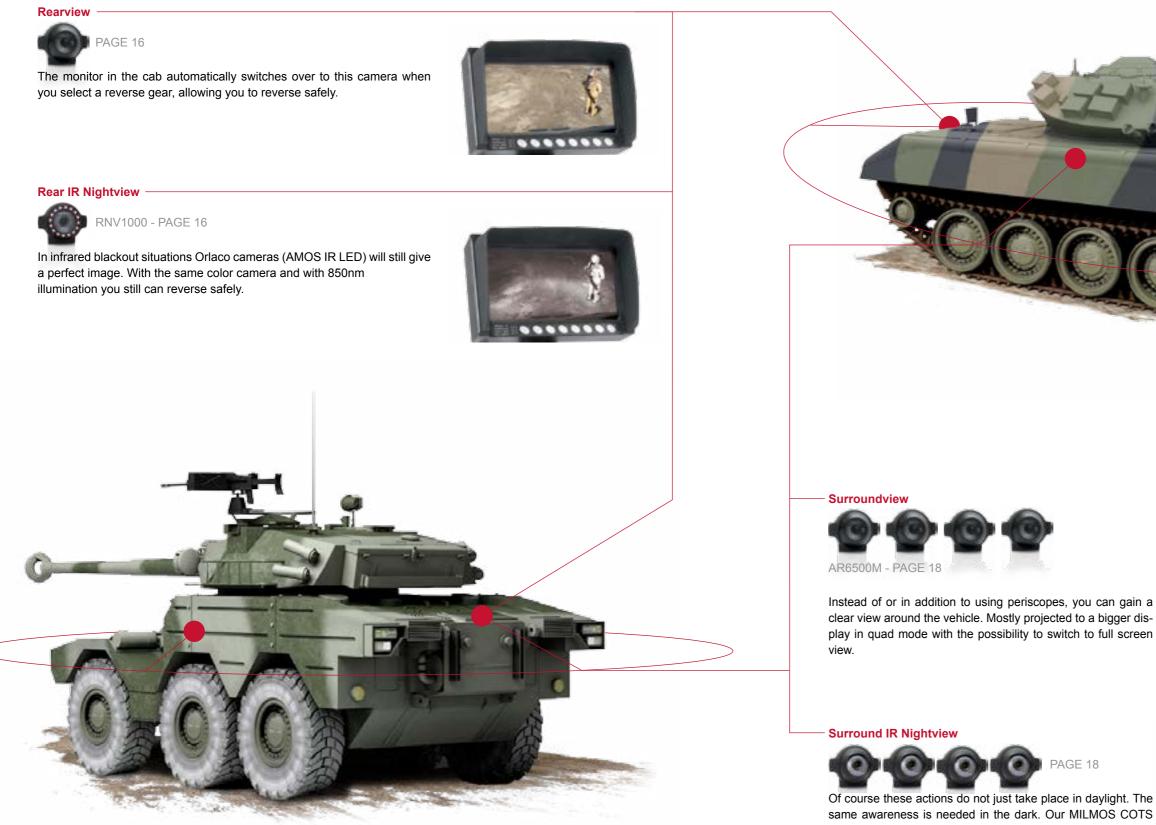
APC wheeled 9







10 AFV wheeled



same awareness is needed in the dark. Our MILMOS COTS cameras and IR illumination provide the solution, along with integrated rear-view cameras for the driver.



AFV tracked 11

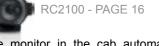






12 Light tactical vehicle





The monitor in the cab automatically switches over to this camera when you select a reverse gear, allowing you to reverse safely.



and the second

Riot control vehicle 13



PAGE 20

During emergencies it is vital to have proper vision on the situation. The Riot View provides a broad field of vision. The integrated led light enables vision up to 25m ahead without blinding bystanders.

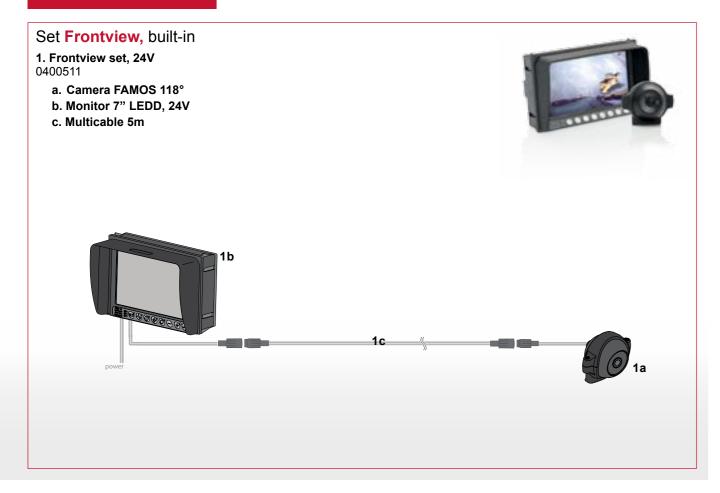


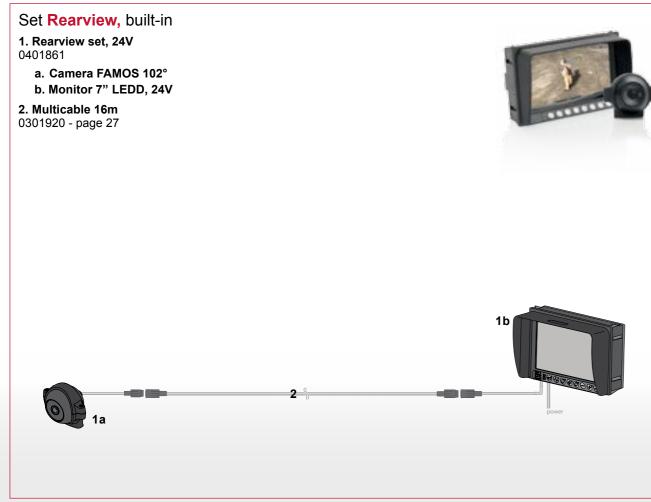


PAGE 19

Of course these actions do not just take place in daylight. The same awareness is needed in the dark. Our AMOS IR LED cameras provide the solution.







Set Frontview-Rearview, built-in

- 1. Front- and Rearview set, 24V 0401971
- a. Camera FAMOS 118°
- b. Camera FAMOS 102°
- c. Monitor 7" LEDD, 24V
- d. Switcher UNI
- e. Multicable 5m
- 2. Multicable 16m 0301920 - page 27



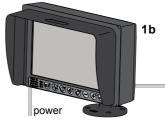
```
Set Frontview, stand-alone

1. Frontview set, 24V

0400920
```

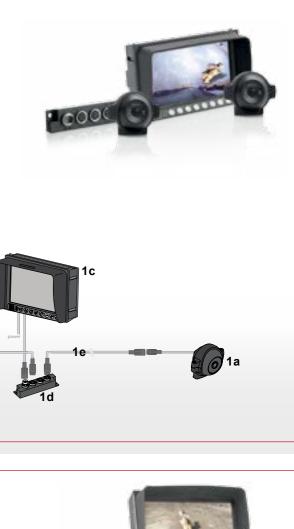
a. Camera FAMOS 118° b. Monitor 7" RLED, 24V

Cables To be ordered separately, see page 27.

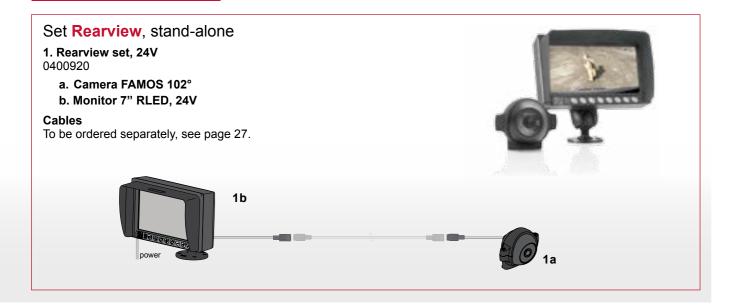


CONFIGURATIONS

15





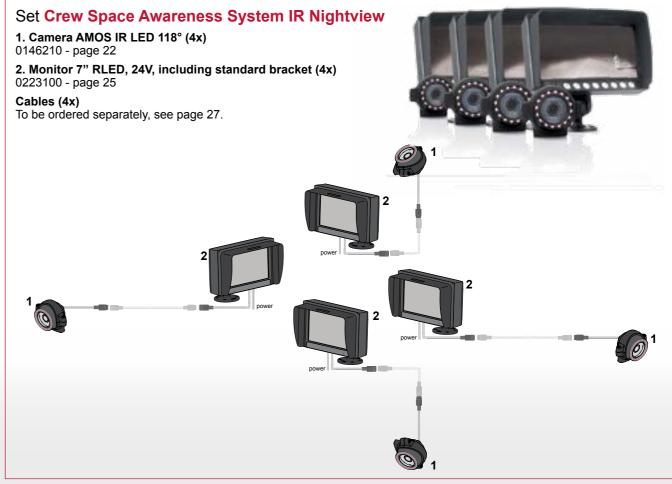






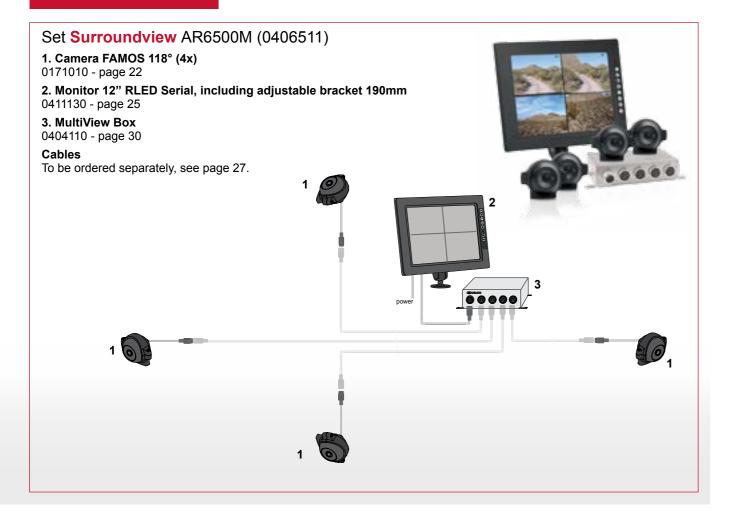


0223100 - page 25



2

CONFIGURATIONS





Set DEVS Safety

1. AF-Zoom Camera PAL Serial 0103531 - page 23

2. Thermal Imaging Camera TIC 320 9Hz 0103730 - page 23

3. Camera AMOS IR LED 118° 0146210 - page 22

4. Monitor 12" RLED Serial, including adjustable bracket 190mm 0411130 - page 25

5. Pan & Tilt unit 24V/DC 0507060 - page 34

6. Fastening plate 0507100 - page 34

7. Smartbox Stainless steel 0504730 - page 31

8. Keyboard handheld AF 0502610 - page 32

9. Easysolid recorder 0000200 - page 31

10. Multi cable 6m 7p 0304410 - page 27

11. Multi cable 16m 0301920 - page 27

12. Special cable 5m + Connectors



Products

Set Surroundview Recording

1. Camera AMOS IR LED 118° (4x) 0146210 - page 22

0411130 - page 25

3. MultiView Box 0404110 - page 30

0407330 - page 31

5. DVR 4 Channel

Cables

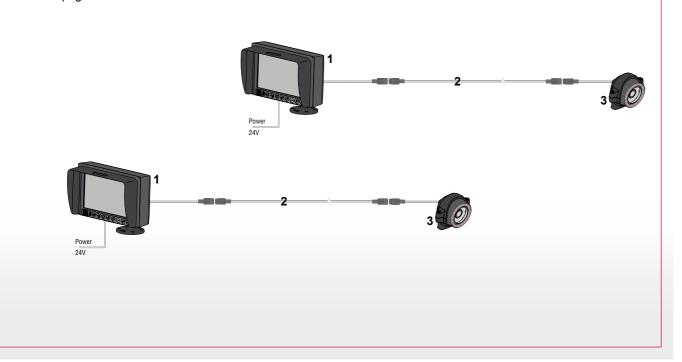


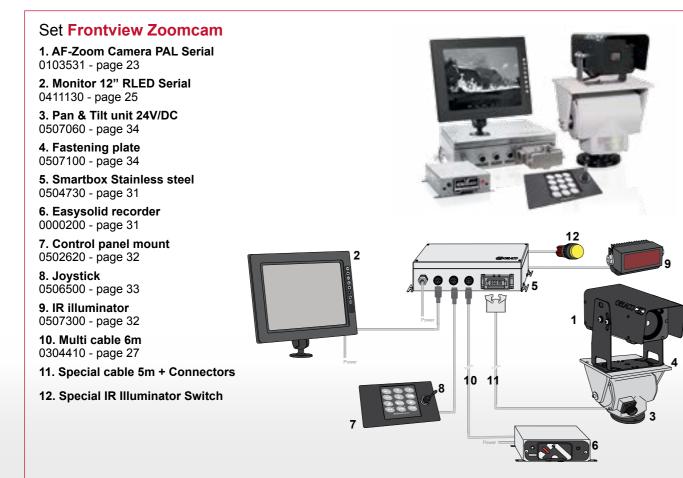
CONFIGURATIONS

Riot view

1. Camera AMOS IR LED 69° (2x) 0146200 - page 22 2. Monitor 7" RLED, 24V, including bracket (2x) 0223000 - page 25

3. Multicable 16m (2x) 0301920 - page 27





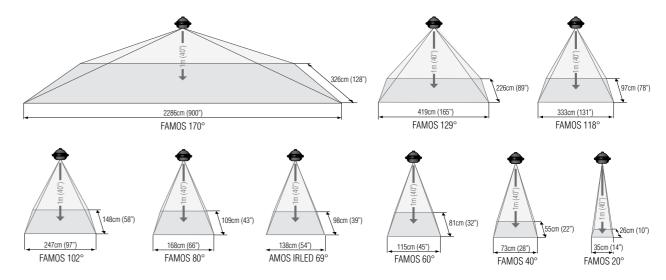
Or design your system yourself

Step 1: Select your camera	Wh
Step 2: Select your desired cable	is p
Step 3: Select your monitor	No
Step 4: Select the required options	Мо
It is also possible to configure your system online	qui
on our website: www.orlaco.com	

The qualifications of our AMOS and FAMOS Compact Cameras

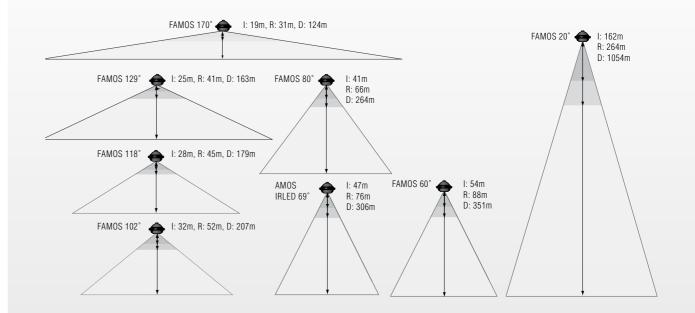
-40°C to +85°C

- Next generation CMOS sensor
- Light sensitivity 0.05 lux
- Integrated Safety ticker to show that
 camera is running and active
 Impact and vibration proof
 - f Fixed lens



Johnson's Criteria

The Johnson's criteria defines what is meant by "seeing a target". The minimum required resolution according to Johnson's criteria are expressed in terms of image resolution across a target, in terms of several tasks: Detection (4px), Recognition (16px) and Identification (26px). The measurements are based on optimal conditions with an object size of 2.3m x 2.3m and are theoretical. Practical situations may deviate.



/hatever you select, the system can be easily installed and plug-and-play.

ote: For two or more cameras a switcher, 4Cam RLED onitor or MultiView Box and additional cables are reuired. Contact us for support.

- Operating temperature between
- IP68 dust- and waterproof according to IEC 60529
- Heated lens glass, therefore no problems with condensation or frost
- The camera has a 0,5m cable including a waterproof molded 4p connector male



Cameras FAMOS

Туре	Art. no. PAL	Art. no. NTSC
20°	0171060	0171160
40°	0171050	0171150
60°	0171040	0171140
80°	0171030	0171130
102°	0171020	0171120
118°	0171010	0171110
118° MIRROR	0171210	0171230
129°	0171000	0171100
170°	0171070	0171170

· Chemically hardened lens

Automotive molding-filled housing, watertight IP69K according to DIN 40050-9

Improved EMC-standards

Optimized impact- and vibration-resistance

Camera FAMOS MIRROR SW

Camera with mirrored image and guiding lines. Type 102° MIRROR

Art. no. NTSC

Art. no. NTSC

Cameras AMOS IR LED

Day/Night camera including 15 High Power Infrared LEDs 850nm.

Art. no. PAL

0171250

Туре	Art. no. PAL	Art. no. NTSC
69°	0146200	0146220
118°	0146210	0146230



Cameras MILMOS

870 / 940nm IR sensitive camera.

Туре	Art. no. PAL
69°	0146300
118°	0146310

The qualifications of our Zoom Cameras

· Nitrogen-filled housing,

· Heated lens glass, therefore no problems

· Shock and vibration

resistant

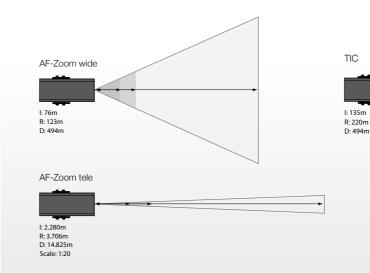
100% watertight (IP 69K)

with condensation or frost

- Operating temperature between -40°C to +85°C
- Built-in brightness function to ensure better visibility on dark areas
- 480x zoom, 1.6° to 48° horizontal opening angle
- Built-in night vision function (0 lux mode)

Johnson's Criteria

The Johnson's criteria defines what is meant by "seeing a target". The minimum required resolution according to Johnson's criteria are expressed in terms of image resolution across a target, in terms of several tasks: Detection (4px), Recognition (16px) and Identification (26px). The measurements are based on optimal conditions with an object size of 2.3m x 2.3m and are theoretical. Practical situations may deviate.



AF-Zoom Cameras

- · Including 6m multicable fitted with 7p connector (female)
- Power supply 12V 24V/DC when cable is <50m Power supply 18V - 24V/DC when cable is >50m

0103531 AF-Zoom Camera Aluminium (PAL)

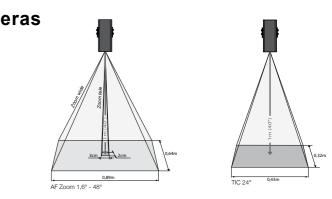
Thermal Imaging Cameras (TIC)

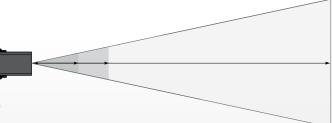
- Thermal Imager Uncooled VOx microbolometer
- Including 6m multicable fitted with 7p connector (female)
- 24° lens (up to 450m detection)
- 12-30V/DC max 8W
- 2x and 4x zoom

0103730 TIC Aluminium 9Hz

CAMERAS

23











CAMERAS

Camera AMOS CFMC

Camera for mounting at the inside of the right-hand side fork.

- Waterproof camera IP69K according to DIN 40050-9
- Next generation CMOS sensor Including 1m multicable 4p connectors

0198710 Camera AMOS CFMC 51° (PAL)

0198700 Camera AMOS CFMC 51° + LEDs (PAL) Camera with two integrated high bright LEDs.



Camera AMOS CPH

Extremely robust small camera for mounting on a vulnerable position.

- Waterproof camera IP69K according to DIN 40050-9
- · Fixed lens, angle of aperture: 51°
- Next generation CMOS sensor
- · The camera has a 0,6m cable including a waterproof 4p connector male

0199700 Camera AMOS CPH 5100P (PAL) 0199730 Camera AMOS CPH 5100N (NTSC)

Mounting means - Compact Cameras

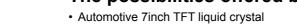
0401270 Camera bracket Compact bracket specially designed for the Compact Camera.

- · Cap can be resprayed in the color of the vehicle
- Including mounting kit
- · Compact Camera are not included



0401210 Camera bracket with extension Extended bracket specially designed for Volvo FM / FH Frontview and Mercedes-Benz.

- Including mounting kit
- Rubber extension part
- Compact Camera is not included



- display module, LED backlight Operating temperature between
- -40°C to +85°C
- · Impact and vibration resistance meet the stringent requirements
- Power protected against:
- Induction voltages
- Load dumps

Monitors 7" LEDD

· For double DIN slide opening in the dashboard

0221000 Monitor 7" LEDD, 24V

- 2m multi cable (power) open wired, 2m multi cable (video) including 4p molded female connector
- Input Voltage 18...30V/DC +/-10%

0208232 Monitor 7" LEDD Serial

- For serial connection (Zoom-, PTZ- or TIC cameras)
- 6m multicable (power) open wired, 6m multicable (video) including 7p female connector
- Input Voltage 12...60V/DC +/-10%

Monitors 7" RLED

User-adjustable 132mm mounting bracket

0223000 Monitor 7" RLED R2, 24V

- · 2m multicable (power) open wired, 2m multicable (video) including 4p female connector
- Input Voltage 18...30V/DC +/-10%

0208632 Monitor 7" RLED Serial

- For serial connection (Zoom-, PTZ- or TIC cameras)
- · 6m multicable (power) open wired, 6m multicable (video) including 7p female connector
- Input Voltage 12...60V/DC +/-10%

Monitors 12"

User-adjustable 190mm mounting bracket

0411000 Monitor 12"

· 4m multicable (power) open wired, 4m multicable (video) including 4p female connector

0411130 Monitor 12" Serial

- For serial connection (Zoom-, PTZ- or TIC cameras)
- 6m multicable (power) open wired, 6m multicable (video) including 7p female connector



0403310 Shock-absorbers for Compact Camera

In situations where shock absorption plays a major role, we recommend that the specially developed shock absorbers are used when installing the Compact Camera.

- Over- and undervoltage Mirror image setting High resolution pixel WVGA
- 800xRGBx480
- the ambient light
 - Option of a marker line per camera on the screen for the optimum determination of distance







MONITORS Step 2

The possibilities offered by Orlaco LED monitors

- · Brightness automatically adjusts to
- · Integrated sun visor
- IP67 according to IEC 60529
- Full On-Screen-Display (OSD) in 12 languages
- · Watertight molded connectors





Mounting means - LEDD monitor

Brand	Model	DDIN slot	Necessary mounting brackets
DAF	Euro 5 CF/XF	Yes	None
DAF	Euro 6 CF/XF/LF	Yes	None
lveco	All models	No	0400610 or 0400600
MAN	All models	No	0400610 or 0400600
Mercedes-Benz	Actros Euro 5	Yes	0400610 or 0400600
Mercedes-Benz	Actros Euro 6	No	0400610 or 0400600
Mercedes-Benz	Other models	No	0400610 or 0400600
Renault	Euro 5 Premium / Euro 6 Renault T	Yes	0400610 or 0400600
Renault	Magnum	Yes	0400630
Renault	Other models	No	0400610 or 0400600
Scania	Long dashboard: Euro 5 / Euro 6	Yes	None
Volvo	Euro 5 FM / FE	Yes	None
Volvo	Euro 5 FH	No	0400680
Volvo	Euro 6 FM	Yes	None
Volvo	FL	No	0400610 or 0400600

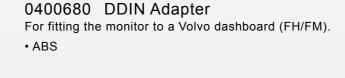


0400610 Monitor mounting bracket For assembly of the Monitor 7" LEDD.

· ABS + aluminium

0400600 Monitor mounting bracket flexible For flexible assembly of the Monitor 7" LEDD.

· ABS + aluminium



0400630 DDIN Adapter For fitting the monitor to the dashboard of a Renault Magnum. • ABS



Sun masks

2291230 Sun mask 12" Monitor Horizontal ABS Sun mask specially designed for the 12" RLED Monitor.

The advantages of Orlaco cables

- All cables are specially developed by · Special cables are available for Orlaco various circumstances
- · ADR approved

Resistant to oil and petrol

Multi cable standard

This standard cable can be used if no special requirements like mechanical protection or dynamic movement of the cable is needed.

Including 4p molded connectors:

0301960	1m	0301870	2m
0301890	3m	0301880	5m
0301910	7,5m	0301930	8m
0301950	9m	0301900	11m
0301920	16m	0301940	21m
0301990	40m		

Armored cable (type 1220280)

This cable offers good protection against severe conditions. This is due to the additional internal galvanised braided steel wire armor.

For EMC 100V/m

Including 4p molded connectors:

-			
0303342	1,5m	0303352	3m
0303472	5m	0303362	7,5m
0303372	9m	0303482	11m
0303492	16m	0305021	20m
0305011	28m		

Cable per metre (connectors not included)

1220110	Standard Multicable 1x coax, 3x wires	
1220170	Multicable 1x coax, 5x wires	
1220280	Multicable armored 1x coax, 5x wires	
1220250	Multicable 1x coax, 12x wires PUR	
1220350	Multicable 2x coax, 5x wire PUR	
1220600	Dynamic cable 1x coax, 5x wire PUR	
1220900	Power cable 7x wire AWG20	
1222000	Coax cable 75 OHM RG59	
1210300	Control cable 8 x 0.25mm ²	
Any required connectors can be ordered separately. (see page 28)		

Products



Watertight cable connectors • Operating temperature -40°C to +85°C



27



















Connectors

- Recommended for multicable (1220170)
- 1310841 Connector 4p female Gold
- 1312001 Connector 4p male Gold
- 1311201 Connector 7p female Gold
- 1322401 Connector 7p male Gold
- Recommended for dynamic cable (1220600)
- 1310850 Connector 4p female PG9 Gold 1312050 Connector 4p male PG9 Gold 1311250 Connector 7p female PG9 Gold
- 1322450 Connector 7p male PG9 Gold

SPECIAL Military Connector

- · Female and male connectors available on request, please contact Orlaco.
- 0357010 Bulkhead connector • 4p Suitable for lead-through on bodywork 0357050 Bulkhead connector
- 7p Suitable for lead-through on bodywork

Cable disconnection sets

0351070 7p 0351130 13p

· Watertight

With caps

0351100 10p Watertight With caps

Spare parts 10p

1399510	Mounting housing
1399610	Female insert
1399500	5 5
1399600	
2200250	
2205200	Cable gland
Adapter c	ables
0304000	Adapter cable 4p female - 4p female
0304050	Adapter cable 4p male - 4p male
0004000	Maple cable 4p male 4p male
0304210	Adapter cable 4p female - 7p male
0304220	Adaptar apple 4n mala - 7n famala
0304220	Adapter cable 4p male - 7p female
0303860	Adapter cable 4p female - BNC
0303770	Adapter cable 4p female - Cinch (if OEM monitor is used)

Device cables

0303781 Y-Split cable RLED

- With two 4p female connectors (video) and open wire cable (power)
- For connections 2 to 4 cameras (with Switcher)

0304860 Y-Split cable 12" RLED

• With 4p and 7p female connectors (video) and open wire cable (power) • For connections 2 to 4 cameras (with Switcher)

8976330 Cable Serial 6m A non-serial LEDD monitor can be connected to the MultiView Box (0404110) via this cable.

• 6m multicable (power) open wired, 6m multicable (video) including 7p female connector

OPTIONS



OPTIONS

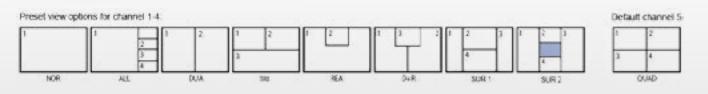
Multiview

The MultiView box is an advanced video imaging system for up to 4 cameras. There are many possibilities of different split views in 5 selectable video channels.

- Stainless steel housing
- · A MultiView box can only be connected to an Orlaco Serial Monitor or via the Serial Cable 6m (8976330) when a nonserial monitor is used

0404110 MultiView box • 4 camera inputs (4x Compact Camera)

MultiView box 0404120 • 4 camera inputs (3x Compact Camera, 1xAF-Zoom Camera)



Switchers

cable: four cameras.



0404040 Switcher UNI

- Waterproof IP54 according to IEC 60529
- 4p output for monitor

0404060 Switcher Serial

- Waterproof IP67 according to IEC 60529
- 7p output for monitor
- · Only in combination with a Serial monitor
- Possibility to connect 1 serial Orlaco camera (AF Zoom)

0404080 Switcher UNI IP67

- Waterproof IP67 according to IEC 60529
- · 4p output for monitor

Video control unit

0504730 Orlaco Smartbox For connect and control the Orlaco AF-Zoom camera, Pan & Tilt and TIC camera.

- IP67
- · Stainless steel housing

Video distributor

0407001 Orlaco video distributor For connecting a second and third Orlaco monitor.

- 12V/DC
- · Cables and connectors are not included

0407330 Video distributor 4 channel · Cables and connectors are not included

Digital MPEG2 video recorder

0000200 Easysolid Recorder

- CompactFlash storage
- · Compact stainless steel housing
- Video loop function
- 10-36V/DC
- Automatic timestamp
- Including 32GB CF-card for max 72 hours of storage and CF-card reader

0407100 DVR 4 Channel

- Total resources: 4 channels D1 at real time (100fpa / 120fps)
- Supports 2.5" 1 TB hard disk storage and SD card for mirror recording
- Built-in GPS, WIFI and 3G

Products

Input and power supply for three cameras and in combination with a Y-split

· Cameras can be switched over automatically or manually

OPTIONS







Infrared illuminator

0507300 IR-CIV870 Lamp

For NightView in combination with a MILMOS or AF-Zoom Camera.

- 870nm IR light
- Max. 15W
- IP67
- Maximum range 40m

0506500 Joystick

- Built-in
- Operating temperature between -30°C to +75°C
- IP40
- Telemanique



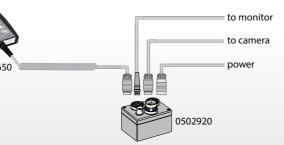
Interface Control panel

0502920 Interface Controlpanel Serial 2x7p This interface is designed to connect the Handheld control AF to a Camera AF-Zoom or PTZ.

• Including 3,85m 8p power supply cable and connectors

· Can control each type of monitor





0702000 Compact joystick

- Operating temperature between -30°C and +75°C
- To assemble on control column
- IP40
- 12V/24V

0502630 Foot switch

· Zoom in and out



Control

0502620 Control panel mount Built-in keyboard for activating of the Pan & Tilt / AF-Zoom / TIC camera.

- · Joystick (0506500) is not included
- Power input 24V/DC
- Dimensions: 140x116x80mm



0502610 Handheld control AF (serial)

For activating of the Pan & Tilt / AF-Zoom / TIC camera.

- Zoom function
- Including 5m power supply cable

0702100 Zoom control box

Operating zoom in and out function of the camera AF-Zoom on a crane.

- · Including hardware, tyrap and locktape
- IP54

8975760 Push button yellow For manually switching between cameras.

OPTIONS











Pan & Tilt units

0507060

- IP 68 watertight
- Maximum weight 6 Kg
- Left/right reach 360° speed: 30° sec.
- Reach up 30° down 90° speed: 10° sec.
- 24V/DC

0507040

- · IP 68 watertight
- Left/right reach 360° speed: 32° sec.
- Reach up 25° down 90° speed: 12° sec.
- Maximum weight 16 Kg
- 24V/DC



0507100 Fastening plate For quick mounting of camera on Pan & Tilt unit.



Mounting means

0403400 Compact Camera magnet bracket For quick mounting of Compact Camera on steel profiles.

8400610 Compact Camera bracket Assembly set for Compact Camera.



0402320 Protective cover Cover specially designed for the Compact Camera. • Stainless steel housing

ISO Certifications

All Orlaco products are manufactured according to the latest *Quality Management System Standards*:

ISO/TS 16949 : 2009 ISO 9001 : 2008, with AQAP

Additionally, all Orlaco products are manufactured according to the latest *Environmental Management System Standard*:

ISO 14001 : 2004



Type-Approval Certifications

Regulations 10 and 46 are used to determine the Type-Approval for **EMC** and **Indirect Vision** (Mirror Directive). **R46** describes mirror specifications for truck compliancy. Orlaco Frontview systems meet all these requirements. **R10** describes the **EMC** behavior of the Orlaco Camera and Monitor systems.

TÜV Automotive Certifications

The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) demands additional equipment. Orlaco Camera and Monitor systems and connection cables comply with these regulations.

Compliance

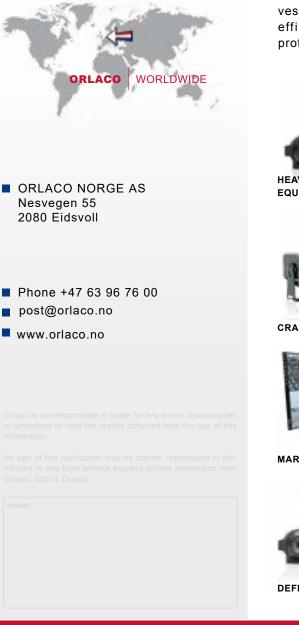
Our Camera and Monitor systems are produced entirely in line with the **CE-marking** and the most recent applicable directives and product standards (e.g. **EMC**, **FCC**, **Machinery**, **R&TTE**). Orlaco products are compliant with **RoHS** and **REACH**.

34



Certification





It is Orlaco's viewpoint that optimal vision around every vehicle and vessel should be the norm. It provides safety, less damage, comfort and efficiency. Vision is our mission®. A revealing mission. We develop professional vision solutions for every situation:

















Check our website for all our brochures (pdf).



0970150 V1.3 EN