Vision is our mission

CRANES
VISION SOLUTIONS
Welcome to the Orlaco product catalogue. 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 catalogue 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,
Henne van Beusekom
Executive Director Orlaco
A crane camera not only enables its operator to work more efficiently, it could also largely contribute to job site safety. With an Orlaco vision system, a crane operator is more independent and not solely reliant on instructions from the signalman. The Orlaco vision system allows crane operators to verify the instructions received from the signalman, virtually eliminating the age-old misunderstanding of “your left, or mine?” In fact, a recent study, done by an end-user, shows that tower cranes performing “blind” lifting operations work 21% faster and more efficiently while using an Orlaco vision system than cranes operating without the system. Orlaco solutions help to increase the all-round safety and efficiency of the crane and its operator – both on and off the job site.

Modern cranes have become more comfortable. Their cabins are now air-conditioned and have air suspension seats. Even with these extra comforts, crane operators are often left unnaturally twisting and turning to keep track of the job site. This can lead to back and neck injuries, or even force an operator to stop working indefinitely. An Orlaco vision solution could help crane operators to maintain correct posture, to work in more comfort. And because Orlaco systems allow a crane operator to immediately see all around the crane without twisting and turning, damage to objects, people or even the crane itself could be greatly minimized. Prevention, ergonomics and comfort – a triple benefit!

At Orlaco, quality is never taken lightly. We keep a clear and persistent focus on customer satisfaction. A focus that is maintained throughout the manufacturing process of our quality products, which are custom designed in various formats. We are able to uphold our level of quality by providing detailed servicing. To top it all off, we have secured the highest achievable automotive certification: TS16949. At Orlaco, we invest in continuous improvement in order to secure a long term, satisfied customer base. We believe that compatibility in products, systems, and operations is the key element to creating reliable partnerships. All our products are controlled and clearly documented to give our customers a zero-defect product with operation that works right, every time.
A Rearcam is positioned on the rear end of the upper carriage (wireless or any free slip rings) or alternatively on the under carriage, which enables the operator to see accurately who or what is behind the crane.

Recommendation: Add RadarEye to increase safety & efficiency. (see page 42-43)

On the larger types of mobile telescopic cranes with super lift counter weights or double hooks, direct vision from the cabin on all the winches is very limited. The monitor used for load view purposes can therefore simultaneously be used for observing the Winchview. The operator is able to switch easily from camera to camera by pressing a button on the monitor.

The operator in the cabin does not always have optimal visibility of the crane’s hook and the load. Especially in situations where he must lift the load over large buildings, machines or installations. Fortunately Orlaco is offering a solution and some relief to the operator with their eyes in the sky. The Loadcam fitted to the tip of the telescopic boom, is looking straight downwards on top of the hook and the load. On the colour monitor in the crane cab, the operator receives at all times, a crystal clear image of the position of the hook. When necessary he can zoom in on the hook for a more detailed image. Everything is possible!

The Zoom Camera can also be moved to the end of a jib. Required is an additional mounting pipe and 7 pin cables in the correct length. For longer jibs (+30m) we recommend using a reel.

A Sidecam positioned on front of the cabin helps the operator when he is making a turn. Finally the system can be extended with a navigation system (page 41) for travelling as fast as possible from one job to another.
The crane operator can see immediately on his monitor when a lifting operation could possibly become dangerous. The operator is no longer dependent on information from other persons by means of a portable radio. He can make the right decisions without delay and thus prevent accidents on site. There is also a far lesser chance of any misunderstandings occurring as the Loadcam system makes it possible for the operator to verify the instructions from the signalman.

Visibility on the rear boom is becoming increasingly necessary on large building sites that have various types of cranes working together. The load view monitor can be used simultaneously with a Rearcam. With just one button, the operator is able to switch between both cameras.
A Loadcam provides images of the working area and is fitted on the boom. It is positioned in such a way that it looks vertically downwards onto the top of the hook and load. The monitor in the cabin ensures that the operator has continuous visibility while hoisting, regardless of the position of the hook and load.

Not only safe reversing, but also knowing what is happening behind the crane. The chance of an accident is greatly reduced by a Rearcam.

A Sidecam positioned on the front of the cabin helps the operator when he is making a turn. Finally, the system can be extended with a navigation system (page 41) for travelling as fast as possible from one job to another.
The crane operator in the cabin does not always have optimal visibility on the crane’s hook and load. Especially when he must lift over machinery, into rail cars and behind stacks of plate/coil steel in warehouses. The Orlaco loadview system is offering a solution with a camera fitted to the hoist looking straight down on the hook and load. The monitor in the cabin ensures that the operator has continuous visibility while hoisting, regardless of the position of the hook and load.

It is also possible to connect the Winchcam to the monitor. The crane operator is able to switch between the cameras by simply pushing on a button. On the larger types of crawler cranes, it is possible to extend the winch view system with additional cameras. Up to 4 cameras on the same monitor. Improve it with a Multiview box and the operator has continuously up to 4 cameras displayed at the same time on the screen.

A Loadcam provides images of the working area and is fitted on the boom. It is positioned in such a way that it looks vertically downwards onto the top of the hook and load. The monitor in the cabin ensures that the operator has continuous visibility while hoisting, regardless of the position of the hook and load.

Not only safe reversing, but also knowing what is happening behind the crane. The chance of an accident is greatly reduced by a Rearcam.
If you are continually turning backwards and forwards, you cannot always see what is happening next to or behind the crane. A Sidecam is then the solution, certainly when the turning space is limited. It can also be used in combination with a Rearcam.

The crane operator in the cabin does not always have optimal visibility on the crane’s hook and the load. Especially in situations where he must lift the load over large buildings, machines or installations. Fortunately Orlaco is offering a solution and some relief to the operator with their eyes in the sky. The Loadcam fitted to the tip of the telescopic boom, is looking straight downwards on top of the hook and the load. On the waterproof colour monitor in the crane cab, the operator receives at all times, a crystal clear image of the position of the hook. When necessary he can zoom in on the load for a more detailed image with a Zoom Camera. Everything is possible!
It is possible to connect a Winchcam to the monitor. The crane operator is able to switch between the cameras by pressing a single button. On the larger types of lattice harbour cranes, it is possible to extend the winch view system with additional cameras.

A Loadcam provides improved accuracy for the crane operator as well as increases safety in the workplace. The operator can always see if there are persons or a wheel loader in the hold while unloading ships.

The camera that is fitted onto the grasping arm ensures optimum visibility of the grasper at all times. A Loadcam provides improved accuracy for the crane operator as well as increases safety in the workplace. The operator can always see if there are persons or a wheel loader in the hold while unloading ships.

Not only safe reversing, but also better vision when turning the crane. The chance of an accident is greatly reduced by a Rearcam. It can also be used in combination with a Sidecam.

A Loadcam provides images of the working area and is fitted on the boom tip. It is positioned in such a way that it looks vertically downwards onto the top of the hook. The monitor in the cabin ensures that the operator always has visibility while hoisting, regardless of the position of the hook and load. The camera gives the operator a complete overview of the ships hull and dock area.
Not only safe reversing, but also knowing what is happening behind and near the crane. The chance of an accident is greatly reduced by a Sidecam. Another possible application is a camera for the positioning of containers. Time loss is thus reduced to the minimum.

Loadview

Good visibility when moving the containers. You have a good view of the operations behind and under the crane. How and where the Loadcam is placed depends on your needs.

Driven-Direction-View

Positioning compact cameras on the crane legs ensures that the crane operator always has a good view while moving to the left or right. The four cameras can be switched to a quad view when the vehicle is stationary and the views from the two required cameras can be shown in a split screen when moving to the left or the right. This considerably reduces the chances of an accident. Ask your dealer for further information.

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!

For more information about our vision solutions for port cranes and container handlers: check our website and download our other brochures (pdf).
The Rearcam ensures that the operator can see behind the STS on the working space at all times. A quick look at the monitor gives the operator an instant view of the area in which the container should be positioned.

The boom is raised when the crane is not operational. A Latchcam is fitted at the top near the locking point, allowing the operator to monitor the locking function at all times.

Good visibility during unloading of the containers. You have a good view of the operations behind and under the crane. How and where the Load-cam is placed depends on your needs.

The backreach cam is a camera that is mounted on the backreach platform. This camera cannot be accessed by the operator; it is used by the logistics and operations teams via a network application to view the work area under the crane. A remote-controlled pan & tilt camera provides them with a view of the entire working space.

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!

For more information about our vision solutions for port cranes and container handlers: check our website and download our other brochures (pdf).
Set Loadview Telescopic crane / RT-Crane (7” RLED - wireless) LV7010 (0402910)
1. AF-Zoom Camera Serial
   0103560 - page 31
2. Monitor 7” RLED Serial, including bracket
   0208632 - page 34
3. Spectrum Scanner LineMax 300
   0004091 - page 41
4. Oil damped camera bracket
   0701200 - page 46
5. Quick release set Weld
   0910240 - page 46
6. Multi cable p7M-m7F 3.3ft
   0305040 - page 37
7. Multi cable m7M - p7F 3.3ft
   0305050 - page 37
8. Zoom Control box
   0702100 - page 40

Set Loadview Telescopic crane (12” RLED - wireless) LV7015 (0406700)
1. AF-Zoom Camera Serial
   0103560 - page 31
2. Monitor 12” RLED Serial, including bracket
   0411130 - page 34
3. Spectrum Scanner LineMax 300
   0004091 - page 41
4. Oil damped camera bracket
   0701200 - page 46
5. Quick release set Weld
   0910240 - page 46
6. Multi cable p7M-m7F 3.3ft
   0305040 - page 37
7. Multi cable m7M - p7F 3.3ft
   0305050 - page 37
8. Zoom Control box
   0702100 - page 40

Set Loadview Crane truck / RT-Crane (wireless) LV7025 (0402970)
1. Camera AMOS 69°
   0135130 - page 30
2. Monitor 7” RLED Serial, including bracket
   0208672 - page 34
3. Spectrum Scanner LineMax 300
   0004091 - page 41
4. Oil damped camera bracket
   0701200 - page 46
5. Quick release set Weld
   0910240 - page 46
6. Adapter cable 4pF - 7pM
   0304210 - page 37
7. Protection cover
   0402320 - page 44

Note:
Accu pack and charger are not included.
Set Loadview Tower crane (7” RLED) LV7030 (0402930)
1. AF-Zoom Camera Serial
   0103560 - page 31
2. Monitor 7” RLED Serial, including bracket
   0208622 - page 34
3. Spectrum Scanner LineMax 300
   0004081 - page 41
4. Quick-fit set
   0402801 - page 44
5. Battery pack set
   0049040 - page 35
6. Foot switch
   0502630 - page 40
7. Power supply
   0503810 - page 39
8. Spider cable crane
   0403880 - page 37
9. Multicable 36ft
   0304610 - page 33

Optional: Autocontact
   0405950 / 0405951 - page 35
Optional: Solar panel
   0049500 - page 35

Set Loadview Mobile tower crane (wireless) LV7040 (0402940)
1. AFI Camera
   0103610 - page 31
2. Monitor 7” RLED Serial, including bracket
   0208632 - page 34
3. Spectrum Scanner LineMax 300
   0004091 - page 41
4. Battery pack set (side connection)
   0049610 - page 35
5. Quick release set Weld
   0910250 - page 46
6. Foot switch
   002630 - page 40
7. Spiral cable for battery
   0303670 - page 37
8. Multicable 19.7ft
   0304410 - page 33
Including vacuum mounting set.

Note:
Can only be ordered by/through OEM.

Set Loadview Mobile tower crane (wireless) LV7040 (0402940)
1. AFI Camera
   0103610 - page 31
2. Monitor 7” RLED Serial, including bracket
   0208632 - page 34
3. Spectrum Scanner LineMax 300
   0004091 - page 41
4. Battery pack set (side connection)
   0049610 - page 35
5. Quick release set Weld
   0910250 - page 46
6. Foot switch
   002630 - page 40
7. Spiral cable for battery
   0303670 - page 37
8. Multicable 19.7ft
   0304410 - page 33
Including vacuum mounting set.

Note:
Can only be ordered by/through OEM.

Set Loadview Tower crane (12” RLED) LV7035 (0403000)
1. AF-Zoom Camera Serial
   0103560 - page 31
2. Monitor 12” RLED Serial, including bracket
   0411160 - page 34
3. Spectrum Scanner LineMax 300
   0004091 - page 41
4. Quick-fit set
   0402801 - page 44
5. Battery pack set
   0049040 - page 35
6. Foot switch
   0502630 - page 40
7. Power supply
   0503810 - page 39
8. Spider cable crane
   0403880 - page 37
9. Multicable 36ft
   0304610 - page 33

Optional: Autocontact
   0405950 / 0405951 - page 35
Optional: Solar panel
   0049500 - page 35

Set Loadview Crawler crane (7” RLED) LV7050 (0402950)
1. AF-Zoom Camera Serial
   0103560 - page 31
2. Monitor 7” RLED Serial, including bracket
   0208632 - page 34
3. Oil damped camera bracket
   0701200 - page 46
4. Quick release set Bolt
   0910250 - page 46
5. Cable reel with 492ft + 49.2ft cable
   0712040 - page 36
6. Zoom control box
   0702100 - page 40
7. Protection caps (F/M)
   1350200 & 1350300
8. Quick-fit set Bolt
   0910250 - page 46

Optional: Foot switch
   0502630 - page 40

Optional: Solar panel
   0049500 - page 35
Set Loadview Crawler crane (12” RLED) LV7055 (0403010)

1. AF-Zoom Camera Serial
   0103560 - page 31
2. Monitor 12” RLED Serial, including bracket
   0411130 - page 34
3. Oil damped camera bracket
   0701200 - page 46
4. Quick release set Bolt
   0910250 - page 46
5. Cable reel with 492 ft + 49.2 ft cable
   0712040 - page 36
6. Zoom control box
   0702100 - page 40
7. Protection caps (F/M)
   1350200 & 1350300

Optional: Foot switch
0502630 - page 40

Set Loadview Lattice harbour crane (12” RLED) LV7065 (0406710)

1. AF-Zoom Camera Serial
   0103560 - page 31
2. Monitor 12” RLED Serial, including bracket
   0411130 - page 34
3. Oil damped camera bracket
   0701200 - page 46
4. Quick release set Bolt
   0910250 - page 46
5. Zoom Control box
   0702100 - page 40
6. Multicable 279.9 ft
   0304400 - page 33

Optional: Foot switch
0502630 - page 40

Set Loadview Lattice harbour crane (7” RLED) LV7060 (0402960)

1. AF-Zoom Camera Serial
   0103560 - page 31
2. Monitor 7” RLED Serial, including bracket
   0208632 - page 34
3. Oil damped camera bracket
   0701200 - page 46
4. Quick release set Bolt
   0910250 - page 46
5. Zoom Control box
   0702100 - page 40
6. Multicable 279.9 ft
   0304400 - page 33

Optional: Foot switch
0502630 - page 40

Set Loadview Hydraulic port crane / Overhead crane LV7070 (0402300)

1. Camera AMOS 69°
   0135130 - page 30
2. Monitor 7” RLED, including bracket
   0208603 - page 34
3. Cables 4p
   To be ordered separately, see page 33.

Optional: Protection cover
0402320 - page 44
Sets

Loadview Top crane (7” RLED) LV7080 (0402980)
1. AF-Zoom Camera Serial
   0103560 - page 31
2. Monitor 7” RLED Serial, including bracket
   0208622 - page 34
3. Oil damped camera bracket
   0701200 - page 46
4. Quick release set Weld
   0910240 - page 46
5. Power supply
   0503810 - page 39
6. Foot switch
   0502630 - page 40
7. Multicable 278.9ft
   0304400 - page 33

Optional: Suction cup mounting bracket
   0401310 - page 44
Optional: Compact Joystick
   0702000 - page 40
Optional: Zoom Control box
   0702100 - page 40

Loadview Top crane (12” RLED) LV7085 (0406720)
1. AF-Zoom Camera Serial
   0103560 - page 31
2. Monitor 12” RLED Serial, including bracket
   0411160 - page 34
3. Oil damped camera bracket
   0701200 - page 46
4. Quick release set Weld
   0910240 - page 46
5. Power supply
   0503810 - page 39
6. Foot switch
   0502630 - page 40
7. Multicable 278.9ft
   0304400 - page 33

Optional: Suction cup mounting bracket
   0401310 - page 44
Optional: Compact Joystick
   0702000 - page 40
Optional: Zoom Control box
   0702100 - page 40

Loadview (12” RLED) LV7085 (0406720)
1. Camera AMOS 118°
   0135110 - page 30
2. Monitor 12” RLED, including bracket
   0208603 - page 34
Cables 4p
   To be ordered separately, see page 33.

Rearview RV7520 (0402100)
1. Camera AMOS 118°
   0135110 - page 30
2. Monitor 7” RLED, including bracket
   0208603 - page 34
Cables 4p
   To be ordered separately, see page 33.

Sideview SV7510 (0402200)
1. Camera AMOS 118°
   0135110 - page 30
2. Monitor 7” RLED, including bracket
   0208603 - page 34
Cables 4p
   To be ordered separately, see page 33.

Winchview WV7200 (0402210)
1. Camera AMOS 58°
   0135140 - page 30
2. Monitor 7” RLED, including bracket
   0208603 - page 34
Cables 4p
   To be ordered separately, see page 33.

Optional: MultiView box
   0404110 - page 39
Or design your system yourself

**Step 1:** Select your camera
**Step 2:** Select your desired cable
**Step 3:** Select your monitor
**Step 4:** Select the required options

Whatever you select, the system can be easily installed and is plug-and-play.

**Note:** For two or more cameras a switcher, 4Cam RLED Monitor or MultiView Box and additional cables are required. Contact us for support.

The qualifications of our AMOS Compact Cameras
- Next generation CMOS sensor
- Light sensitivity 0.05 lux
- Integrated Safety sticker to show that camera is running and active
- Operating temperature between -40°F to 185°F
- Chemically hardened glass
- Nitrogen-filled housing, watertight IP69K according to DIN 40050-9
- Heated lens glass, therefore no problems with condensation or frost
- Impact and vibration proof
- Fixed lens
- The camera has a 1.6ft cable including a waterproof molded 4p connector
- There is an aperture angle for every vision solution

The measurements given are theoretical. Practical situations may deviate.

**Cameras AMOS**

<table>
<thead>
<tr>
<th>Type</th>
<th>Art. no. NTSC</th>
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<tbody>
<tr>
<td>16°</td>
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**Cameras AMOS MaxView**

Camera with fisheye correction

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<tr>
<td>102°</td>
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**Cameras AMOS Communicator**

Camera with additional features: digital zoom, guiding lines, fisheye correction, mirror/flip settings and text features.

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<tr>
<td>69°</td>
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Cameras AMOS IR LED

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

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<tr>
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<td>118°</td>
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Cameras AMOS IR LED Communicator

Camera with additional features: digital zoom, zone graticule, fisheye correction, mirror/flip settings and text features.

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<td>69°</td>
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<tr>
<td>118°</td>
<td>0146810</td>
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</table>

Cameras AMOS ATVC Set (All Time Vision Camera)

Self cleaning camera system by a rotating glass tube and fluid.

<table>
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<tr>
<th>Type</th>
<th>Art. no. NTSC</th>
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</thead>
<tbody>
<tr>
<td>118° MIRROR</td>
<td>0400260</td>
</tr>
</tbody>
</table>

- Including control unit for Input/Output ATVC
- Excluding water pump with 6 liter reservoir (3500810)
- Excluding water hose (2270140)
- Excluding extension cable camera to Input/Output ATVC

The qualifications of our zoom cameras
- Operating temperature between -40°F to 185°F
- Built-in brightness function to ensure better visibility on dark areas
- 432x zoom, 1.7° to 48° horizontal opening angle
- Built-in night vision function (0 lux mode)
- Nitrogen-filled housing, 100% watertight (IP 69K)
- Heated lens glass, therefore no problems with condensation or frost
- Shock and vibration resistant

**AF-Zoom Cameras**

<table>
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<tr>
<th>Type</th>
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<tr>
<td>0103560</td>
<td>AF-Zoom Camera Serial</td>
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</tbody>
</table>

- Including 19.7ft multicable fitted with 7p connector (female)
- Power supply 12V - 24V/DC when cable is <164ft
- Power supply 18V - 24V/DC when cable is >164ft
- 2.6kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Art. no. NTSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>0103610</td>
<td>AFI Auto Focus Insulated</td>
</tr>
</tbody>
</table>

- Designed for usage on cranes to have a camera pointed downwards perpendicular.
- Power supply 12V - 24V/DC when cable is <164ft
- Power supply 18V - 24V/DC when cable is >164ft
- Damper absorbs sudden movements and procure stability
- Stainless steel mounting hardware
- Including 19.7ft multicable fitted with 7p connector (female)

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<th>Type</th>
<th>Art. no. NTSC</th>
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</thead>
<tbody>
<tr>
<td>0103620</td>
<td>AFI Auto Focus Insulated Arctic</td>
</tr>
</tbody>
</table>

- Operating temperature -50°C to +85°C
Armored cable especially for severe off-road conditions

This cable offers good protection against severe conditions. This is due to the additional internal galvanised braided steel wire armor. Attention: if cable is constantly moving as on a boom or hinged construction, please use the dynamic cable.

- For EMC 100V/m

Including 4p molded connectors:

<table>
<thead>
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<th>Length</th>
<th>Code</th>
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<td>16.4ft</td>
<td>0303362</td>
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<td>24.6ft</td>
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<td>29.5ft</td>
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<tr>
<td>65.6ft</td>
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<tr>
<td>91.9ft</td>
<td>0305021</td>
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Dynamic cable

Designed for dynamic use.

- Soft cover with small bend radius

Including 4p molded connectors:

<table>
<thead>
<tr>
<th>Length</th>
<th>Code</th>
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<tbody>
<tr>
<td>1.6ft</td>
<td>0304371</td>
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<tr>
<td>32.8ft</td>
<td>0304451</td>
</tr>
<tr>
<td>36ft</td>
<td>0304470</td>
</tr>
<tr>
<td>39.4ft</td>
<td>0304480</td>
</tr>
<tr>
<td>49.2ft</td>
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</tr>
<tr>
<td>65.6ft</td>
<td>0304560</td>
</tr>
<tr>
<td>71.8ft</td>
<td>0304570</td>
</tr>
<tr>
<td>36ft</td>
<td>0304580</td>
</tr>
<tr>
<td>55.8ft</td>
<td>0304590</td>
</tr>
<tr>
<td>69ft</td>
<td>0304620</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Length</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>2ft</td>
<td>0304371</td>
</tr>
<tr>
<td>6.6ft</td>
<td>0304380</td>
</tr>
<tr>
<td>19.7ft</td>
<td>0304410</td>
</tr>
<tr>
<td>26ft</td>
<td>0304431</td>
</tr>
<tr>
<td>29.5ft</td>
<td>0304441</td>
</tr>
<tr>
<td>32.8ft</td>
<td>0304451</td>
</tr>
<tr>
<td>36ft</td>
<td>0304470</td>
</tr>
<tr>
<td>39.4ft</td>
<td>0304480</td>
</tr>
<tr>
<td>49.2ft</td>
<td>0304490</td>
</tr>
<tr>
<td>65.6ft</td>
<td>0304560</td>
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<td>71.8ft</td>
<td>0304570</td>
</tr>
<tr>
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<td>0304580</td>
</tr>
<tr>
<td>55.8ft</td>
<td>0304590</td>
</tr>
<tr>
<td>69ft</td>
<td>0304620</td>
</tr>
</tbody>
</table>

Thermal Imaging Camera

0103730 TIC-camera 320 Hz
- Thermal Imager Uncooled VOx microbolometer
- Including 19.7ft multicable fitted with 7p connector (female)
- Pan 25° (up to 1476ft detection)
- Nitrogen-filled housing, 100% waterproof IP69
- Operating temperature between -40°F to 170°F
- 12-30V/DC max 8W
- Shock- and vibration resistant
- 2x and 4x zoom

Infrared illuminator

0507300 IR-CIV870 Lamp
- 870nm IR light
- Max. 15W
- IP67
- Maximum range 262.5ft
The possibilities offered by Orlaco LED monitors

- Automotive 7inch TFT liquid crystal display module, LED backlight
- Operating temperature between -40°F to 185°F
- Impact and vibration resistance meet the stringent requirements
- Power protected against:
  - Induction voltages
  - Load dumps
  - Over- and undervoltage
- Mirror image setting
- High resolution pixel WVGA 800xRGBx480
- Brightness automatically adjusts to the ambient light
- Option of a marker line per camera on the screen for the optimum determination of distance
- Integrated sun visor
- IP67 according to IEC 60529
- Full On-Screen-Display (OSD) in 12 languages
- Input Voltage 12...60V/DC +/-10%
- Watertight molded connectors

Monitor 7” RLED (Incl. 132mm bracket)
Monitor 12” RLED (Incl. 190mm bracket)

Monitors RLED

<table>
<thead>
<tr>
<th>Type</th>
<th>Video cable / connector</th>
<th>Power cable</th>
<th>Bracket</th>
<th>Art. no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>7”</td>
<td>6.6ft / 4p female</td>
<td>6.6ft open wired</td>
<td>132mm</td>
<td>0208603</td>
</tr>
<tr>
<td>7” 4Cam</td>
<td>6.6ft Y-split / 4p female</td>
<td>6.6ft open wired</td>
<td>132mm</td>
<td>0208612</td>
</tr>
<tr>
<td>7” Serial</td>
<td>19.7ft / 7p female</td>
<td>19.7ft / 8p male</td>
<td>132mm</td>
<td>0208622</td>
</tr>
<tr>
<td>7” Serial</td>
<td>19.7ft / 7p female</td>
<td>19.7ft open wired</td>
<td>132mm</td>
<td>0208632</td>
</tr>
<tr>
<td>7”</td>
<td>13.1ft / 4p female</td>
<td>13.1ft open wired</td>
<td>132mm</td>
<td>0208672</td>
</tr>
<tr>
<td>7” CAN SRD</td>
<td>19.7ft / 7p female</td>
<td>19.7ft open wired</td>
<td>132mm</td>
<td>0208871</td>
</tr>
<tr>
<td>12”</td>
<td>13.1ft / 4p female</td>
<td>13.1ft open wired</td>
<td>190mm</td>
<td>0411000</td>
</tr>
<tr>
<td>12” 4Cam</td>
<td>6.6ft Y-split / 4p female</td>
<td>6.6ft open wired</td>
<td>190mm</td>
<td>0411040</td>
</tr>
<tr>
<td>12” 4Cam Serial</td>
<td>6.6ft Y-split / 4p female</td>
<td>6.6ft open wired</td>
<td>190mm</td>
<td>0411170</td>
</tr>
<tr>
<td>12” Serial</td>
<td>19.7ft / 7p female</td>
<td>19.7ft open wired</td>
<td>190mm</td>
<td>0411130</td>
</tr>
<tr>
<td>12” Serial</td>
<td>19.7ft / 7p female</td>
<td>19.7ft / 8p male</td>
<td>190mm</td>
<td>0411160</td>
</tr>
<tr>
<td>12” CAN SRD</td>
<td>19.7ft / 7p female</td>
<td>19.7ft open wired</td>
<td>190mm</td>
<td>0411300</td>
</tr>
<tr>
<td>4Cam</td>
<td>Cable can be used to easily extend your system to display two cameras on one monitor or up to four cameras per monitor in combination with a Switcher.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAN SRD</td>
<td>Specially designed for RadarEye systems. (see page 42-43)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serial</td>
<td>For serial connection (Zoom cameras, PTZ-Cameras and MultiView box).</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Battery packs

0049040 Camera Control Unit + Battery, for power only
- Battery, 12V/DC, 18A
- Including spiral cable (length 26ft) for charging the battery manually (0303670)
- Battery pack is IP 65 watertight
- Including data antenna
- Including cable package to video transmitter / zoom camera/auto-contact/ solar panel
- Including remote control to operate the camera
- Can be charged using a solar panel/ Auto-contact or charging cable
- Battery charge indicator line can be seen on monitor in the cabin
- Excluding Spider cable crane (0403880)

0049610 Camera Control Unit + Battery pack side connection, for power only
- Battery, 12V/DC, 18A
- Battery pack is IP 65 watertight
- Including remote control to operate the camera
- Can be charged using a solar panel/ auto-contact
- Battery charge indicator line can be seen on monitor in the cabin
- Suitable for charging - solar panel/car jack
- Excluding cable set for spectrum scanner (0403860)

Charging systems

0405951 Auto-contact (sliding contact)
- Tower crane battery loading system
- Operating temperature between -40°F to 185°F

0405950 Auto-contact (push contact)
- Tower crane battery loading system
- Operating temperature between -40°F to 185°F

0049500 Solar Cell Panel
- Monocrystalline silicon cells
- Capacity 4.1A (nominal 3.75A)
- Dimensions 2.5ft x 2.2ft
- Weight 6.7kg
- Including mounting frame

Battery cables

0403880 Spider cable crane
Specially designed to connect the Battery pack to the Spectrum Scanner.
- 12.5ft multicable including 6p female connector
- Two extra 4.6ft charging cables (7p male)
- 10p Harting male connector

0303670 Spiral cable for Battery pack
- Total length 19.7ft
- Including 10p Harting male and 7p male connector
Cable per metre (without connectors)

- 1220110 Multi cable 1x coax, 2x power, 1x data
- 1220170 Multi cable 1x coax, 5x wires
- 1220280 Multi cable armored 1x coax, 5x wires
- 1220350 Multi cable 2x coax, 5x wire
- 1220600 Dynamic cable 1x coax, 5x wire
- 1220900 Power cable 7x wire
- 1222000 Coax cable 75 OHM RG59

Any required connectors can be ordered separately. (page 38)

Cable reels

- 0712020 Cable reel
  - Maximum capacity 492ft cable 1220150
  - Including 10p harting connectors
- 0712040 Cable reel with 492ft + 49.2ft cable
  - Including 492ft multicable with 7p female connector
  - Including 49.2ft multicable with 10p female Harting connector
  - Including mounting strips and pipe clamps
- 0710270 Spring driven cable reel
  - Including 180.4ft cable 1220250 on reel with 7p female connector
  - Holds the cable tight
- 0710210 Cable reel
  - Capacity up to 328ft cable on reel with 10p male connector
  - Holds the cable tight
- 0710240 Cable reel spring driven
  - Holds the cable tight
  - 23ft cable (1220150) and 39.4ft cable (1220600)
  - Watertight connector straight (1310850 & 1312001)
  - Operating temperature 32°F to 167°F
- 0710280 Cable reel spring driven
  - Specification identical to 0710240 except for:
    - Operating temperature -40°F to 167°F

Adapter cables

- 0304000 Adapter cable 4p female - 4p female
- 0304050 Adapter cable 4p male - 4p male
- 0304210 Adapter cable 4p female - 7p male
- 0304220 Adapter cable 4p male - 7p female
- 0303860 Adapter cable 4p female - BNC
- 0303770 Adapter cable 4p female - Cinch
  (if OEM monitor is used)

Extension cables

- 0305040 Multi cable p7M - m7F 3.3ft
- 0305050 Multi cable m7M - p7F 3.3ft
- 0305060 Multi cable p7M - p7F 6.6ft
- 0305070 Multi cable p7M - p7F 36ft
- 0305080 Multi cable p7M - p7F 52.5ft

Split cable (6.6ft)

- 0303781 Y-Split cable RLCD/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)

Antenna Set

- 0403860 Cable set for 0049610 with Spectrum Scanner
  - Specially designed to connect the Battery pack to the Spectrum Scanner.
  - Including antenna with BNC connector
  - Including cable to connect the Spectrum Scanner with the Battery pack
  - Including charging cable

Video distributor

- 0407000 Orlaco video distributor
  - For connecting a second and third Orlaco monitor.
  - 12V/DC
  - Cables and connectors are not included
Connections

- **Power supplies**
  - **0004600 Power supply 9-36V**
    - Maximum cable length 656.2 ft
    - Power input 9-36V/DC
    - Power output 12V/DC
  - **0504030 AC/DC unit**
    - Power supply for the Compact Camera.
    - Power input 110-230V/AC
    - Power output 12V/DC
    - Dimensions 0.338(l) x 0.338(w) x 0.099(h)
  - **0503810 Power supply 115-230V/24V**
    - 2 outputs: for loading battery and power supply for monitor
    - Built in a IP65 watertight box
    - Including connector 1312021 (8p)

- **Switchers**
  - **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
  - **0404070 Switcher 4Cam**
    - This video switcher for third party monitors has 4 video inputs
    and 1 video output
    - Connect up to 4 cameras to a third party monitor
    - Including 12.6 ft power cable

- **Multiview split**
  - **0404110 MultiView box**
    - 4 camera inputs (4x Compact Camera)
  - **0404120 MultiView box**
    - 4 camera inputs (3x Compact Camera 1x AF-Zoom Camera)

- **Cable disconnection sets**
  - **0351070 7p**
    - Watertight
    - With caps
  - **0351130 13p**
    - Watertight
    - With caps
  - **0351100 10p Harting**
    - Watertight
    - With caps

- **Connectors**
  - **1310841 Connector 4p female Gold**
    - Recommended for multicable (1220170)
  - **1312001 Connector 4p male Gold**
    - Recommended for multicable (1220170)
  - **1310850 Connector 4p female PG9 Gold**
    - Recommended for dynamic cable (1220600)
  - **1312050 Connector 4p male PG9 Gold**
    - Recommended for dynamic cable (1220600)
  - **1311201 Connector 7p female Gold**
    - Recommended for Multi cable (1220170)
  - **1322401 Connector 7p male Gold**
    - Recommended for Multi cable (1220170)
  - **1311250 Connector 7p female PG9 Gold**
    - Recommended for Dynamic cable (1220600)
  - **1322450 Connector 7p male PG9 Gold**
    - Recommended for Dynamic cable (1220600)
  - **0357010 Bulkhead connector**
    - 4p
    - Suitable for lead-through on bodywork
  - **0357050 Bulkhead connector**
    - 7p
    - Suitable for lead-through on bodywork

- **Interfaces**
  - **0050000 Glass fibre transmitter / receiver**
    - Input voltage 12-16V/AC and 12-16V/DC
    - Operating temperature between -40°C and 167°F
    - Glass fibre 62.5 μm
Interface Control panel
0502920 Interface Control panel Serial 2x7p
This interface is designed to connect the Handheld control AF to a Camera AF-Zoom or PTZ.
- Including 12.4ft 8p power supply cable and connectors
- Can be connected to each type of third-party monitor

Control
0502620 Control panel mount
Built-in keyboard for activating of the Pan & Tilt / AF-Zoom / TIC camera.
- Joystick (0506500) are not included
- Power input: 24V/DC
- Dimensions: 0.46ftx0.38ftx0.26ft

0502650 Handheld control AF (serial)
For activating of the Pan & Tilt / AF-Zoom / TIC camera.
- Zoom function
- Including 16.4ft power supply cable

0506500 Joystick
- Built-in
- Operating temperature between -22°F and 167°F
- IP40
- Telemanique

0702000 Compact joystick
- Operating temperature between -22°F and 167°F
- To assemble on control column
- IP40
- 12V/24V

0502630 Foot switch 16.4ft
- Zoom in and out

0502660 Foot switch 32.8ft
- Zoom in and out

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.

Orlaco Battery packs parts
2108990 Remote control
Suitable for Battery packs 0049040 and 0049610.

2130780 Accu
Suitable for Battery packs 0049040 and 0049610.
- 12V / 18A

2109350 Antenna with BNC
Suitable for Battery packs 0049040 and 0049610.
- CB Antenna, length 1.1ft
- Frequency 26-28MHz
- Cable length: 13.1ft
- Connector BNC RG58, 50 OHM

Spectrum Scanner wireless video transmitter & receiver
- Including powercable and two adjustable brackets for transmitter and receiver
- 8 video channels
- Full On Screen Display (OSD) functionality for system settings
- Please contact your dealer for further advice

0004061 RoundMax 150
- Omnidirectional antenna with horizontal orientation
- Maximum range 492ft (dependent on surroundings)

0004091 LineMax 300
- Directional antenna with vertical orientation
- Maximum range 984ft (dependent on surroundings)

Navigation
0277010 VCA Truck Specific Navigation
- Easy to connect on an Orlaco LEDD or RLED monitor
- Internal memory
- European map; SD-card slot for updates
- Including TMC computer, speaker, remote control with touchpad and GPS receiver
- Adjustable parameters: i.a. total weight, axle load, length of vehicle, height of vehicle, dangerous goods

0277020 VCA Truck Specific Navigation + bluetooth
RadarEye unites visibility and active detection

Orlaco has developed this radar unit in addition to the camera-monitor systems. By combining the vision solution with an active signaling system, RadarEye offers additional safety and efficiency.

RadarEye is an integrated active view system designed to detect and see objects in zones obscured from the driver’s view. The radar system detects stationary as well as moving objects in a designated coverage area. With this view system the driver is actively warned with audible tones that increase in rate as objects come closer. When an object is detected it can be seen on the monitor and the driver can respond immediately. This prevents damage to the driver’s truck and any other equipment he may reverse into. The radar units have a rugged design, are shockproof, waterproof and is not influenced by the environment, such as snow, rain, mud and or temperature changes.

- RadarEye can be used on various machines
- RadarEye is capable of visualizing the radar-zones on the display. As soon as an object enters the zone it will activate colored dots (default setting) or a transparent visualization (standard/custom preset settings) to make the driver aware of the potential danger
- 6.5...60ft detection area, divided in 5 equally sized segments
- Separation distance: 3.3ft-13.1ft (configurable)
- Antenna beam horizontal: 70°(typ.), vertical: 11°(typ.)
- Operating temperature between -40°F to 185°F
- Obstacle reaction delay 50ms
- Orlaco Monitor CAN SRD is required (see page 34)
- RadarEye can be extended with multiple sensors and camera units for all around detection and visibility
- Please contact Orlaco for advice and installation

Vehicle RadarEye Interface boxes

0256010 Interface Box CAN/SRD/camera
The Interface Box is designed to connect SRD sensors to camera and CAN SRD monitor.

0504820 Interface Box with Ext. speaker CAN/SRD/camera
The Interface Box is designed to connect SRD sensors to a camera, CAN SRD monitor and external speaker.

- Set consists of: External speaker and Interface Box
- Sound pressure speaker: 85dB (+/-3dB) distance 3.3ft

Vehicle RadarEye Cables

Cable M12 Green
Connection cable between Interface box and master SRD sensor or connection cable between slave SRD sensor and next SRD sensor.

0301050 16.4ft 0301060 32.8ft
0301070 49.2ft 0301120 65.6ft
0301130 82ft 0301140 98.4ft

Cable M12 Master-Slave Red
Connection cable between master SRD sensor and slave SRD sensor.

0301080 0.8ft 0301020 3.3ft
0301030 13.1ft 0301040 26ft
0301090 52.5ft

Vehicle RadarEye Brackets

0401330 Bracket SRD Sensor Corner Rear
Mounting bracket for SRD Sensor for corner mounting
- Stainless steel
- SRD sensor not included

0401320 Bracket SRD Sensor Center Rear
Mounting bracket for SRD Sensor for center mounting
- Stainless steel
- SRD sensors not included

Vehicle RadarEye Parts

Please contact Orlaco for advice

0004310 SRD sensor CAN Horizontal
Short Range Detection (SRD) sensor for integration in active view system (RadarEye).
- Connectors position: Side

0004320 SRD sensor CAN Vertical
Short Range Detection (SRD) sensor for integration in active view system (RadarEye).
- Connectors position: Top / Bottom

0350110 M12 Terminator 120 Ohm
120 Ohm resistor for terminating CAN bus.
Mounting means

0402801 Quick-fit set Tower crane
- Including adjustable suction cup for quick mounting of the monitor on the cab window, magnet (with ball joint) for quick mounting of the monitor to the cab and 2x safety chains and mounting materials
- Stainless steel holder
- Operating temperature between -40°F to 185°F

0401310 Suction cup with ball joint
For mounting the Orlaco monitor on the cab window.

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

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

Orlaco IP SmartView

0060310 Licence Smartview software
View and control of cameras over TCP/IP or a local computer network.
- Support H.264 digital video codec
- Multiple display settings (full, split, quadviews, 8 and 16 cams on 1 screen)
- Individual camera presets and master presets for controlling multiple PTZ simultaneously
- Sequential camera switcher
- Motion detection
- Supplied on USB memory stick

0401260 Quick coupling Compact Camera
For moving the Compact Camera between various objects.
- Including two attachment plates
- Stainless steel
- Compact Camera is not included

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

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.

0402450 Camera Housing Dome
Ceiling mount for Compact Camera.
- Aluminum housing
- Including mounting hardware
- Compact Camera is not included

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

2015700 Adjustable mounting bracket 3/8" UNC
- Length 0.43ft

2015500 Adjustable mounting bracket
- Length 0.43ft

2015600 Adjustable mounting bracket
- Length 0.62ft
0701200 Oil damped camera bracket
Designed for usage on cranes to have a camera permanently pointed vertically downwards. The damper absorbs sudden movements and procures stability to all Orlaco cameras. Others have to be checked to determine the position of their centre of gravity.
• Adjustable damping
• Made entirely from Stainless Steel
If cranes have a tilting angle of >130° (e.g. Knuckle boom cranes) it is possible to connect 2 pieces 0701200 to achieve a tilting angle up to 260°.

0910280 Extra Weight for Zoomcam
• Stainless steel
• 1.09kg

0910270 Suspension Tube Complete
• Stainless steel
• Including sketch plate
• Including lock pin

2013280 Adapter Pin for Release Set
• Stainless steel

0910260 Mounting Bracket Set Additional
• Stainless steel

0910240 Quick release set weld version
• Stainless steel

0910250 Quick release set bolt version
• Stainless steel

5200500 Magnet 80x18 M10
For quick mounting video receiver on steel profiles.
• Including safety chain
5200600 Magnet 100x22 M10

ISO Certifications
All Orlaco products are manufactured according to the latest Quality Management System Standards:
ISO/TS 16949 : 2009
ISO 9001 : 2008
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.
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:

- Heavy Equipment
- On Road Trucks
- Cranes
- Forklifts
- Maritime
- Emergency Vehicles
- Defense

Check our website for all our brochures (pdf).