



Individual modules for maximum performance
_KUKA omniMove UTV-2 options







_KUKA omniMove UTV-2

The KUKA omniMove UTV-2 sets everything in motion, boosting your productivity. Never before has it been simpler to maneuver heavy and bulky loads into the right position – with pin-point accuracy. The unrestricted two-dimensional freedom of motion makes it possible: the KUKA omniMove mobile platform system ensures maximum flexibility. Lifting and moving: the KUKA omniMove can effortlessly handle heavy loads. Five different standard vehicle models and numerous customer-specific option packages ensure that solutions for a wide range of requirements can be implemented. It is equally possible for the KUKA omniMove UTV-2 to be optionally adapted to individual customer needs.

Individual modules for maximum performance

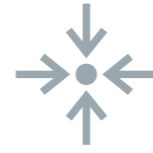


-  _Precise transport 4
-  _Battery management 7
-  _Safety options 8
-  _Navigation options 10

 +  +  = Your solution

Precise transport

An absolute match for any requirement – high-precision solutions for maximum flexibility



The production of the future calls for ever greater flexibility while maintaining utmost reliability. The latest generation of intelligent transport systems from KUKA is the logical continuation in realizing integrated overall concepts assuring top precision and short cycle times.

eLift 180 mm and eLift 250 mm

–powerful and safe handling

You can also equip your KUKA omniMove with synchronized electric lifting elements. eLift 180 mm and eLift 250 mm stand out for their simple operation, high reliability and low maintenance requirements. Equipment of the lifting elements with absolute encoders makes for highly precise synchronized motion of the lift spindles. The specially developed lift spindles are integrated extremely efficiently into the KUKA omniMove. External guides for the lifting elements were omitted in order to achieve a compact design and to keep the vehicle height to a minimum.

CupCone centering

–perfect positioning for smooth production

The CupCone centering allows you to position the transport load accurately on the KUKA omniMove. Due to the non-slip location, the load remains precisely positioned throughout the entire production cycle. This ensures smooth production without the need for recalibration.

The lifting elements equipped with absolute encoders make for highly precise synchronized motion of the lift spindles.



Spreader beams

–top flexibility in component transport

To ensure that the load is held safely and practically, it is important for bulky and heavy components to be supported at multiple points. Spreader beams offer maximum freedom to transport components of widely differing geometries with one and the same KUKA omniMove vehicle.

WLAN network adapter

–status information always available

Our KUKA omniMoves can optionally be equipped with an industry-standard network adapter to communicate with higher-level control systems. This enables the KUKA omniMove to receive motion commands and forward relevant status information via TCP/IP in a timely manner. It thus gives you precisely the kind of flexibility you need for the production of tomorrow.

The KUKA omniMove stands for high-precision component transport.

Load identification via RFID

_automatic adaptation to transport situation

Smart factories necessitate smart processes and technologies: that is why KUKA omniMove vehicles can be equipped with RFID (radio frequency identification) load recognition. This enables the vehicle controller to identify the load automatically via RFID tags. Our RFID systems allow processes to be designed transparently and controlled precisely. The compelling result: better verification, identification and storage of changing information. The transponder makes things smart and is thus a building block for the production of tomorrow.

Optical load recognition

_more agile than ever

No two load scenarios are alike. Our optical load recognition enables you to address the increasing diversity of variants. Our installed cameras detect predefined visual component markings. This allows the KUKA omniMove to identify the load and position itself with an accuracy of ± 5 mm in relation to it. As a result, you optimize not only your work processes, but also the quality of your production – and cost-efficiently at that.



Always reliable and accurate thanks to optical guidance

Battery management

Ultimate performance – with autonomous power supply from high-capacity batteries



The KUKA omniMove reliably and accurately transports heavy components within the existing material flow. Intelligent battery management enhances the availability, thereby ensuring fail-safe performance.

48 V 34 kWh battery upgrade kit

_significant increase in uptime

Today's production requires constant availability – not only of all components, but also of the batteries. With our battery upgrade kit you can optionally double the battery capacity – if needed also without extended charging time.

Floor charging contacts

_convenient “snack charging” without charging cable

This option package enables you to charge the vehicle without a charging cable. The advantages are obvious: as soon as the corresponding infrastructure is available, the KUKA omniMove can be charged automatically, meaning that you no longer have to worry about battery charge levels. The vehicle establishes a connection to the charging station automatically when it moves onto the fixed floor contacts. In addition, the KUKA omniMove can fetch its power rations during short stopovers – an approach that is called “snack charging”. Get your production ready for the future and benefit from the advantages of wireless floor charging contacts.



Top-precision and omnidirectional transport – no matter what the load

Safety options

Extremely safe transport throughout the entire production process



High load capacity with maximum safety – that is the hallmark of the KUKA omniMove. The mobile platform concept meets all the safety standards required for industrial trucks. Our option packages offer solutions for a wide variety of requirements.

Enabling switch

—more safety for people and machinery

The enabling switch gives your staff an additional means of safely controlling the KUKA omniMove. It allows the vehicle to be stopped immediately in an emergency. This sensible option provides even greater protection for your staff and components – especially when transporting heavy loads that are difficult to keep in full view, or when operating in tight spaces. The KUKA omniMove can optionally be upgraded for two-person or multi-person operation.



Safe control – with enabling switch also for multi-person operation

Safety laser scanners

—in full control at all times

Our safety laser scanners offer optimum protection with an all-round protection zone of 360° at a height of 150 mm above floor level. Our laser scanners distinguish between protective fields and warning fields. If an object is detected in a warning field, the speed of the KUKA omniMove is reduced immediately. If an object is scanned in the protective field, the vehicle stops instantly. Two to four safety laser scanners are mounted on the vehicle depending on the KUKA omniMove model.



Simple and manual operation – even in complex maneuvering situations

Tried and tested: acceptance test of a customized KUKA omniMove solution



Navigation options

Maximum freedom of movement, millimeter precision and easy control

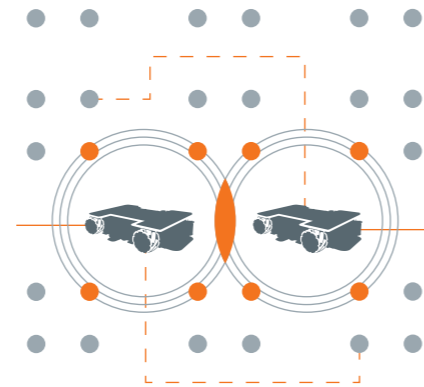


The KUKA omniMove maneuvers components to the exact location where they are required. We offer a wide range of intelligent and precise navigation options for maximum flexibility in adapting to the production process.

Optical guidance

_safely navigating on all routes

Optical systems are already widely used in many production environments. Our optional optical tracking system offers you a cost-effective solution, extending up to automation of your vehicles for transporting materials and goods in the production area. In this case, the KUKA omniMove vehicles are equipped with cameras that track the optical guides on the floor. Markers can identify intersections and stopping points, which facilitates precise fine positioning. Navigation of the vehicles can thus be easily automated. The routes of your driverless transport systems can be flexibly adapted at any time. Motion commands are still issued via safe radio remote control. Alternatively, the motion commands can also be sent via a host controller.



Intelligent orientation, positioning, response. KUKA navigation options know the destination and the best way to get there – every time.

High-precision fine positioning

_cameras for a clear focus on the task

For high-precision fine positioning, cameras are mounted either on the underside of the vehicle or on top. They enable positioning relative to corresponding markers on the floor or the underside of the load. Fine positioning with an accuracy of up to ± 3 mm is thus possible. This gives you ideal control of precise component handling.



KUKA.NavigationSolution

_synonymous with flexibility

With KUKA.NavigationSolution, we are presenting a navigation solution in the mobility sector that does not require any external installations and uses the existing structures of your production instead. The KUKA.NavigationSolution software is used for autonomous and safe navigation, control, management and monitoring of mobile platforms. This is achieved without artificial markings in the environment and is based on the SLAM method. KUKA.NavigationSolution promises an immediate response to obstacles, easy position teaching, the capability of programming applications, and communication with your production and logistics systems, for example PMS, WMS and ERP. KUKA.NavigationSolution is synonymous with flexibility and is available for all mobile KUKA robots.

Moving with great ease – even with large and heavy components

Laser scanner navigation plus optical fine positioning

_win-win for production

The combination of laser scanner navigation and optical fine positioning merges flexibility with perfection. The SLAM navigation ensures that loads are transported quickly and safely over long routes. The additional cameras additionally offer high-precision fine positioning. Take advantage of this win-win combination for your production.



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