

KUKA – your partner for AMR 

AMR

Portfolio Presentation



KUKA



KUKA AMR_Vision





8000 sqm Product Test Area

- Bad Tracks
- Ramps

>100 Developer

- 60% Software
- 40% Hardware

Global Development Sites

- Europe
- China

Customer Service worldwide

- 24/7 Hotline
- Service Technicians

KUKA AMR

_a strong and effective Team

KUKA AMR_ Autonomous Mobile Robots by KUKA



KMP - KUKA Mobile Platform



KMR - KUKA Mobile Robot



KMF - KUKA Mobile Forklift
– Order from Q3 2026 –



KUKA AMR_ Portfolio Q1 2026

Mobile platforms

KMP diffDrive



KMP 250P/-T



KMP 600P



KMP 600W



KMP 1500P

KMP omniMove



KMP 3000P

Mobile robots



KMR iisy-2

KUKA provides all relevant Software for AMRs



KUKA.AMR Fleet

The fleet manager that orchestrates and visualizes the AMRs.



KUKA.AMR OS

The operating system that is installed on our AMRs and controls its intelligent features.



KUKA.AMR Suite

The commissioning tool to set up a project, record the map.

Wprowadzenie do świata_ KUKA AMR





KUKA AMR_ KMP Portfolio 2026



Model	KMP 250P-T Order from Q2 2026	KMP 250P	KMP 600W	KMP 600P	KMP 1500P	KMP 3000P
Dimensions LxWxH	800*520*300 mm	800*520*300 mm	980x686x267 mm	980x686x270 mm	1300x900x263 mm	2200x1200x370 mm
Lift Stroke [mm]	45 (only pins)	60 (optional)	60	80 (optional)	60 (optional)	100
Lift clearance height[mm]	-	-	25	25	25	-
Drive	Differential	Differential	Differential	Differential	Differential	Omnidirectional
Navigation	SLAM	SLAM & QR	QR	SLAM & QR	SLAM & QR	SLAM & QR
Laser Safety scanners	Front/Rear	Front/Rear	Front (fenced area only)	Front/Rear	Front/Rear	Front/Rear
Max. speed (w/o load)	2 m/s	2 m/s	2 m/s	2 m/s	1.8 m/s	1.2 m/s
Max. speed (w load)	1 m/s	1.5m/s	1.5 m/s	1.5 m/s	1.5 m/s	1 m/s
Stopping accuracy	±10mm, ±1°(SLAM)	±10mm, ±1°(SLAM)/ ±5mm, ±0.5°(QR)	±5mm, ±0.5°	±10mm, ±1°(SLAM)/ ±5mm, ±0.5°(QR)	±10mm, ±1°(SLAM) /±5mm, ±0.5°(QR)	± 15mm, ± 1° (SLAM) ± 5mm, ± 0,5° (QR)
Battery	LFP	LFP	LFP	LFP	LFP	LFP
Battery endurance	6 h	8 h	8 h	Ca. 8 h	10 h	6-8 h
IP protection class	IP24	IP24	IP20	IP54	IP54	IP54
Operating temperature	0-45°C	0-45°C	0-45°C	0-45°C	0-45°C	5-45°C
Certification	CE, NRTL, FCC	CE, NRTL, FCC, ESD, CR	CE DOI, NRTL, FCC	CE, NRTL, FCC	CE, NRTL, FCC	CE, NRTL, FCC



KUKA AMRs _ KMP Focus Applications

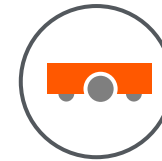
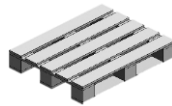
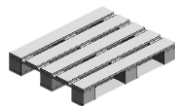
Material supply for manufacturing lines



Process linkage of lines and stations



Intralogistic



Standard products (AMRs and accessories) with KUKA quality



Intelligent Fleetmanager
KUKA.AMR Fleet with comfort and AI functions

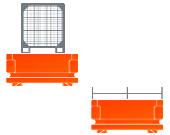


Worldwide Customer Service Network

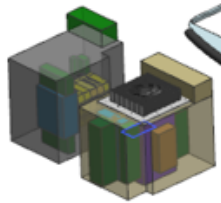


KMP 250P_ highest flexibility for lightweights

KUKA AMR_ KMP 250P overview



IP 24



Payload

_max. 250 kg

Protection

_IP 24 prevents splash water, dust
_CR/ ESD version (ISO 5/ ESD basic)

Easy Maintenance

_Easy exchangeable controls & power components

KUKA Navigation

_SLAM Navigation (based on laser scanners)
_QR Code Navigation (based on bottom camera)
_Fleet Management

High Safety

_2 laser scanners (diagonal for 360° protection)
_3D camera in the front
_2x emergency stops & side bumpers
_Sound alarm & visual signaling



Manual Controller

_Only for trained people

Load Detection Camera

_Load Identification & tracking

Certifications

_CE certification by TÜV
_Certified for North American market
_FCC Options

Integrated Lifting Devices

_60mm lifting stroke (optional)

LFP Batteries, Inductive charging option

_Up to 8 hours running time
_2 hour recharged 20% - 80% SOC

Differential drive

_Up to 2m/s speed unloaded
_Up to 1,5m/s loaded

Tugging Version

_Allowing tugging of loads of up to 300kg
_Tugging Pin



KUKA AMR_ KMP 250P Specification



Dimensions (L x W x H)	Approx. 800×520×300mm
Weight approx.	120 kg
Max. Payload	250 kg
Max. velocity (unloaded)	2.0 m/s
Max. velocity (loaded)	1.5 m/s
Max. rotational velocity	32°/s
Max. slope	5 %
Battery	48 VDC 21 Ah
Operating time (50% loaded / 50% unloaded)	> 8 h
Lifting stroke (optional)	60 mm
Lifting time	approx. 3s
Number of laser scanners	2
Number of 3D cameras for obstacle avoidance	1 (front)
Accuracy for positioning (Depending on environment)	up to ±10mm, ±1°(SLAM) ±5mm, ±0.5°(QR)
CR/ESD (optional)	ESD Basic / ISO 5
Protection class rating	IP24
Operating Conditions	0 – 45 °C (excl. in house use)

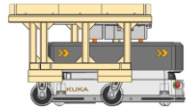
Specifications of tugging version will differ.





KMP 250P-T (Tugger)_ highest flexibility for lightweights

KUKA AMR_ KMP 250P-T overview (Shipping from Q2/26)



○ Payload (tugging)

_max. 300 kg

○ Protection

_IP 24 prevents splash water, dust

○ Easy Maintenance

_Easy exchangeable controls & power components

○ KUKA Navigation

_SLAM Navigation (based on laser scanners)
_QR Code Navigation (based on bottom camera)
_Fleet Management

○ High Safety

_2 laser scanners (diagonal for 360° protection)
_3D camera in the front
_2x emergency stops & side bumpers
_Sound alarm & visual signaling



○ Manual Controller

_Only for trained people

○ Load Detection Camera

_Load Identification & tracking

○ Certifications

_CE certification by TÜV
_Certified for North American market
_FCC Options

○ 2 Lifting Pins

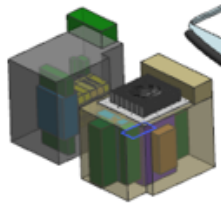
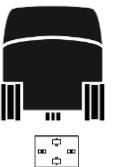
_45mm lifting stroke

○ LFP Batteries, Inductive charging option

_Up to 6 hours running time
_2 hour recharged 20% - 80% SOC

○ Differential drive

_Up to 2m/s speed unloaded
_Up to 1m/s loaded



IP 24



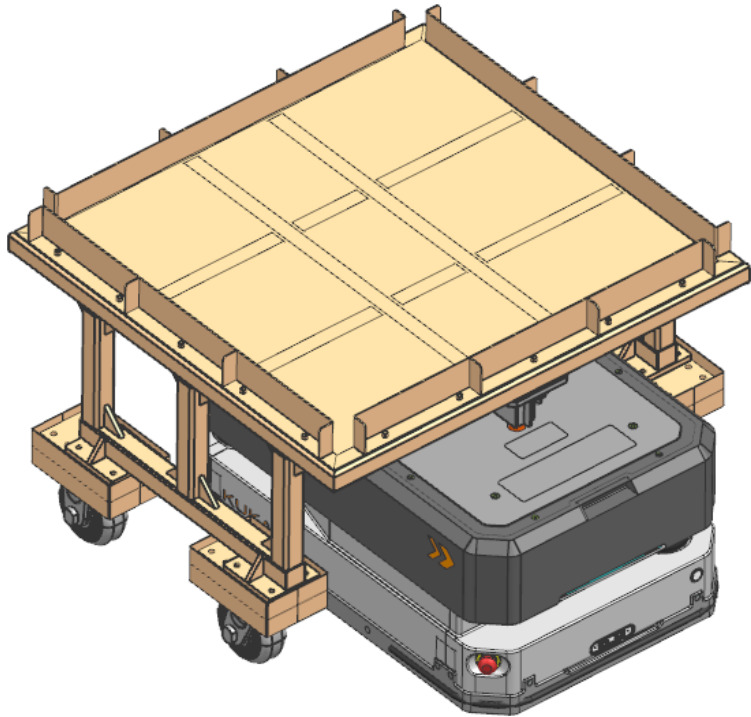


KUKA AMR_ KMP 250P-T Specification

Dimensions (L x W x H)	Approx. 800×520×350mm
Weight approx.	195kg
Max. Towload	300 kg*
Maximum velocity (unloaded)	2.0 m/s
Maximum velocity (loaded)	1.0 m/s
Maximum slope	3%
Battery	48 VDC 21Ah
Operating time	6 h
Pin lifting	45 mm
Number of laser scanners	2
Number of 3D cameras for obstacle avoidance	1 (front)
Positioning accuracy (vehicle)	±10mm, ±1°(SLAM)
Protection class rating	IP24
Operating Temperature	0 – 45 °C
Certification	CE, FCC, cTUVus



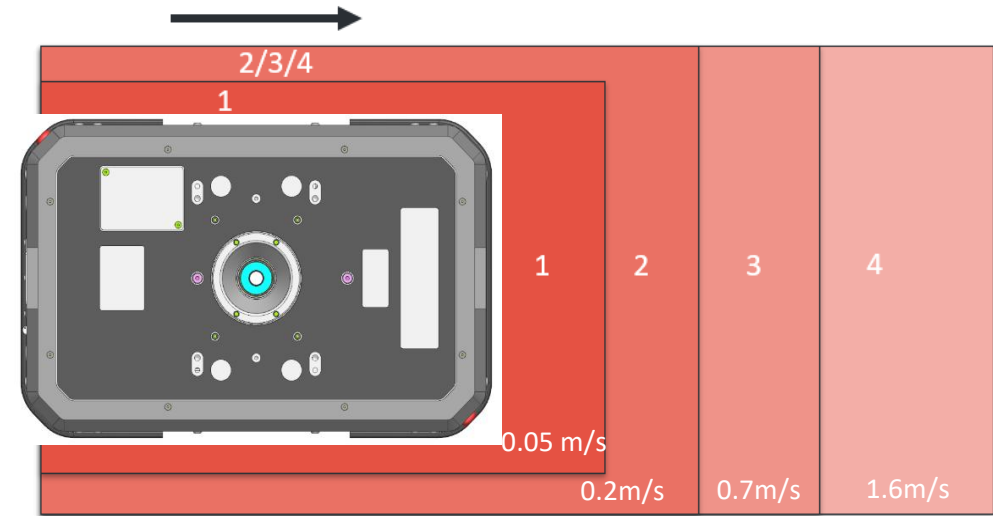
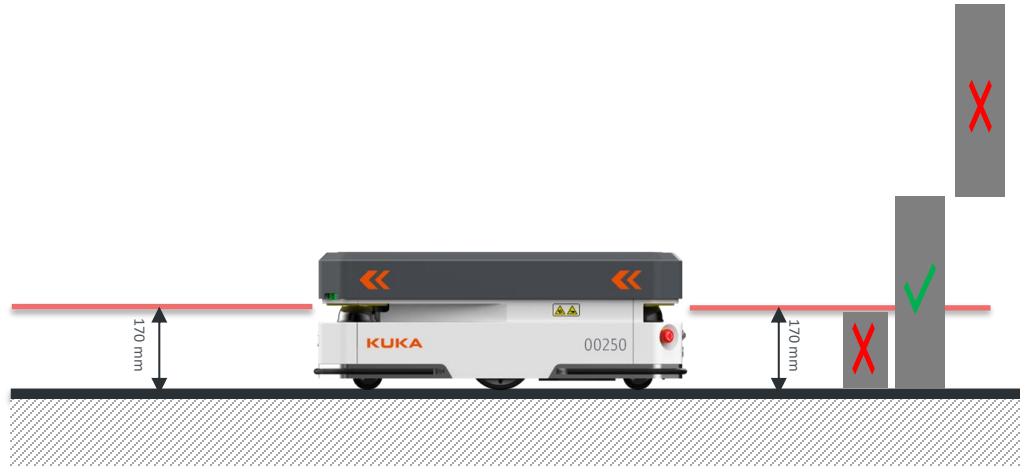
KMP 250P-T_ Unique selling propositions



- First KUKA product for tugging applications
- Compact design for high flexibility
- Inductive and conductive charging options
- Competitive pricing
- High safety (e.g. through 360° protection fields)



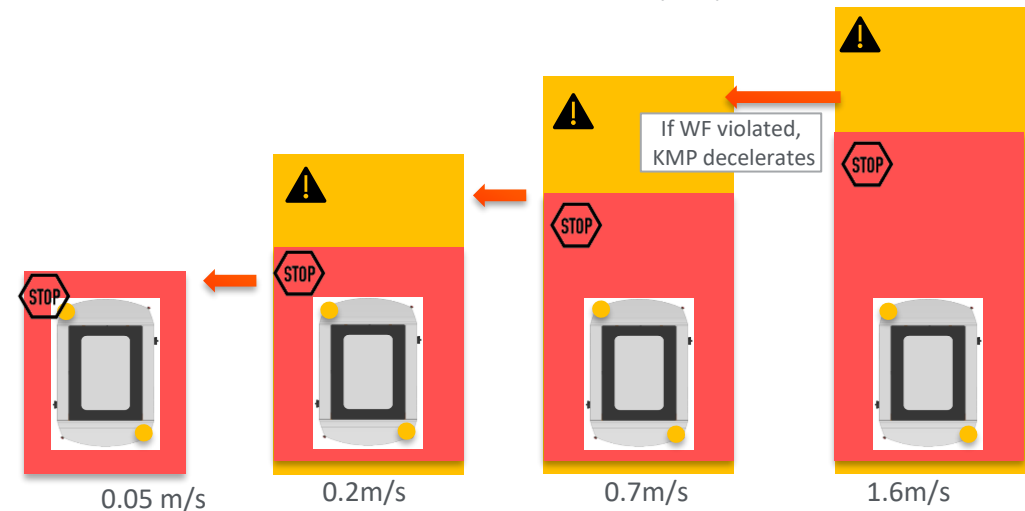
KUKA AMR_ KMP 250P_Lidar Scanner (human safety)



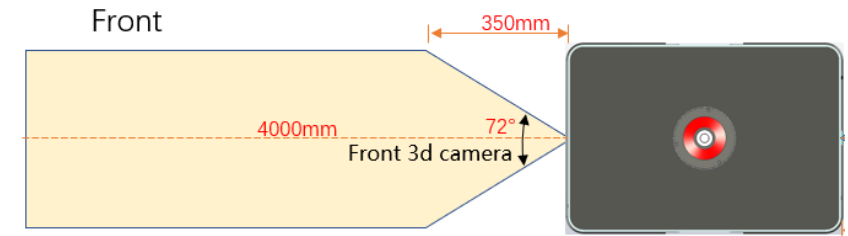
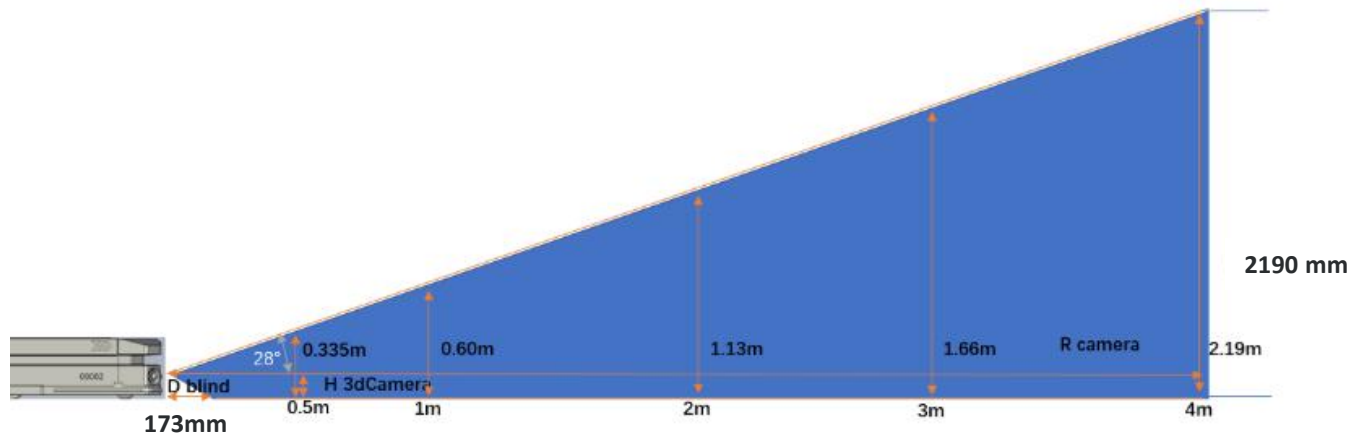
Key Features

- 360° safety field
- Any motions is prohibited if human occurs in protection field
- The size of the fields depends on the velocity of the vehicle and can be adapted to the application/load situation (sizes, see manual)
- Safety PLC monitors AMR movement and stops in case of overspeed
- KMP 250P-E-D diffDrive are equipped with SICK PLC.

Yellow = Warning Field (WF) no safe rating → violation reduces speed
 Red = Protection Field (PF) PL d → violation leads to Safety Stop 1 (SS1)



KUKA AMR_ KMP 250P 3D Obstacle Detection (Machine safety)

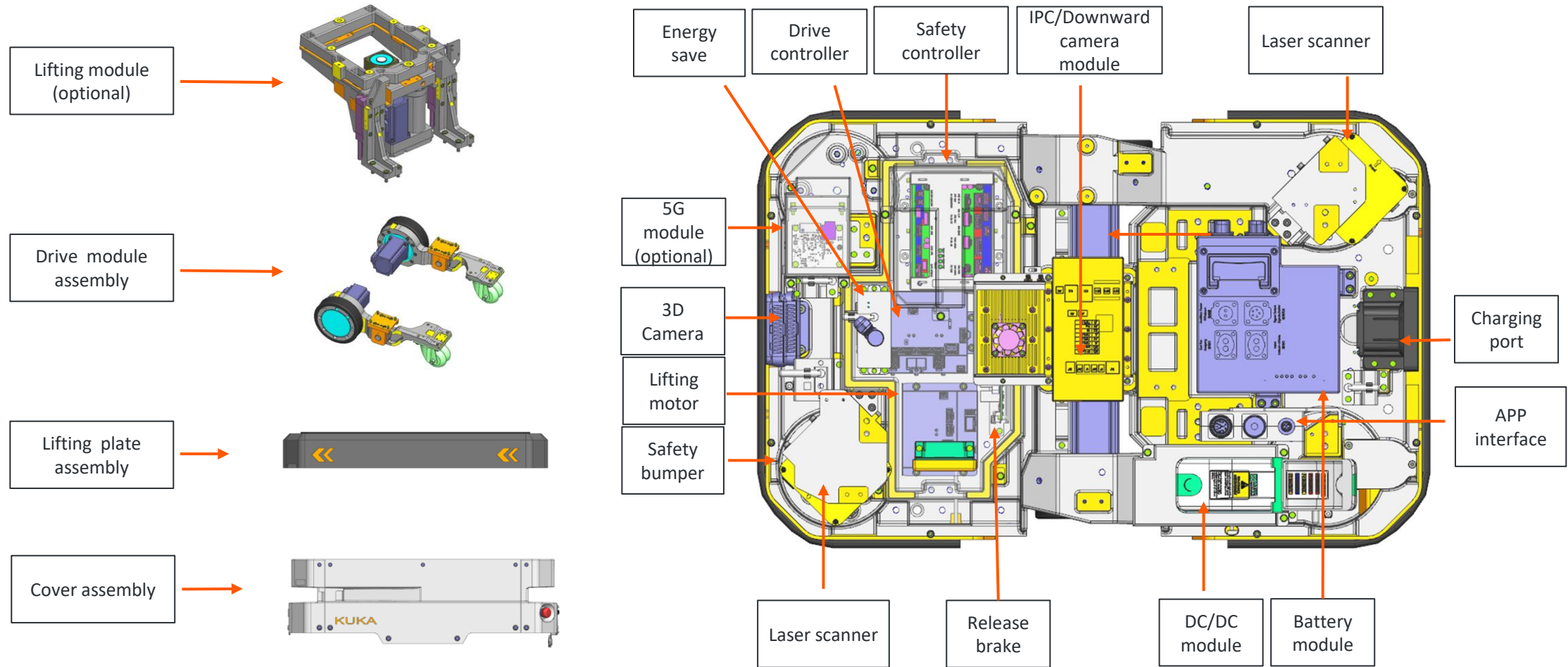


3D camera

- ✓ Detect obstacles from 20mm to 2190mm above ground
(2m obstacle dimension > 80*80*80mm
4m obstacle dimension > 200*200*300mm)



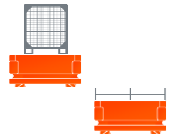
KUKA AMR_ KMP 250P Structure Introduction





KMP 600P_ the compact allrounder

KUKA AMR_KMP 600P



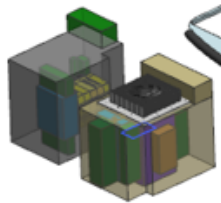
Payload

_max. 600 kg



IP 54 Protection

_Splash water
_Dust



Easy Maintenance

_Easy exchangeable control & power electronics cabinet



KUKA Navigation

_SLAM Navigation (based on laser scanners)
_QR Code Navigation (based on bottom camera)
_Fleet Management



High Safety

_2 laser scanners (diagonal for 360° protection)
_3D camera in the front and rear
_Reduced velocity and sound alarm for backwards driving
_4x emergency stops & side bumpers
_Sound alarm & visual signaling



Manual Controller

_Only for trained people



Load Detection Camera

_Load Identification & tracking

Certification

_CE certification by TÜV
_Certified for North American market by TÜV
_FCC Options



Integrated Lifting Devices

_80mm lifting stroke (optional)



LFP Batteries, Inductive charging option

_Up to 8 hours running time
_1.5 hour recharged 20% - 80% SOC



Differential drive

_Up to 2m/s speed unloaded
_1,5m/s loaded



Touch Display

_Status / Control menu

KUKA AMR_ KMP 600P Specification

Dimensions (L x W x H)	980×686×270mm
Weight approx.	154 kg
Payload (w/o upper structure)	600 kg
Maximum velocity straight direction (unloaded, flat)	2 m/s
Maximum velocity straight direction (loaded, flat)	1,5 m/s
Maximum slope	5 %
Battery	48 VDC
Operating time	>8 h
Lifting stroke	80 mm
Lifting time	approx. 5s
Number of laser scanners	2
Number of 3D cameras for obstacle avoidance	2
Position accuracy	±10mm, ±1°(SLAM) ±5mm, ±0.5°(QR)
Protection class rating	IP54
Operating Temperature	0 – 45 °C





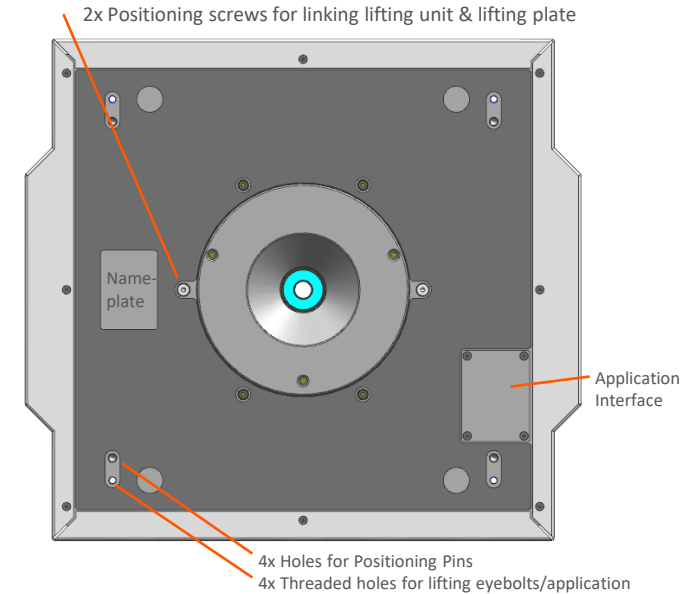
KUKA AMR_ KMP 600P



Wide range of Interfaces

Interfaces for different load handling devices such as roller conveyors for highest flexibility for different applications.

A grit pattern of threaded holes allows flexible attachments of specific components as Cup-cone, special fixtures and add-ons.



Integrated Lift

Fully integrated lifting device with 80 mm stroke offers high flexibility in your application. It is lifting up in 2 smooth steps to transport goods smoothly without any shocks and damages.



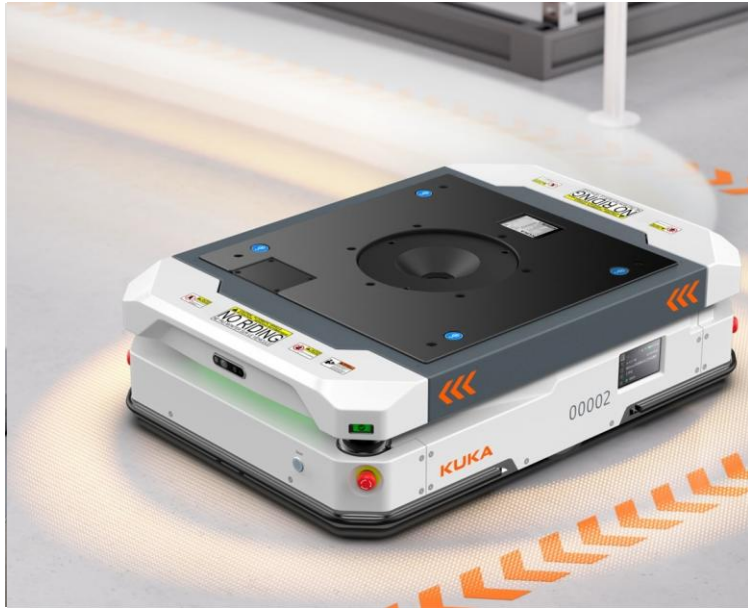
Load Identification

The QR Code Camera on top of the lift identifies the load carrier. This allows to double check if the right goods are picked up and increases the material traceability. Transports of the wrong material belong to the past.

Additionally, the camera can be used for fine positioning in rack stations.



KUKA AMR_ KMP 600P



Obstacle Avoidance

The KMP 600P is passing detected obstacles autonomously and is not just stopping in front of them. This increases the productivity of the fleet and limits necessary interventions of operators.



Touch

The user interface gives the operator all necessary information of the status and obstacles in the lidar or 3D-Camera field to ensure smooth operation and fast trouble shooting.



360° Bumper (machine safety)

The KMP 600P is equipped with a 360° bumper which detects physical contact of any kind of obstacles and stops the KMP immediately. As a result, the safety risk for workers and material damages during operations is reduced to a minimum.

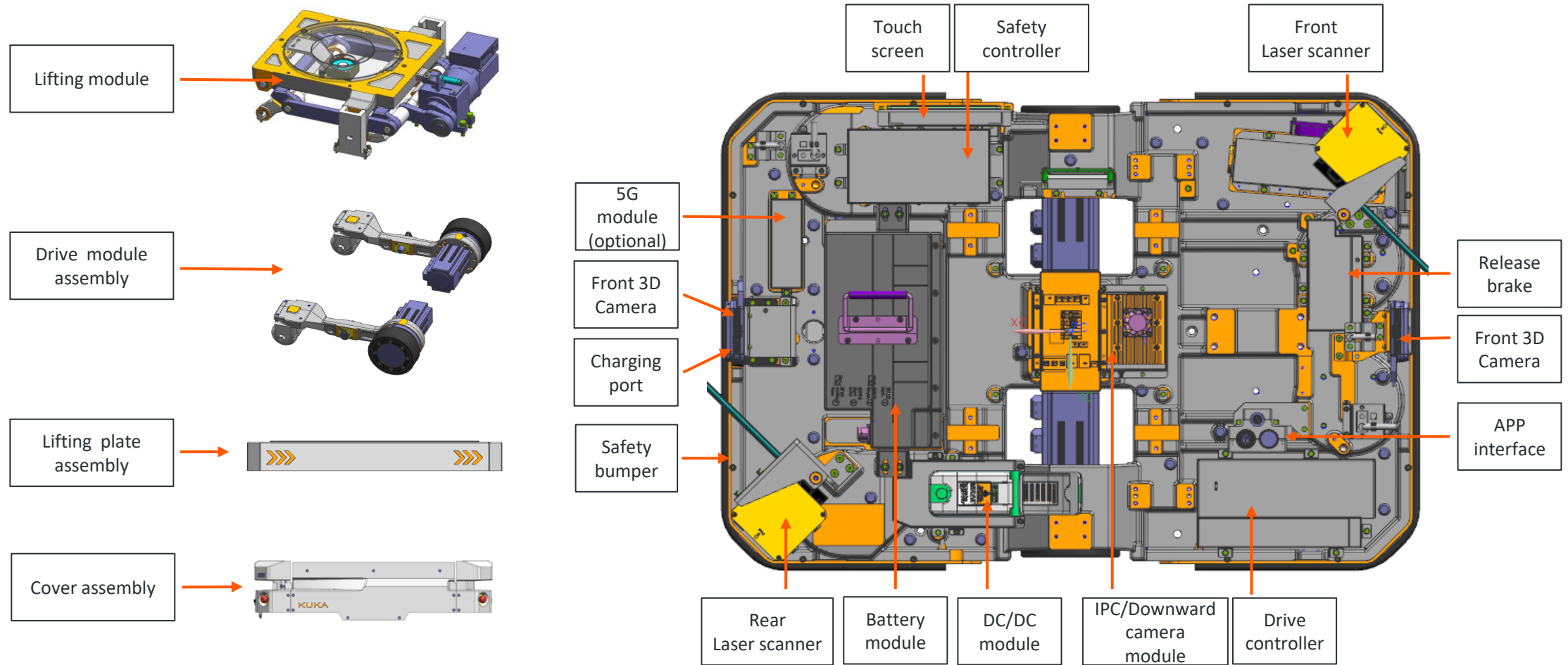


3D Camera (Obstacle Detection)

3D Cameras protect the KMP and the transported goods against collisions with objects in the 3-dimensional space that cannot be detected by the safety laser scanners. The KMP 600P can be used in your production environments according to important standards as DIN EN ISO 3691-4 (2023).

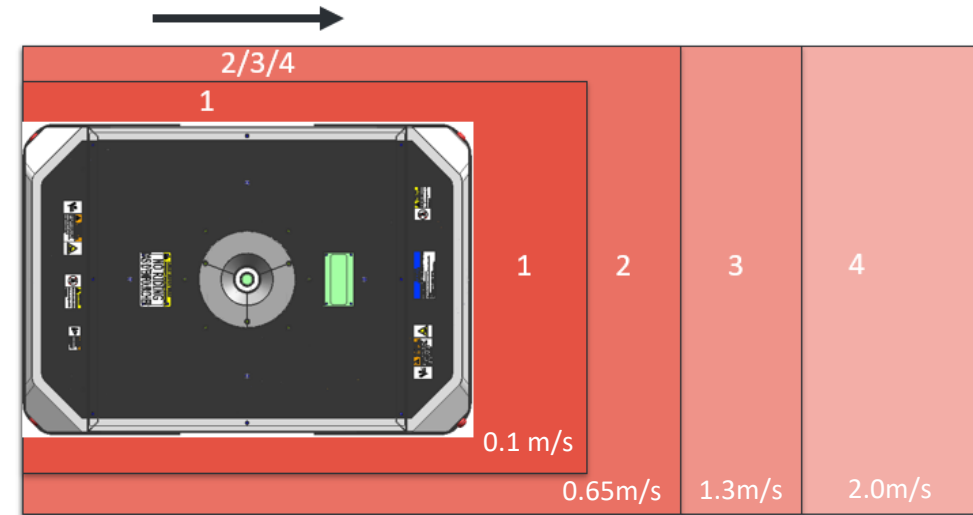
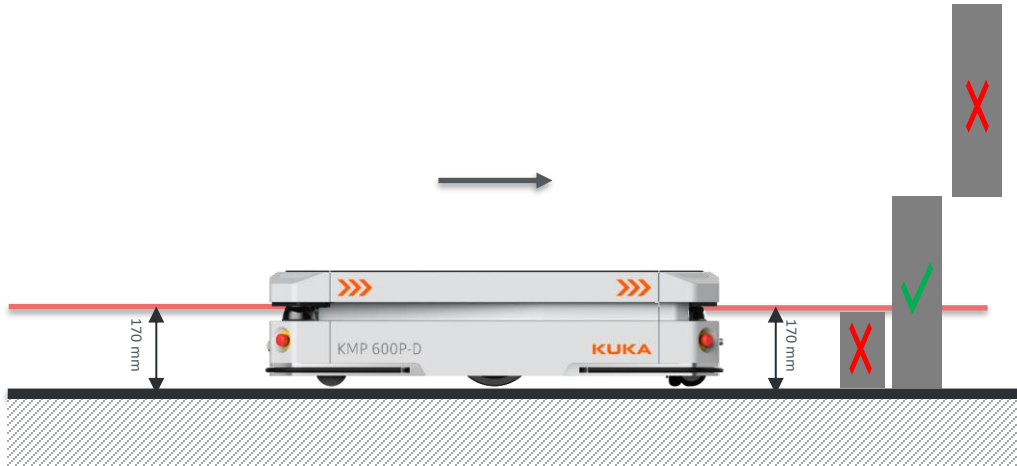


KUKA AMR_ KMP 600P Structure Introduction



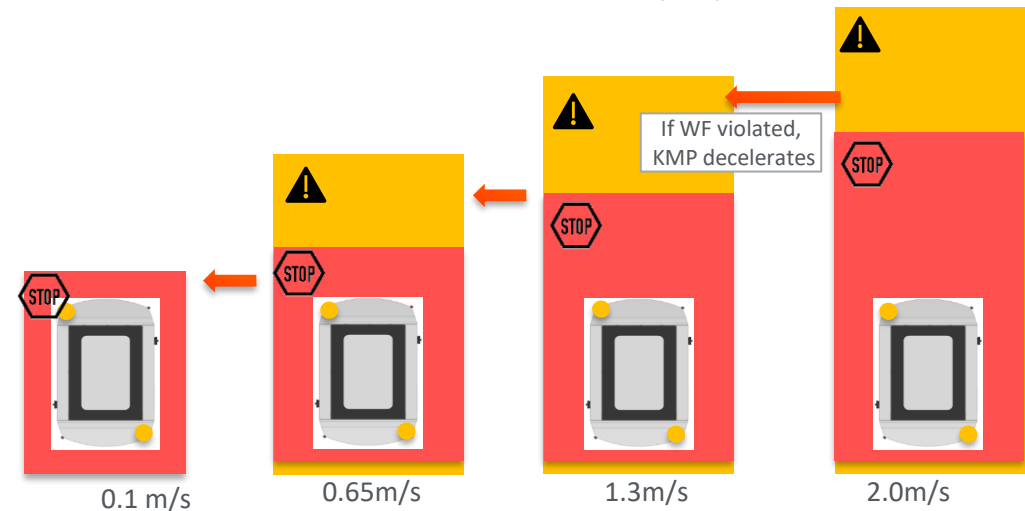


KUKA AMR_ KMP 600P_Lidar Scanner (human safety)

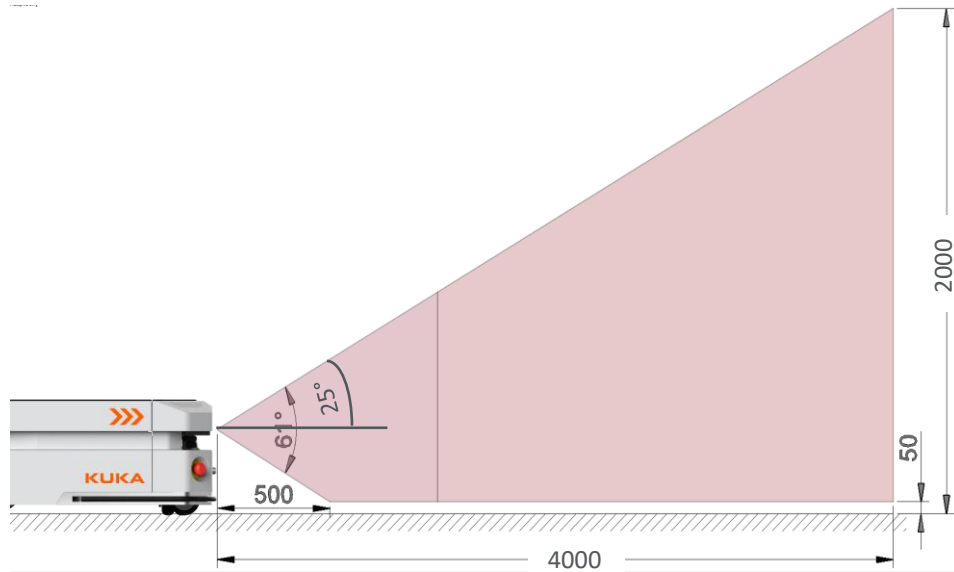


Yellow = Warning Field (WF) no safe rating → violation reduces speed
 Red = Protection Field (PF) PL d → violation leads to Safety Stop 1 (SS1)

- 360° safety field
- Any motions is prohibited if human occurs in protection field
- The size of the fields depends on the velocity of the vehicle and can be adapted to the application/load situation (sizes, see manual)
- Safety PLC monitors AMR movement and stops in case of overspeed

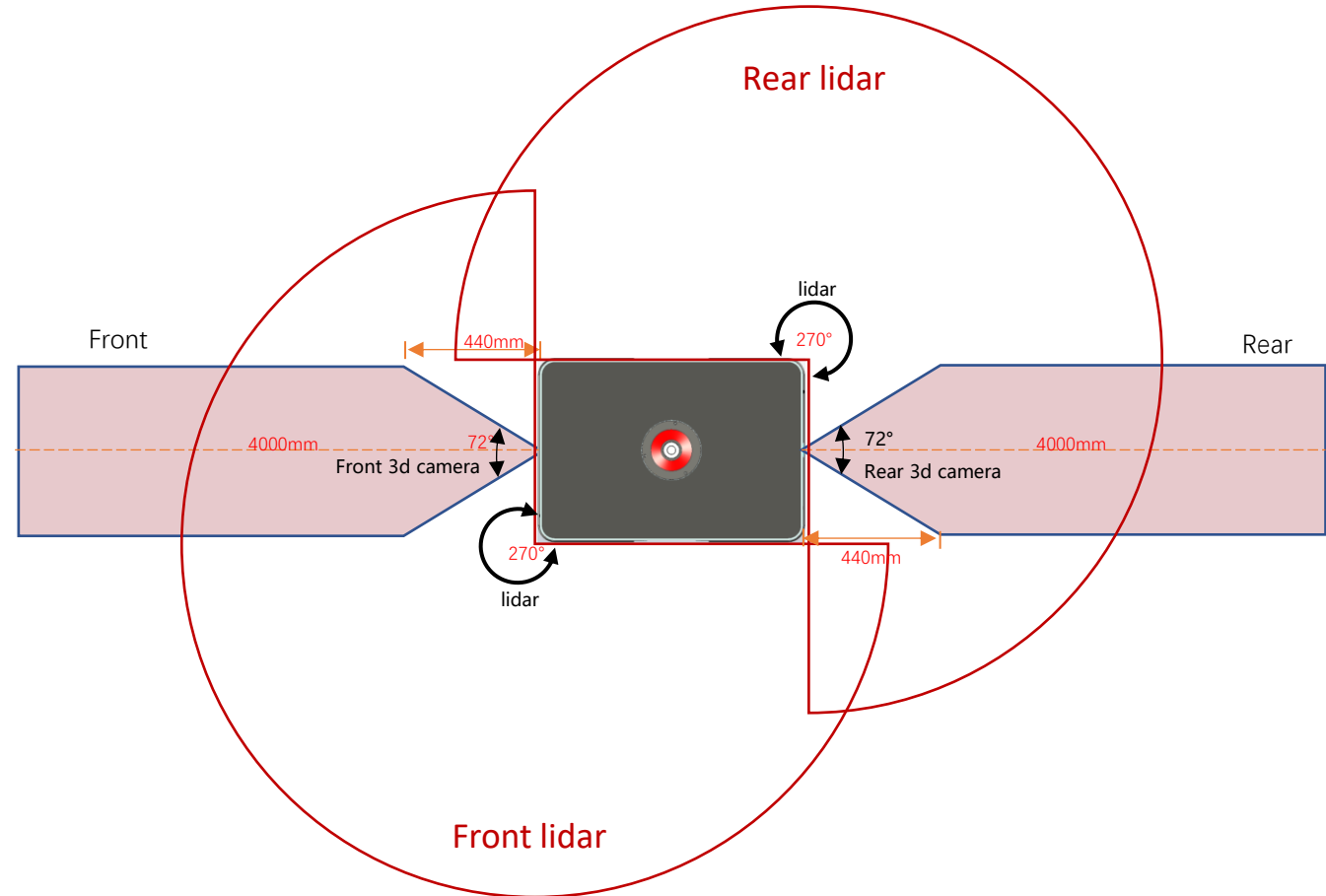


KUKA AMR_ KMP 600P 3D Obstacle Detection (Machine safety)



3D camera

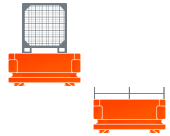
- ✓ Detect obstacles from 50mm to 2000mm above ground
- (Obstacle dimension > 80*80*80mm)





KMP 1500P_ the all-rounder in the (intra-)logistics

KUKA AMR_ KMP 1500P



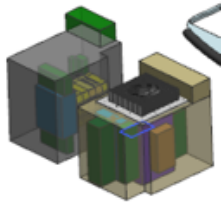
Payload

_max. 1500 kg



IP 54 Protection

_ Splash water
_ Dust



Easy Maintenance

_ Easy exchangeable control & power electronics cabinet



KUKA Navigation

_ SLAM Navigation (based on laser scanners)
_ QR Code Navigation (based on bottom camera)
_ Fleet Management
_ Highest flexibility without external efforts



High Safety

_ laser scanners in front and rear (360° Protection)
_ 3D cameras in the front and rear
_ Reduced velocity and sound alarm for backwards driving
_ 4x emergency stops & side bumpers
_ Sound alarm & visual signaling



Manual Controller

_ Only for trained people



Load Detection Camera

_ Load Identification & tracking

Certification

_ CE certification by TÜV Rheinland
_ Certified for North American Market
_ FCC Options



Integrated Lifting Device

_ max 60mm lifting stroke (optional)

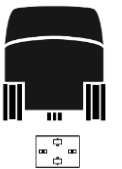
LFP Batteries , Inductive charging option

_ up to 10 hours running time
_ Less than 2 hours charging time
_ Less than 1 hour recharged 20% - 80% SOC



Differential drive

_ Preferred driving direction
(+ turn on spot)
_ Up to 1,8m/s speed



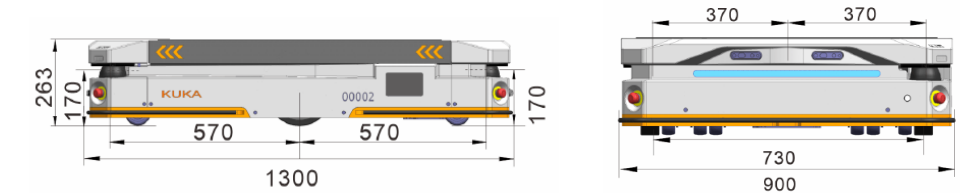
Touch Display

_ Status / Control menu



KUKA AMR_ KMP 1500P Specification

Dimensions (L x W x H)	1300 x 900 x 263 mm
Weight approx.	< 270 kg
Payload (w/o upper structure)	1.500 kg
Maximum velocity straight direction	1,5 m/s
Rotation velocity (Turning on a spot)	0.35 Rad/s
Maximum slope (at max. payload)	5 %
Battery (lithium-ion)	48 VDC 48 Ah
Operating time	10 h
Lifting stroke	60 mm
Position accuracy (SLAM)	+/- 10 mm (+/- 1° Theta)
Position accuracy (QR Code)	+/- 5mm (+/- 0,5° Theta)
Safety category/ performance Level	3/ d
Protection class rating	IP54
Ambient Temperature	0 – 45 °C





KUKA AMR_ KMP 1500P



Integrated Lift

Fully integrated lifting device with 60 mm stroke offers high flexibility in your application. It is lifting up in 2 smooth steps to transport goods smoothly without any shocks and damages.

Wide range of Interfaces

Interfaces for different load handling devices such as roller conveyors for highest flexibility for different applications.

A grit pattern of threaded holes allows flexible attachments of specific components as Cup-cone, special fixtures and add-ons.



Load Identification

The QR Code Camera on top of the lift identifies the load carrier. This allows to double check if the right goods are picked up and increases the material traceability. Transports of the wrong material belong to the past.

Additionally, the camera can be used for fine positioning in rack stations.



KUKA AMR_ KMP 1500P



Obstacle Avoidance

The KMP 1500P is passing detected obstacles autonomously and is not just stopping in front of them. This increases the productivity of the fleet and limits necessary interventions of operators.



Touch

The user interface gives the operator all necessary information of the status and obstacles in the lidar or 3D-Camera field to ensure smooth operation and fast trouble shooting.



360° Bumper

The KMP 1500P is equipped with a 360° bumper which detects physical contact of any kind of obstacles and stops the KMP immediately. As a result, the safety risk for workers and material damages during operations is reduced to a minimum.



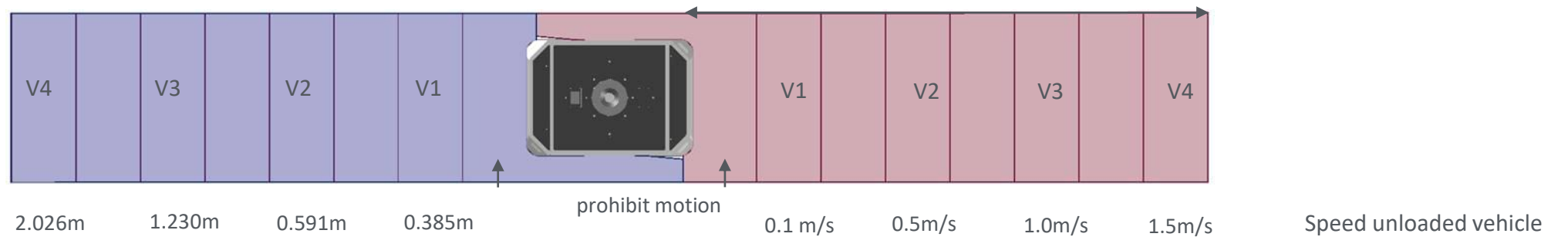
3D Camera (Obstacle Detection)

3D Cameras protect the KMP and the transported goods against collisions with objects in the 3-dimensional space that cannot be detected by the safety laser scanners. The KMP 1500P can be used in your production environments according to important standards as DIN EN ISO 3691-4.

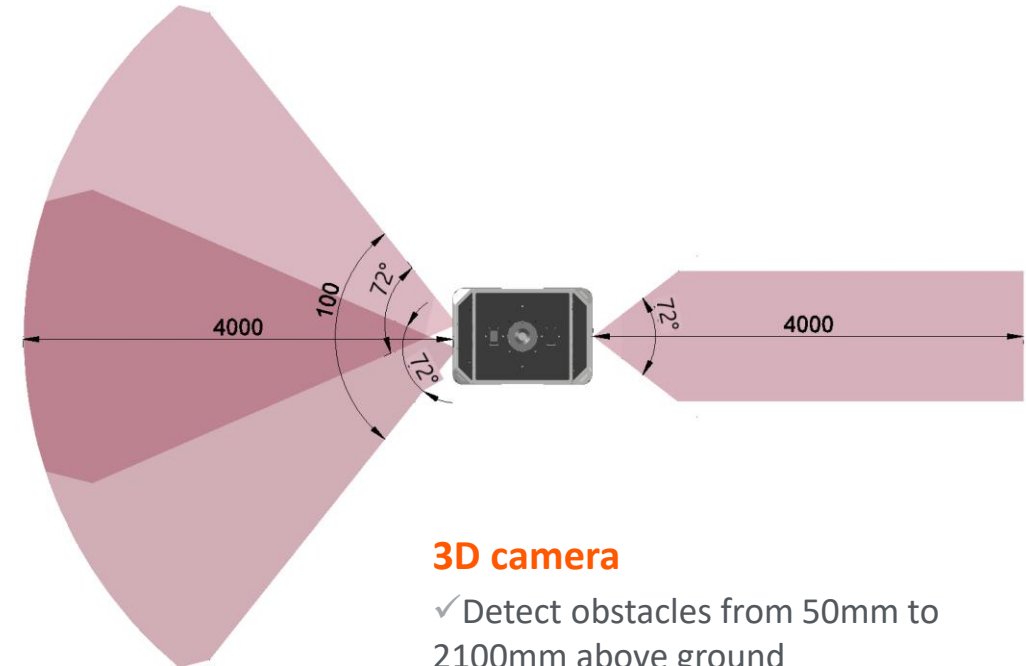
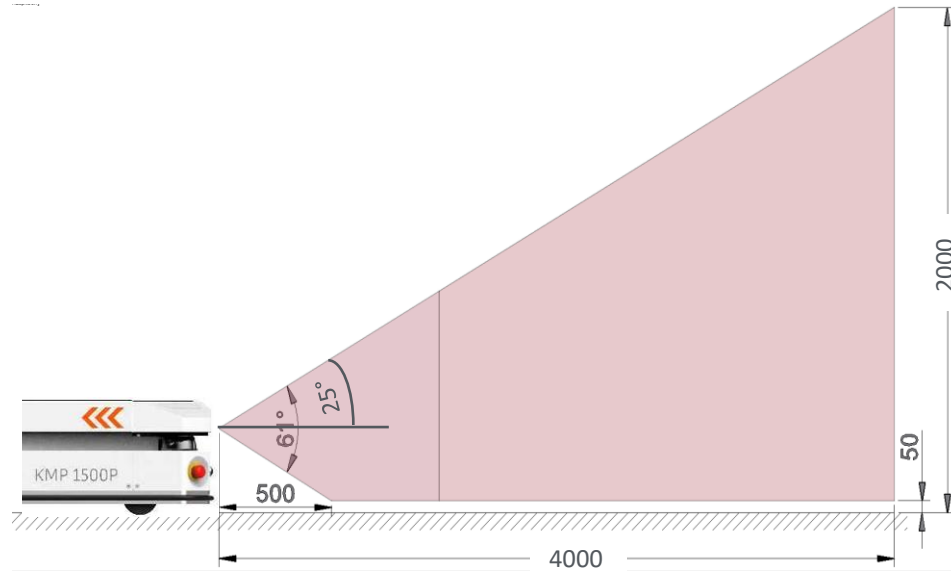
KUKA AMR_ KMP 1500P_Lidar Scanner (human safety)



- 360° safety field
- If the speed exceeds the limit of safety fields, KMP 1500P will stop to prevent injuring.
- Any motions is prohibited if human occurs in field 1
- The size of the fields depends on the velocity of the vehicle and can be adapted to the application situation



KUKA AMR_ KMP 1500P 3D Obstacle Detection (Machine safety)



3D camera

- ✓ Detect obstacles from 50mm to 2100mm above ground
(Obstacle dimension > 80*80*80mm)

*Please note the blind zones of the 3D cameras



KMP 3000P_ brings the heavyweights into motion



KUKA AMR_ KMP 3000P



○ Payload

_max. 3000 kg



○ IP 54 Protection

_Splash water
_Dust



○ Easy maintaining functions

_Side disassembly of wheel units
and inductive charger



○ KUKA Navigation

_SLAM Navigation (based on laser scanners)
_QR Code Navigation (based on bottom camera)
_VDA 5050 interface
_Highest flexibility without external efforts



○ High Safety

_2x laser scanner front and rear (360° Protection)
_4x 3D camera in the front and rear
_6x emergency stops & side bumpers
_Sound alarm & visual signaling

○ Manual Controller

_Only for trained people

○ Load Detection Camera

_Load Identification & tracking

○ Certification

_CE certification by TÜV
_Certified for North American market



○ Integrated Lifting Devices

_100mm lifting stroke

○ LFP Batteries

_6-8 hours running time
_Less than 2 hours charging time (10-90%)
_Inductive charging on the ground



○ Omnidirectional drive

_Omnidirectional movement
_Unloaded max velocity 1.2m/s (flat)
_Loaded max velocity 1.0m/s (flat)



○ Touch Display

_Status / Control Display screen 5"



KUKA AMR_ KMP 3000P Specification

Dimensions (L x W x H)	2200 x 1200 x 370 mm
Weight approx.	800kg
Payload (w/o upper structure)	3000 kg
Maximum velocity straight direction (unloaded, flat)	1,2 m/s
Maximum velocity straight direction (loaded, flat)	1,0 m/s
Maximum slope	5 %
Battery	48 VDC 100 Ah
Operating time	6-8 h
Lifting stroke	100 mm
Lifting velocity	30mm/s
Number of laser scanners	2 (360°)
Number of 3D cameras for obstacle avoidance	6
Positioning accuracy	± 15mm, ± 1° (SLAM) ± 5mm, ± 0,5° (QR)
Protection class rating	IP54
Operating Temperature	5 – 45 °C



KUKA AMR_ KMP 3000P Energy Management

High-power inductive charging on the ground

- wirelessly charging even in workstations during the process
- Wear-free charging during operation
- Fast and efficient charging with up to 3.000W

Battery

Battery type	Lithium Iron Phosphate
Rated Voltage	48V DC
Battery capacity	100Ah

Inductive charging

Input power	> 3kW
Positioning accuracy	± 30mm
IP degree	IP 65





KUKA AMR_ KMP 3000P



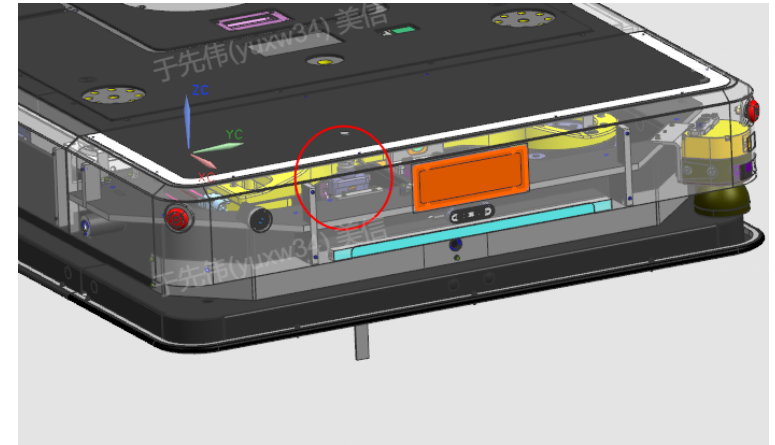
Integrated Lift

Fully integrated lifting device with 100 mm stroke offers high flexibility in your application. It is lifting the goods up smoothly without any shocks and damages.

Wide range of Interfaces

Interfaces for different load handling devices such as roller conveyors for highest flexibility for different applications.

A grit pattern of threaded holes allows flexible attachments of specific components as Cup-cone, special fixtures and add-ons.



Load Identification

The QR Code Camera on top of the lift identifies the load carrier. This allows to double check if the right goods are picked up and increases the material traceability. Transports of the wrong material belong to the past.

Additionally, the camera can be used for fine positioning in rack stations.



KUKA AMR_ KMP 3000P



Obstacle Avoidance

The KMP 3000P is passing detected obstacles autonomously and is not just stopping in front of them. This increases the productivity of the fleet and limits necessary interventions of operators.



Touch

The UI gives the operator all necessary information of the status and obstacles in the lidar or 3D-Camera field to ensure smooth operation and fast trouble shooting.



360° Bumper

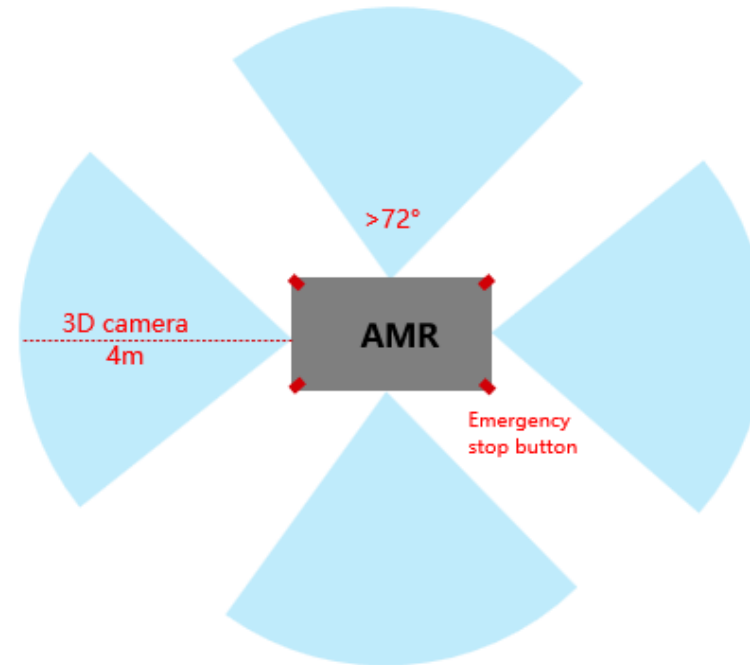
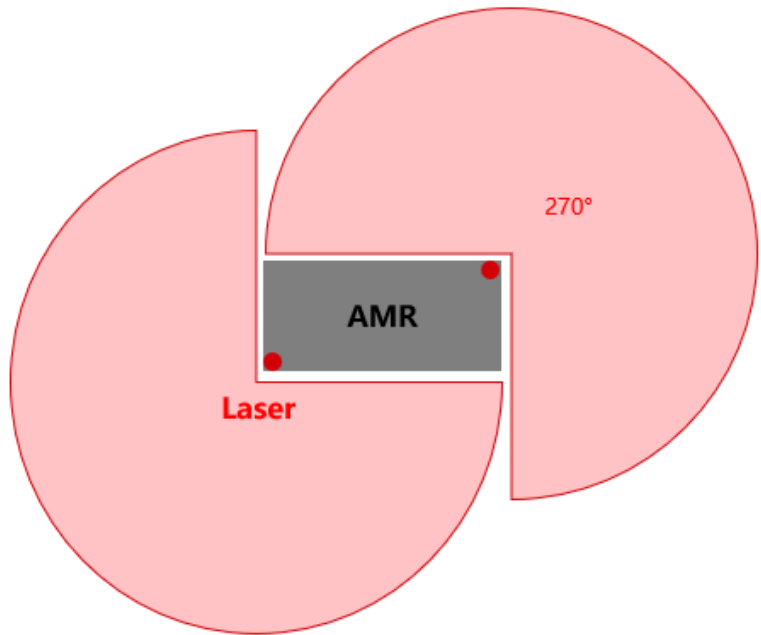
The KMP 3000P is equipped with a 360° bumper which detects physical contact of any kind of obstacles and stops the KMP immediately. As a result, the safety risk for workers and material damages during operations is reduced to a minimum.



3D Camera (Obstacle Detection)

3D Cameras on all 4 sites protect the KMP and the transported goods against collisions with objects in the 3-dimensional space that cannot be detected by the safety laser scanners. The KMP 1500P can be used in your production environments according to important standards as DIN EN ISO 3691-4.

KUKA AMR_ KMP 3000P Safety Layers



The first layer : 360° obstacle avoidance with 2 safety lidars (human safety)

The second layer: 6x Emergency stop buttons (human safety)

The third layer: Enhanced low dangling obstacle avoidance by 4x 3D cameras (machine safety)

The fourth layer: 360° bumper sensors (machine safety)

KUKA AMR_ KMP 3000P innovative & omnidirectional Drive Unit

+ Two driven steering wheel units allow maximum freedom of motion

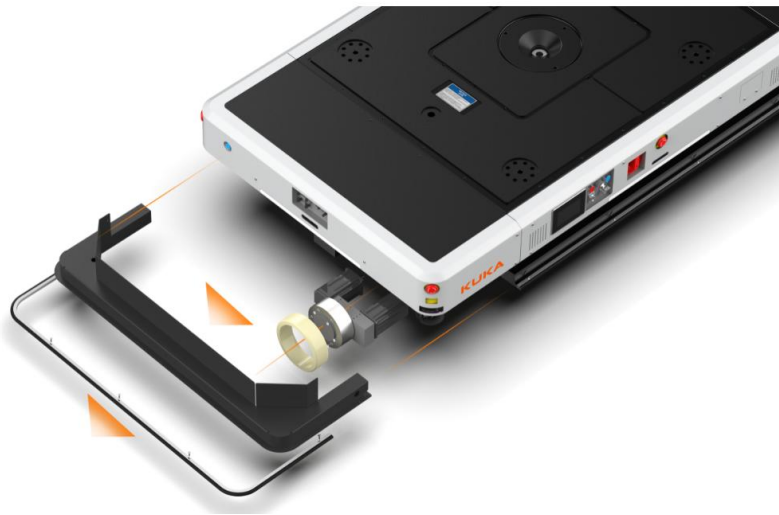
+ Easy and fast exchange of roller coating at minimum cost



+ No movement during reorientation of the drive units on spot

+ Less wear due to mechanical design

KUKA AMR_ KMP 3000P easy Maintenance Concept



+ Easy and fast exchange of roller coating at minimum cost

+ Maintenance hatch for easy access to the mature electrical components



+ Easy access to the inductive charging coil



KMP 600W_ designed for applications behind a fence

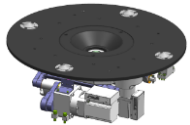


KUKA AMR_ KMP 600W



Payload

- ✓ max. 600kg



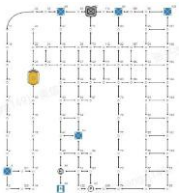
Integrated Lifting + Rotating Mechanism

- ✓ 60mm lifting stroke
- ✓ Rotating stroke 360°
- ✓ Centering cone*4



Differential Drive

- ✓ Forward, backward, rotate on spot, arc
- ✓ Up to 2.0m/s speed



KUKA Navigation

- ✓ Node label navigation
- ✓ No Code Fleet management
- ✓ Positioning accuracy ±5mm/±0.5°



Certification

- ✓ System level cert. for North American Market, FCC certified by SGS
- ✓ Declaration of Incorporation (DOI)

High Safety

- ✓ External emergency stop system FNX
- ✓ 1x laser scanner in front
- ✓ bumper in front/rear/sides
- ✓ 2x e-stop buttons
- ✓ Sound warning & Indicator light



Hand-held Control Unit FNB

- ✓ Only for trained people
- ✓ Drive and lift motions



LFP Batteries

- ✓ 8 hours running time
- ✓ Less than 2 hours charging time
- ✓ More than 1500 full charge cycles



Manual Charger

- ✓ Portable
- ✓ User-friendly



Hand truck

- ✓ Tow forward and arc





KUKA AMR_ KMP 600W Specification

Dimensions (L x W x H)	980×686×268mm
Weight approx.	154 kg
Payload (w/o upper structure)	600 kg
Maximum velocity straight direction (unloaded, flat)	2 m/s
Maximum velocity straight direction (loaded, flat)	1,5 m/s
Maximum slope	5 %
Battery	48 VDC
Operating time	>8 h
Lifting stroke	60 mm
Lifting velocity	30mm/s
Rotation unit	360°
Number of laser scanners	1 (machine safety)
Number of 3D cameras for obstacle avoidance	-
Positioning accuracy	± 5mm, ± 0,5° (QR)
Protection class rating	IP20
Operating Temperature	0 – 45 °C



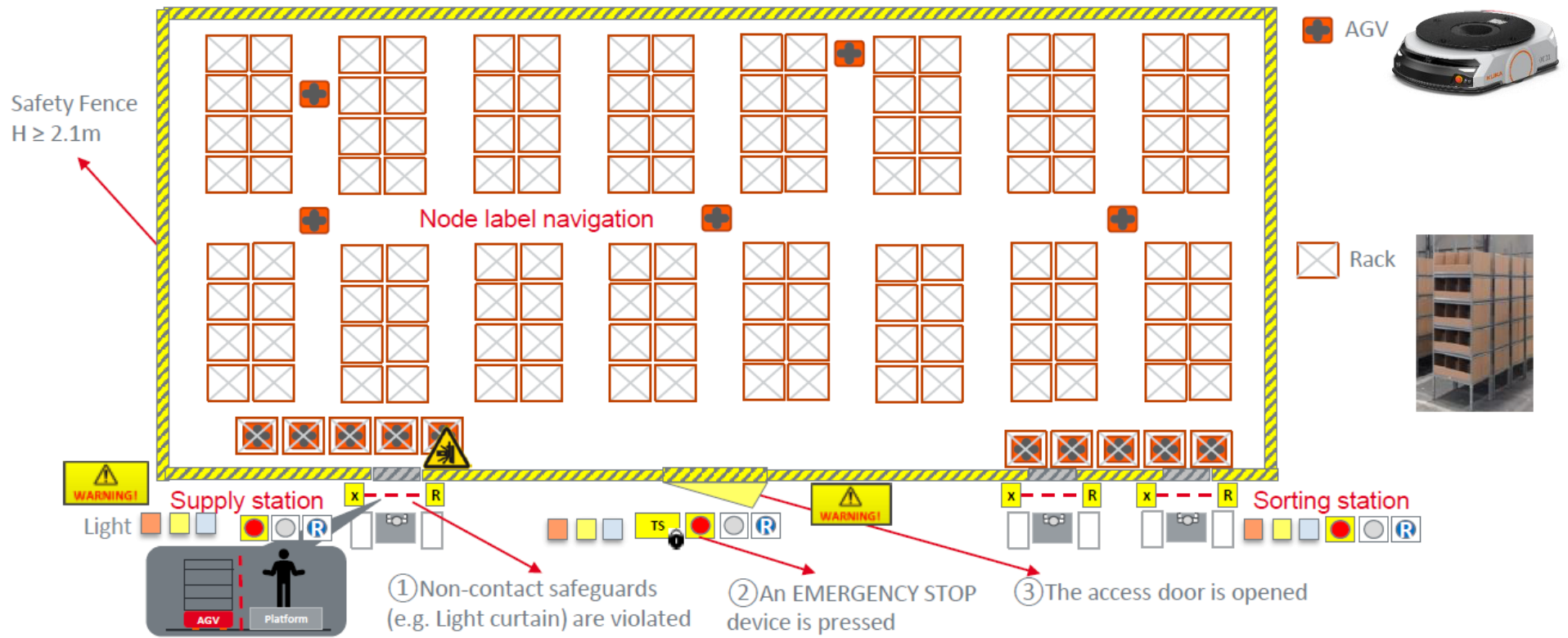


KUKA AMR_ The meaning of Warehouse Line

AMRs work in a confined zone which is a closed safeguarded area. Entry will not be allowed while the AMRs are running.

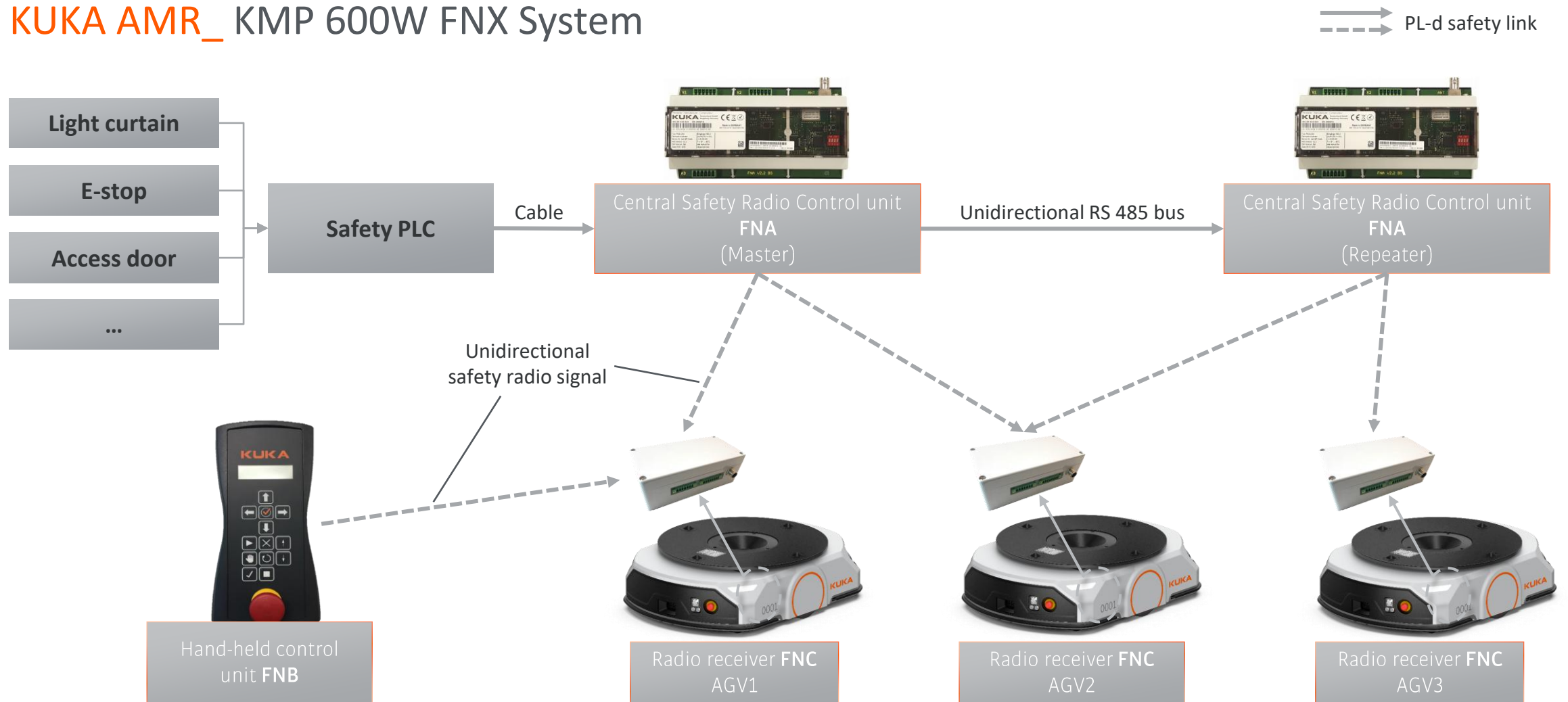
When a safety device of the confined zone is triggered, the AMRs will execute a safe stop triggered by radio signal from the FNX radio system

The warehouse edition utilizes only QR-code navigation





KUKA AMR_ KMP 600W FNX System



KUKA

KUKA – your partner for AMR 

AMR

Hardware Options
Accessories for KMP

KMP 250P(-T)/ 600P/ 1500P_ Conductive charging

Conductive Charging Station

Model	CE, NRTL, CE&NRTL (US, EU-Plug, hardwire available)
Touch Screen	4 inch
Safety	Emergency Stop
Weight	38±2 kg
Dimension	531x473x820mm
Input voltage	110-240 V AC
Input current	13 A
Rated frequency	50/60 Hz
The output voltage	DC 54,6 V
Maximum output current	35 A
Default output current (manual model)	10 A
Operating temperature	-20 to +45 °C

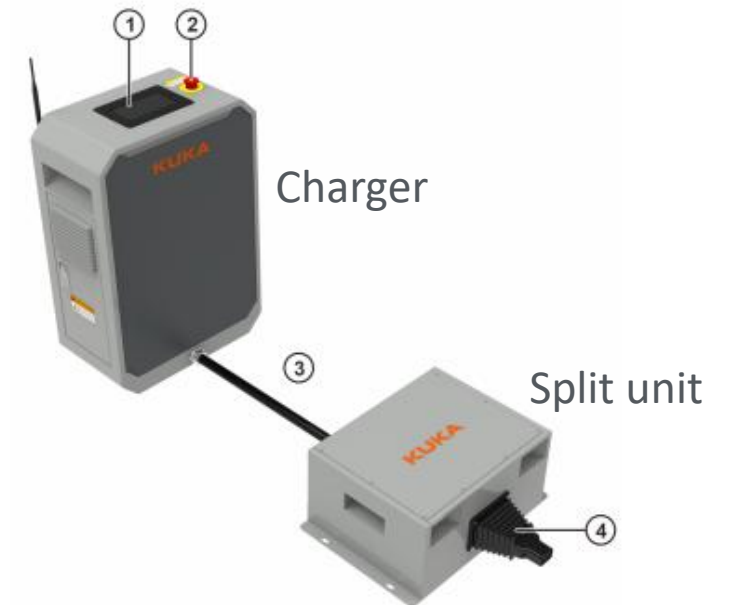


KMP 250P(-T)/ 600P/ 1500P | conductive split type charging station

Charging Station conductive/split type KMPC 48S35-2-G-S (488-143)

Model	KUKA conductive charging system for worldwide use (only hardwire w.o. plug)
Touch Screen	7 inch
Safety	1 Emergency Switching Off button
Weight	~34kg (Charger), ~17kg (Split unit)
Dimension Station	500×280×720 mm
Dimension Unit	511×500×220 mm
Input voltage	110-240 V AC
Input current	15 A
Rated frequency	50/60 Hz
The output voltage	DC 30-60V
Maximum output current	35 A
Default output current (manual model)	10 A
IP Protection class	IP 20
Operating temperature	0 to +45 °C
Certifications	CE, NRTL,FCC,IECS

This charger allows conductive charging of AMRs with overhanging loads



- 1) Touch screen
- 2) Emergency switching button
- 3) Connecting cable (3000 mm)
- 4) Charging connector



KMP 250P(-T)/ 600P/ 1500P/ 3000P_ Inductive charging

Inductive Charging Station: KMPC 48EU30-1-IC (00-491-927)

Model	KUKA wireless charging system for worldwide use (only hardwire w.o. plug)
Rated output power	1500W
Rated output voltage	48V (42 – 60 V) DC
Rated output current	approx. 25A (±5%)
Charging distance	20mm (10-30mm)
Stationary Charging Electronics	390x260x71mm
Stationary Charging Coil	226x226x17mm
Mobile Charging Coil	193x79x69mm
IP Protection	Stationary charging module : IP20 Stationary charging coil : IP67
Operating humidity	10 % to 90 % (non-condensing)
Operating conditions	0 to 45 °C
Certifications	CE, NRTL, FCC, IECS

Inductive charging allows wear free, opportunity charging within the process



- 1) Stationary charging coil
- 2) Cables (~8m)
- 3) Stationary charging electronics

KMP 250P/600P/1500P_ Overview sleepmode



**Sleepmode of up to 72hrs,
not draining the main battery.**

How does the sleepmode work?

Going to sleep:

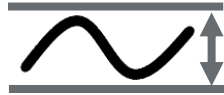
- Shut-off command is sent via the fleet management (AMR Fleet) to the AMRs
- The AMRs finish the current task and move to a defined sleep position (need to be unloaded)
- The AMRs shut down and cut off the power from the main battery

Wake up:

- Wake-up command is sent via the fleet management (AMR Fleet) to the new sleepmode module inside the AMR (own battery)
- The sleepmode module reconnects the main battery to the system and allows the AMR to start
- The AMR performs a start up with initializing and resume to work

KUKA AMR_ KMP Environment requirements

Flatness



$\leq 6\text{mm}$ within 1m^2

Slope



Topload: 5% (H/L)

Gap



Topload: $\leq 35\text{mm}$

Step



$\leq 5\text{mm}$

Temperature



Operation: 0°C - max. 45°C

Storage: -10°C - max. 45°C

Transporting: 0°C - max. 45°C

Humidity



Operation: 10% - max. 80% (No condensation)

Storage: 5% - max. 95% (No condensation)

Transporting: 5% - max. 95% (No condensation)

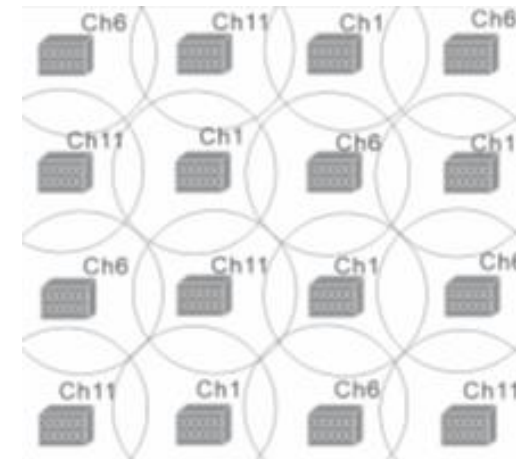
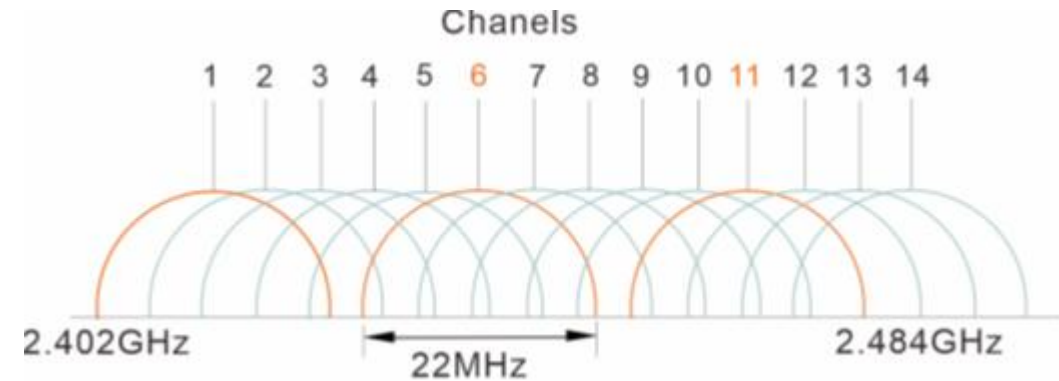


KUKA AMR_ KMP WIFI Communication



Wifi is standard configuration, 5G can be selected as alternative communication

- AMR module for WIFI use is preconfigured for free channel selection.
- In a network it must be guaranteed that the same frequency ranges/channels do not overlap
- Support IEEE 2.4GHz WIFI quality: ≥ -65 dBm
- WIFI must cover all traffic areas
- Channel 1, 6, 11 are recommended if 2.4GHz used



KUKA – your partner for AMR 



KMR iisy

Product Presentation

KMR iisy-2

RVPs KMR iisy-2_ Integrated robot, platform and software by KUKA

Suitable for cleanroom and ESD applications.

Fully integrated robot and platform.

Intelligent & easy to use Fleetmanager and Operating System.

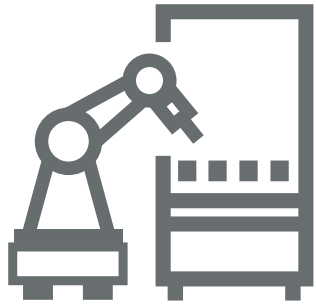
High level of safety.

Flexible and cost-effective autonomous system.

Global network and service.

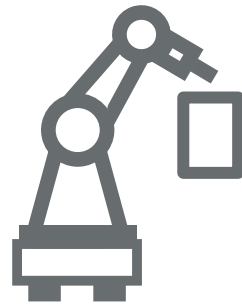


Usecases KMR iisy-2_ Your smart partner in warehouse logistics and production as a fully integrated combination of robot and transport platform.



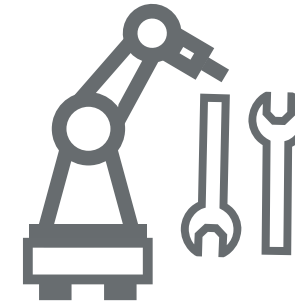
Machine Tending

- Loading of tooling and CNC machines
- Pick-and-place tasks
- Handling of components/material



Material Handling (Cleanroom)

- For cleanroom applications/fabs in Semiconductor and Electronics industry
- Loading and transport of all kinds of pods



Workpiece transportation

- Transport of components to different stations
- Transport of the robot to different application station

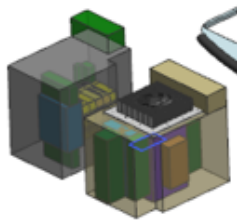


KMR iisy-2_ KUKA Mobile Robot



IP 54 Protection

- _ Splash water
- _ Dust



Easy Maintenance

- _ Large opening for easy access and serviceability



KUKA Navigation

- _ SLAM Navigation (based on laser scanners)
- _ no code Fleet Management with KUKA.AMR Fleet
- _ Highest flexibility without external efforts

SmartPAD Pro or SmartPLUG

- _ For robot teaching, programming, monitoring and manual operation
- _ Option 1: SmartPAD Pro: Take out easily from rear door easily
- _ Option 2: SmartPLUG with your own device



2 LBR payload versions (11 and 15kg)

- _ LBR R930 with 15 kg and LBR R1300 with 11 kg available

ISO 61340-5-1 & ANSI ESD S20.20

- _ ESD Protection for sensitive workspaces
- _ ISO Class 3 Cleanroom version available

WiFi antenna

- _ Top mounted for best WiFi signal strength
- _ 5G (planned)

Li-Ion battery / wireless in-process

- _ up to 8 hours running time
- _ Less than 2 hours charging time
- _ Less than 1 hour recharged 20% - 80% SOC



Differential drive

- _ Preferred driving direction (+ turn on spot)
- _ Up to 1,5m/s speed

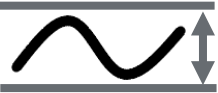






High Safety

- _ 2 laser scanner in front and rear (360° Protection)
- _ Reduced velocity and sound alarm for backwards driving
- _ 4x emergency stops & led strips
- _ International certifications



KUKA AMR_ KMR iisy -2 Environment

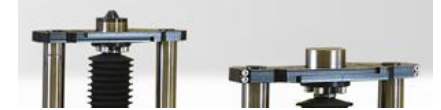
Flatness		$\leq 5\text{mm}$ within 1m^2
Slope		3% (H/L)
Gap		$\leq 10\text{mm}$
Temperature		Operation: 10°C - max. 40°C Storage: -20°C - max. 50°C Transporting: -20°C - max. 50°C
Humidity		Operation: 5% - max. 90% (No condensation) Storage: 5% - max. 95% (No condensation) Transporting: 5% - max. 95% (No condensation)



KUKA AMR_omniMove

Tandem Mode

- ✓ Coupling of multiple omniMove (project specific)



Load detection and securing

- ✓ Lift spindles (180mm – 250mm)
- ✓ Load identification (e.g. RFID Technology)
- ✓ Load identification & positioning (optical)
- ✓ Mechanical centering of the load on the vehicle (e.g. Cups and Cones)
- ✓ Load carrier (longitudinal or lateral)

Speed data		X	Y	θ
		0.0	0.0	0.0
		mm/s	mm/s	deg/s
Motor 1	0.0	0.0	0.0	0.0
A	A	A	A	A
V	V	V	V	V
θ	θ	θ	θ	θ
RPM	RPM	RPM	RPM	RPM
°C	°C	°C	°C	°C

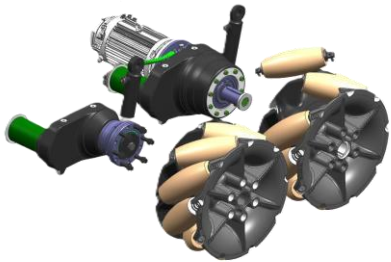
OMNIMOVE DIAGNOSIS SYSTEM Version: 1.0.0

Interfaces and error handling

- ✓ 2,4 GHz Radio remote control
- ✓ WLAN (TCP-IP)
- ✓ Web based diagnose system
- ✓ ProfiNet / ProfiSafe
- ✓ 24VDC(5A) / 48VDC(60A)

omniWheels / suspension

- ✓ Maximum flexibility, highest positioning accuracy
- ✓ Wheel size 375 or 575mm
- ✓ Swingarm suspension +/- 15mm or +/- 25mm



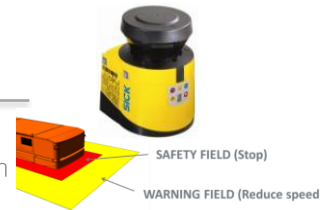
Guidance Systems and navigation

- ✓ Laser scanner based autonomous navigation
- ✓ Optical / inductive / RFID guidance system



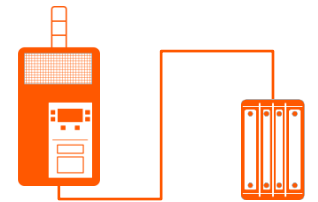
Safety

- ✓ Laser Scanner
- ✓ Second operator enabling switch
- ✓ 4+1 x Emergency Stops
- ✓ LED Lighting



Charging

- ✓ Lead fleece batteries
- ✓ LiFePo batteries (optional)
- ✓ Charging via floor contacts
- ✓ Charging via inductive charging pads
- ✓ Charging via direct cable



... and more (project based)



KUKA omniMove UTV-3



Rated payload	3.000 kg	7.000 kg	7.000 kg	12.000 kg	17.000 kg	25.000 kg
Height	420 mm	420 mm	650 mm	650 mm	650 mm	650 mm
Length (with laser scanner)	2.750 mm	3.650 mm	3.220 mm	3.520 mm	4.620 mm	5.560 mm
Width (with laser scanner)	1.600 mm	1.600 mm	2.050 mm	2.050 mm	2.050 mm	2.050 m
Number of wheels	4	8	4	6	8	12
Weight	1.650 kg	2.600 kg	3.700 kg	4.500 kg	5.200 kg	8.700 kg
Velocity longitudinal without load	0,83 m/s	0,83 m/s	0,83 m/s	0,83 m/s	0,83 m/s	0,83 m/s
Battery capacity	9 kWh	18 kWh	18 kWh	18 kWh	18 kWh	36 kWh
Lifting stroke	180 mm	180 mm	250 mm	250 mm	250 mm	250 mm
Application interface	Profinet IO / ProfiSAFE					
Power interface	24VDC (5A) / 48VDC (60A)					



➤ select the best fit for your project

KUKA – your partner for AMR 

AMR Software

KUKA.AMR Fleet

KUKA.AMR OS

KUKA.AMR Suite

KUKA_ provides all relevant Software for AMRs



KUKA.AMR Fleet

The fleetmanager that orchestrates and visualizes the AMRs.



KUKA.AMR OS

The operating system that is installed on our AMRs and controls its intelligent features.



KUKA.AMR Suite*

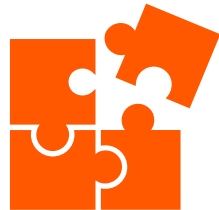
The commissioning tool to set up a project, record the map.



AMR Software by KUKA_ Key benefits



Quick and easy start-up with no-code programming



Seamless integration of AMRs & peripheral equipment into the existing environment



Efficient planning of jobs and transport routes with AI algorithms

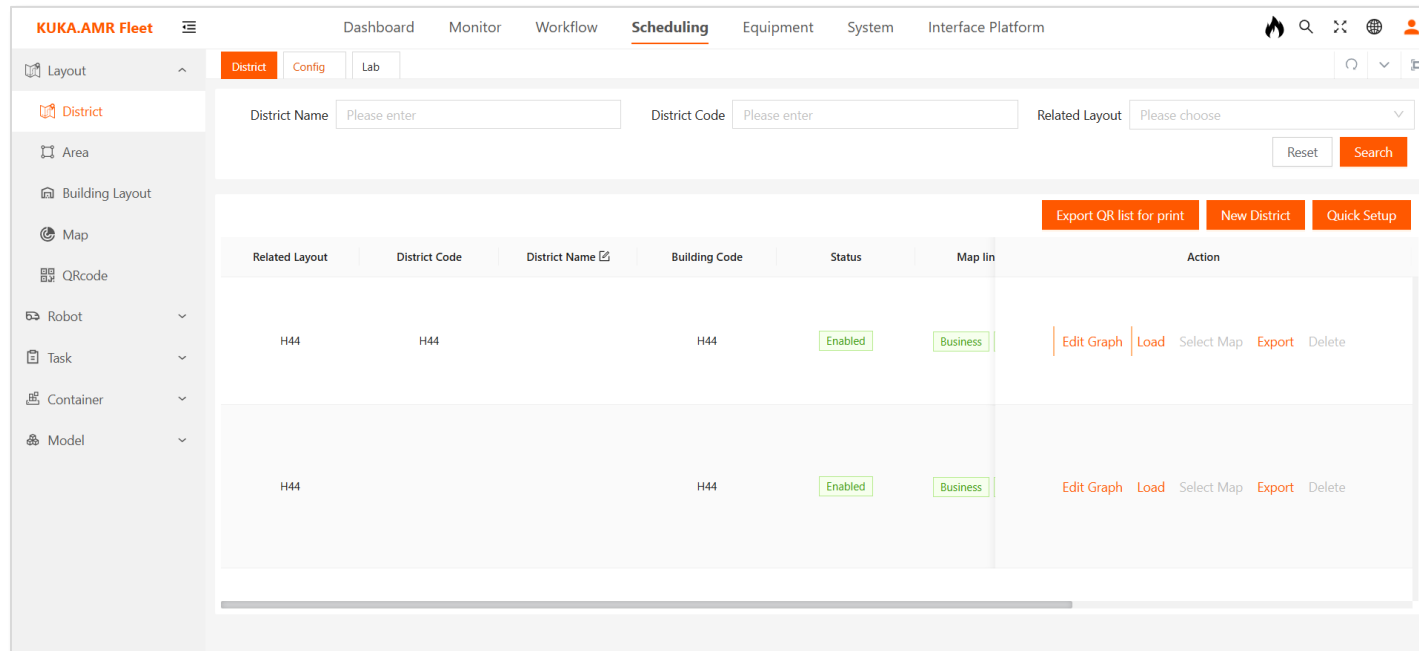


Reliable obstacle detection in a dynamic environment



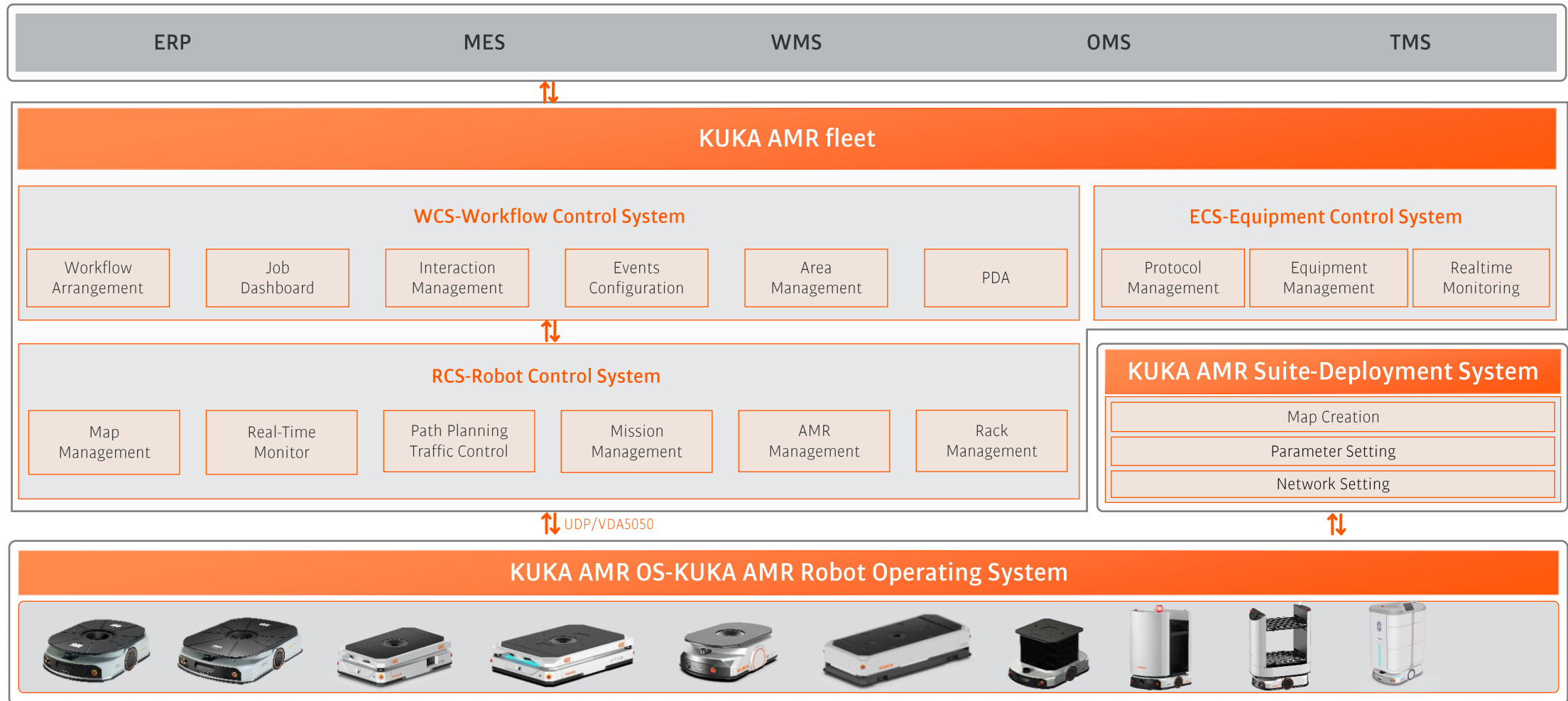
KUKA.AMR Fleet_ The intelligent Fleetmanager by KUKA

The KUKA fleet manager **KUKA.AMR Fleet** can be used to control and manage a fleet of KUKA mobile platforms or mobile robots. KUKA.AMR Fleet is a fleet management software that can perform collision-free high-level graph planning. It coordinates the mobile platforms or robots in the fleet.





KUKA AMR_ KUKA.AMR fleet = Algorithm Platform + Software Platform + Robot Platform



KUKA AMR_ KUKA.AMR Fleet



Workflow Control System

- Highly flexible workflow management
- Order Management
- Rack Management
- Workstation Management
- Customized Dashboard

WCS



Robot Control System

- Map Management
- Real-time Visualization
- Optimal path planning
- Traffic control based on the logic of no dead-lock

RCS



Equipment Control System

- Interactive Platform to peripheral devices
- External integrated systems in real time
- Graphical management & control
- Operation management

ECS



KUKA AMR_ KUKA.AMR Fleet overview

The screenshot displays the KUKA AMR fleet management software interface. It features a central map view on the left showing a robot (green circle) at node 37, with various other nodes and paths marked. A detailed view of the robot node is shown in the center, displaying its status as 'Occupied' and 'Executing'. The robot's details include:

- Robot ID: 1
- Call Code: 3
- Type Name: KMP600-S-2
- IP: 192.168.160.150-51050
- X / Y: 15.09/21.36m
- Direction: -1.63°
- Last Node: 24
- CNTR. Code: -

The node details also show a battery level of 81% and a 'Mission Dispatched' notification. The interface includes a sidebar with navigation icons and a bottom status bar.

Executing Mission Info:

ID:	Create Time:
1137	2024-01-18 19:52:35

Submission Info:

Task Name:	Dependency:	Status:
move	Dependency	EXECUTING

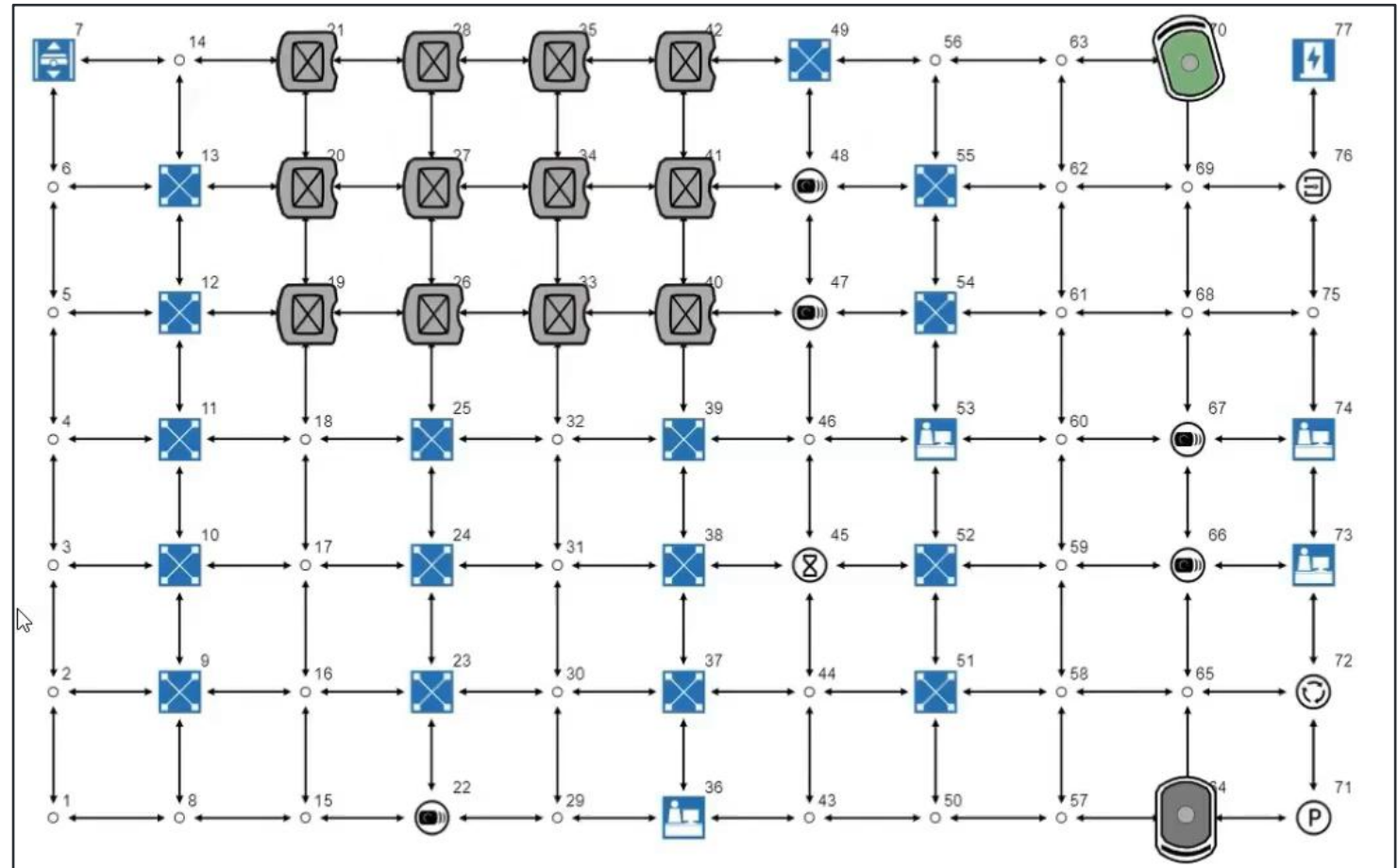


KUKA AMR_ WCS (process management system)



Storage strategy

- Zone control
- FIFO
- Dense storage



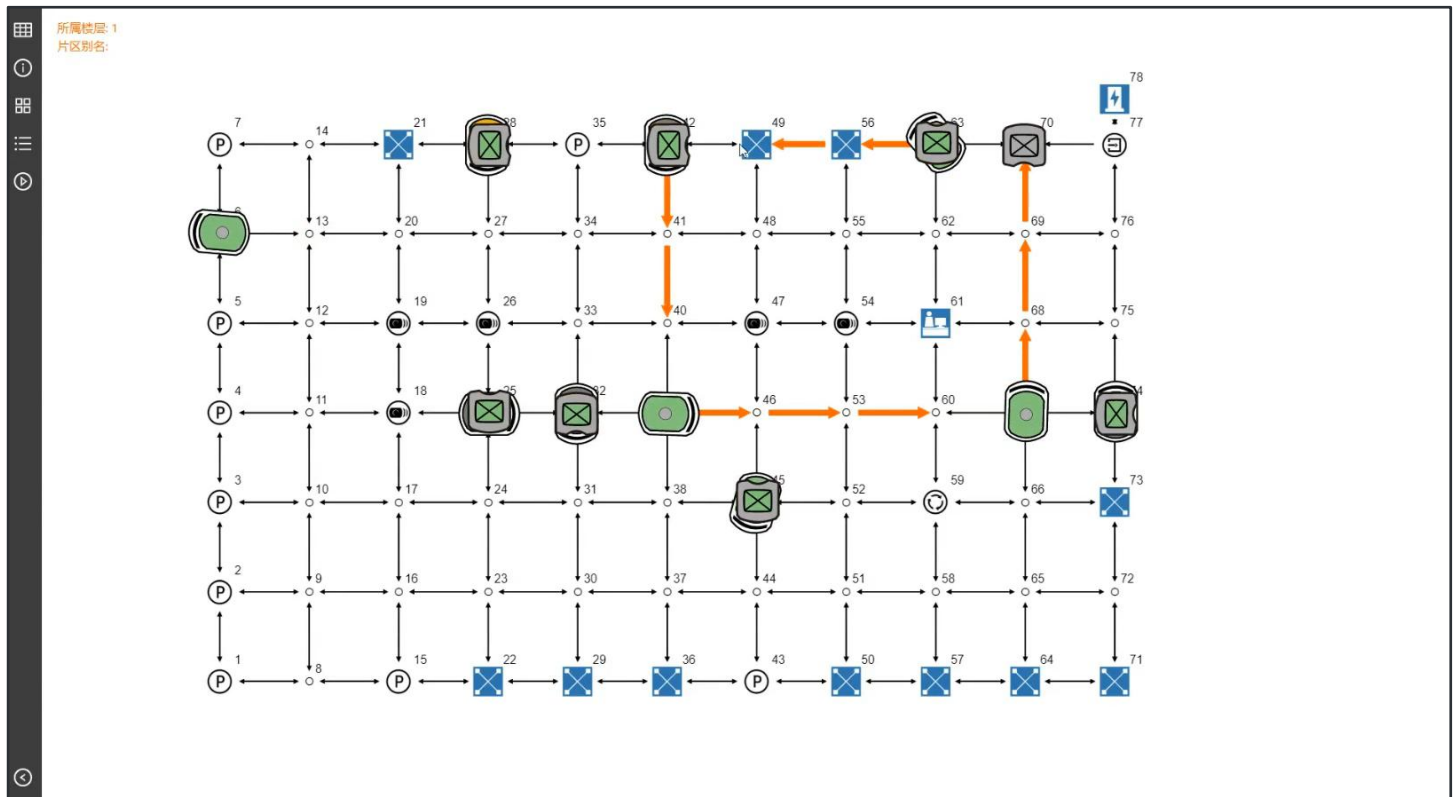


KUKA AMR_RCS (Robot Control System)



Mix dispatching

- Multiple brands
- Multiple type
- Efficient coordination



KUKA AMR_ ECS (Equipment Control System)



Equipment monitoring

- Equipment management
- Condition monitoring
- Implementation schedule



Testing and debugging

- Instruction triggered
- Exception handling
- Debugging integration



Protocol & docking

- Rules editor
- Protocol access
- Protocol development

KUKA AMR_ Our Team

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Nowakowski



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FEEL THE FLOW
OF AUTOMATION

AMR BY
KUKA