

Mobile Manipulators

Intelligent Automation Solutions by Dimalog



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Introduction to Mobile Manipulators



Definition

- Combination of Autonomous Mobile Robot (AMR) and collaborative robot (Cobot)
- Merges mobility with precise manipulation capabilities
- Also known as Mobile Cobots or Compound Robots

Key Components

- **Mobile Base**
Provides autonomous navigation and movement
- **Robotic Arm**
Enables precise handling and manipulation of objects
- **Machine Vision**
Enables precise positioning and work piece identification

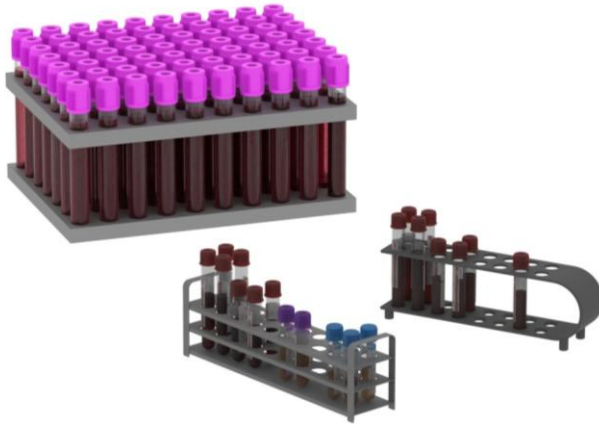
Introduction to Mobile Manipulators



- Mobile Manipulators can move autonomously between different work areas, perform different tasks, and transport material at the same time
- Integrated Machine Vision enables the robot to calibrate its position on different work areas, read barcodes, and recognize work pieces
- Ideal platform for automating laboratory workflows, or to serve as a cutting-edge educational tool for academic institutions

Technology Highlights

Key Applications in Labs and Medical Settings



Transport and delivery

- Sample transportation and handling
- Equipment and supply delivery
- Integration capabilities with existing laboratory equipment

Bridging Gaps

- Connects various workstations and processes
- Eliminates the limitations of fixed-position robots

Versatility

- Adaptable to diverse tasks and environments
- Ideal for dynamic laboratory and medical settings

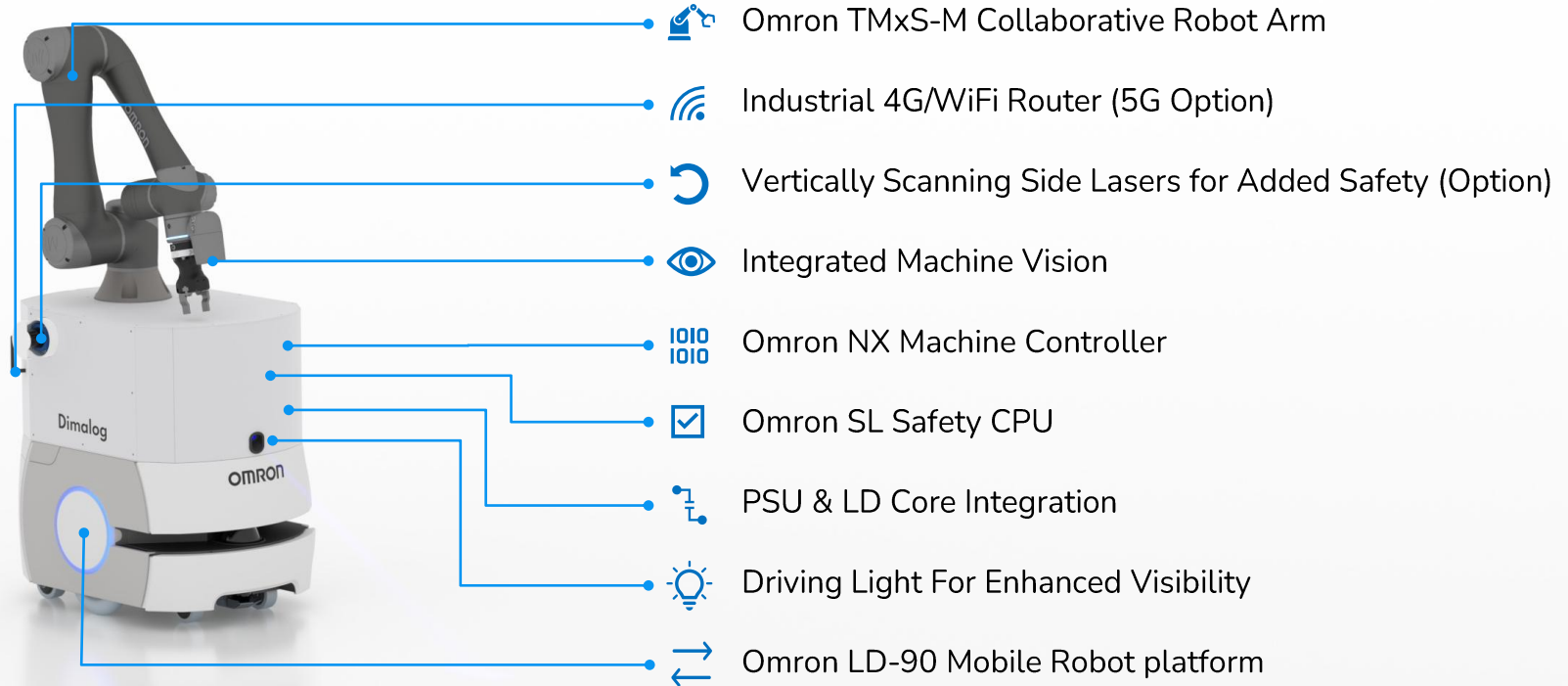
Benefits of Automated Workflows

– Enhancing Efficiency and Safety

- **Continuous Operation**
24/7 capability, maximizing productivity
- **Streamlined Workflows**
Automated material transport and task execution
- **Enhanced Safety**
Reduced risk of contamination and infections
- **Consistent Performance**
Minimized human error in repetitive tasks
- **Scalable Solution**
Adaptable to growing operational needs
- **Resource Optimization**
Frees staff for high-value tasks
- **Cost-Effective**
Long-term savings on labour and operational costs



Key Components and Features



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Mobile Cobots: MC90-5S



Mobile Cobot MC90-5S

AMR maximum payload: 90 kg

AMR maximum speed: 1.35 m/s

Cobot maximum reach 900 mm

Cobot maximum payload 5 kg

Vertically scanning side lasers

Blue LED driving light

Programmable PLC (Omron NX-102)

Programmable Safety Controller (Omron NX-SL3300)

Safety measures to prevent simultaneous movement of AMR platform and Cobot

Industrial 4G LTE Wi-Fi router

CE-marked, warranty 12 months

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Mobile Cobots: MC90-7S

Mobile Cobot MC90-7S

AMR maximum payload: 90 kg

AMR maximum speed: 1.35 m/s

Cobot maximum reach 700 mm

Cobot maximum payload 7 kg

Vertically scanning side lasers

Blue LED driving light

Programmable PLC (Omron NX-102)

Programmable Safety Controller (Omron NX-SL3300)

Safety measures to prevent simultaneous movement of AMR platform and Cobot

Industrial 4G LTE Wi-Fi router

CE-marked, warranty 12 months



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Optional accessories

Delivered fully assembled and tested.

Optional accessories available:

- Electrical grippers
- Rear LIDAR for 360° object detection
- Additional casters for increased stability
- Wireless charging
- Omron Fleet Management Server EM2100

The background image shows two white Dimalog mobile robots in a laboratory or industrial setting. Each robot has a blue circular logo on its side and a robotic arm mounted on top. The robots are positioned on a light-colored floor, and the background features laboratory equipment like shelves with bottles and a whiteboard with mathematical equations.

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