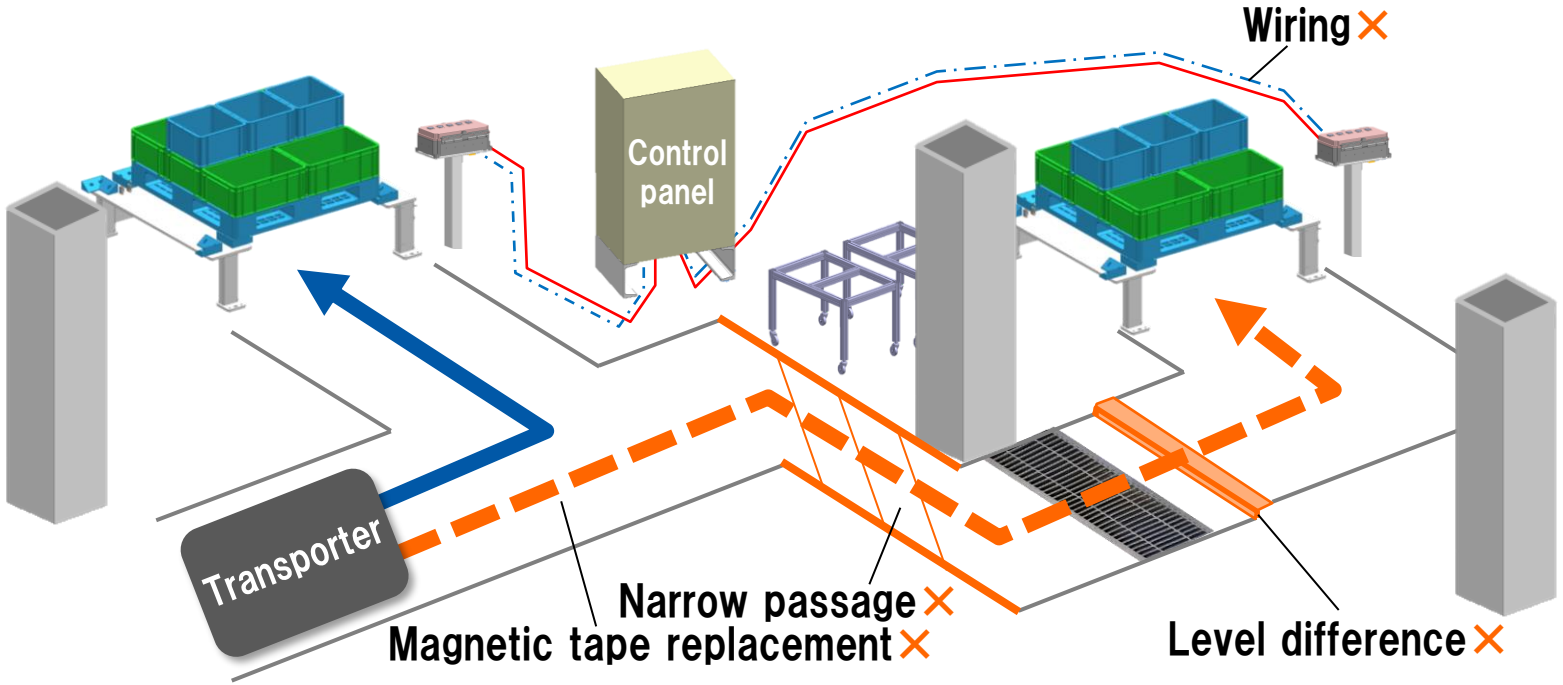
Transport Automation Flexible to Factory Environments

Factory Transport System by AiTran

ROBOT TECHNOLOGY JAPAN 2024

Issues in introducing autonomous transporter carts

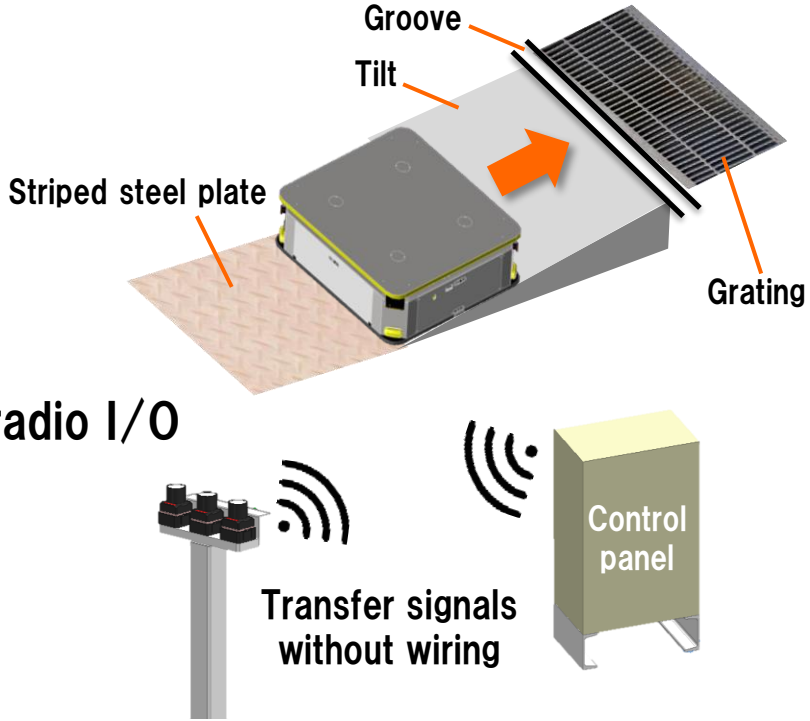
- Difficult to put magnetic tape/QR codes on transport routes, difficult to change or add routes
- Narrow aisles, steps and inclines not driveable, difficult to maintain aisles
- Difficult to wire signal lines for activation buttons, etc



Issues in introducing autonomous transporter carts

Daihen's transport system solved!

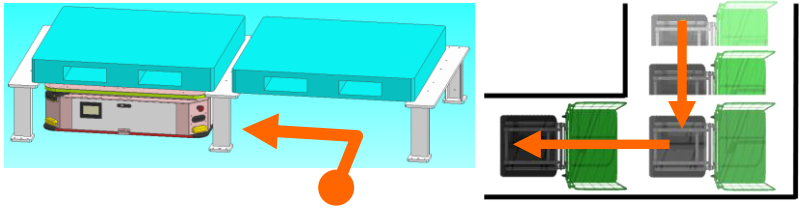
- Flexible response to plant layout
- Flexible direction of travel
- Supports steps and gratings
- Coordinated with facilities using radio I/O



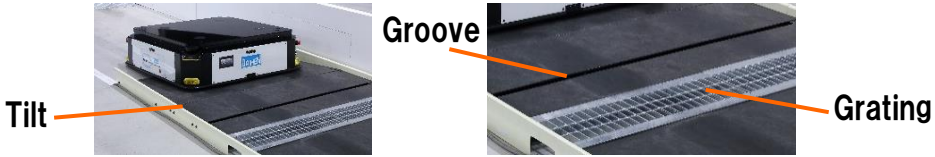
AiTran Features

- **Offline MAP creation**
  Driving routes can be created and changed without stopping the production line
- **Omnidirectional movement**
  Switching posture is not required, and the path is narrow

Lateral movement

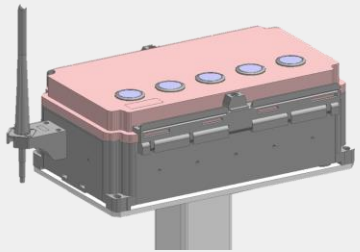


- **Tilts, gratings and grooves can also be run**



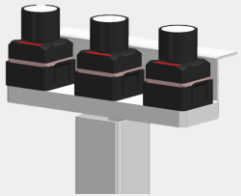
Plant automation by AiTran (radio I/O)

■ Easy installation because signal wiring is not required



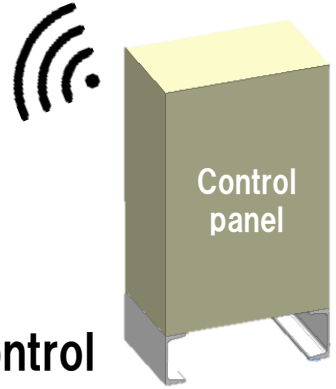
[Signal line radio]

Lamps and sensors can be used if only a power supply is available



[Wireless for both signal and power lines]

Startup signal can be sent even though no power supply is required



■ PLC based control panel

No complicated control required

Simple PLC based control

Autonomous transporter AiTran lineup

Standard type

<Exhibition model>
1000 kg payload

AiTran Lift

<Exhibition model>
400 kg transportability

AiTran400

Traction type

AiTran Trailer

AiTran Trailer

- Cart is gripped and transported by the traction mechanism
- Omnidirectional movement
  Traction and transfer even in small spaces due to arc movement and lateral movement

Automatic transportation of freight items frequently used in factories, such as car carts

Autonomous transportation cart AiTran can be used to automate transportation within your plant


DAIHEN