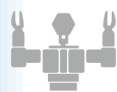
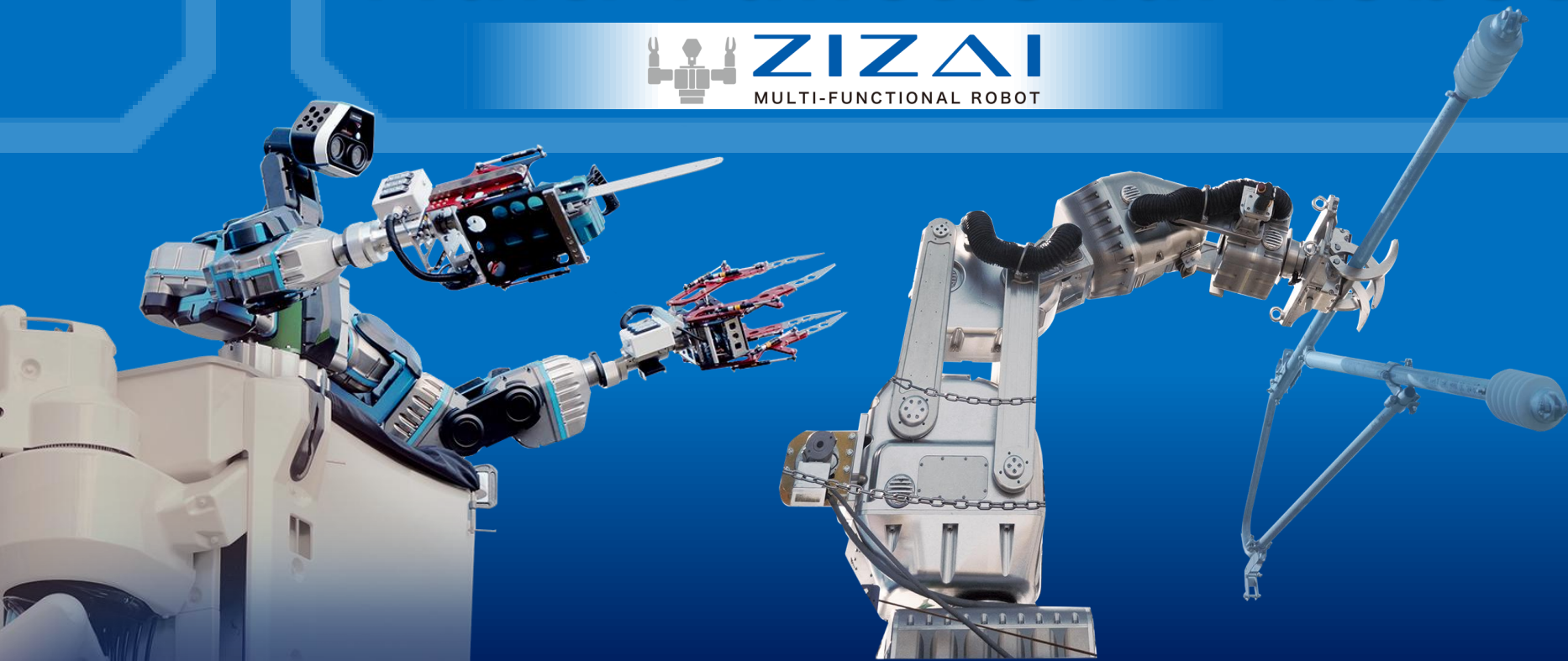


Multi Functional Robot



ZIZAI

MULTI-FUNCTIONAL ROBOT





Multi Functional Robot

NIPPON SIGNAL

Improving the work environment and reducing risks for railway maintenance workers achieved by integrating work robots with transport/control vehicles into heavy railway machinery.

Challenges for railway operators

Improving hazardous tasks

High-Access Work

Heavy Load Handling

Labor-Intensive Work

Hazardous Work

Robots replace humans to handle heavy loads and dangerous operations

Multi Functional Robot 「 Z I Z A I 」

Enhanced Safety

Freedom from Heavy Labor

Workforce Security

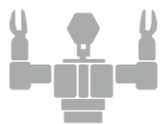
Labor Saving

Total Cost Reduction



Multi Functional Robot

NIPPON SIGNAL



ZIZAI
MULTI-FUNCTIONAL ROBOT

Dual-Arm Type **ZX-3**

Grip Capacity: 20 kg per arm

operator's seat



Multi-Functional
Humanoid Robot

**Performs precise tasks
using dual arms
from the operator's seat**

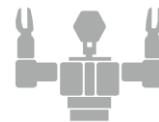
Equipped Vehicles :
Railway Construction Vehicles / Others



Multi Functional Robot

NIPPON SIGNAL

Lifts and holds heavy loads
at height to assist operations



ZIZAI
MULTI-FUNCTIONAL ROBOT

Control Unit

Work
Platform

Single-Arm Type

ZX-2

Grip Capacity: 120 kg

Boom Arm

Manipulator Hand

Equipped
Vehicle





Multi Functional Robot

NIPPON SIGNAL

Tree Cutting

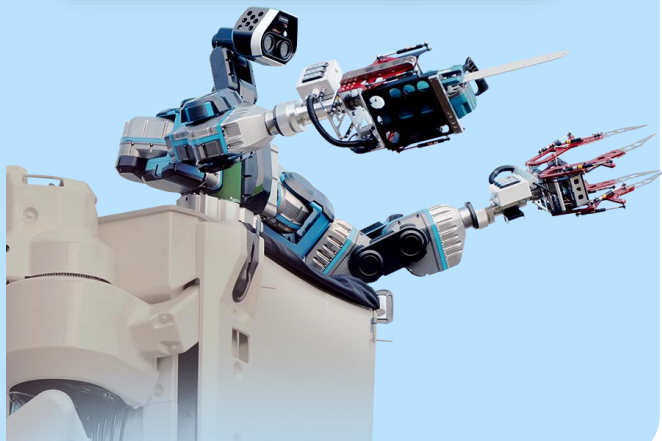
Grips trees with one arm and cuts by using chainsaw hand



ZIZAI

MULTI-FUNCTIONAL ROBOT

Dual-Arm Type





Multi Functional Robot

NIPPON SIGNAL

Insulator Cleaning

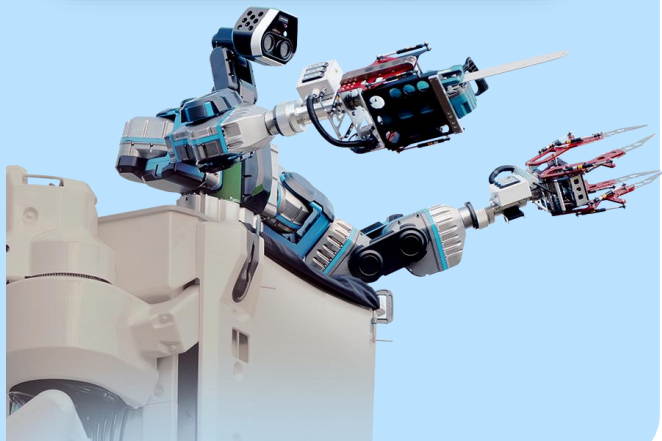
※Future Support



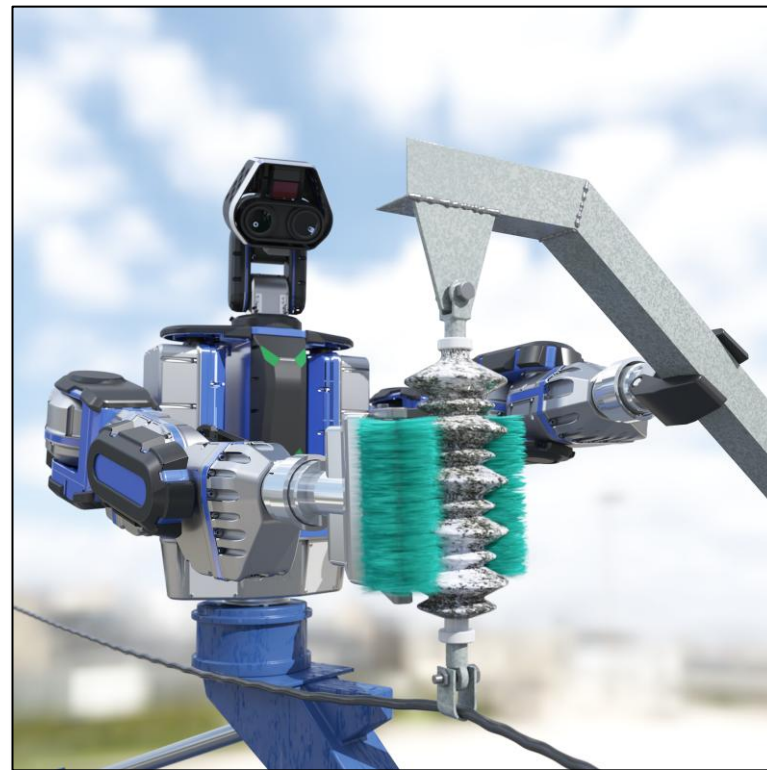
ZIZAI

MULTI-FUNCTIONAL ROBOT

Dual-Arm Type



Dispense cleaning fluid from rotating brush hand for fast cleaning





Multi Functional Robot

NIPPON SIGNAL

Non-Destructive Inspection

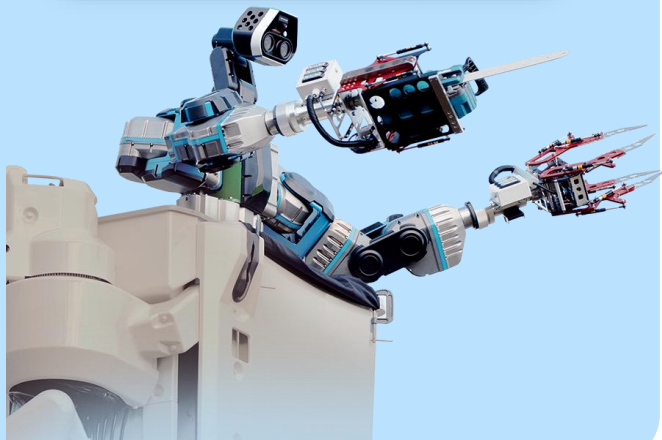
※Future Support



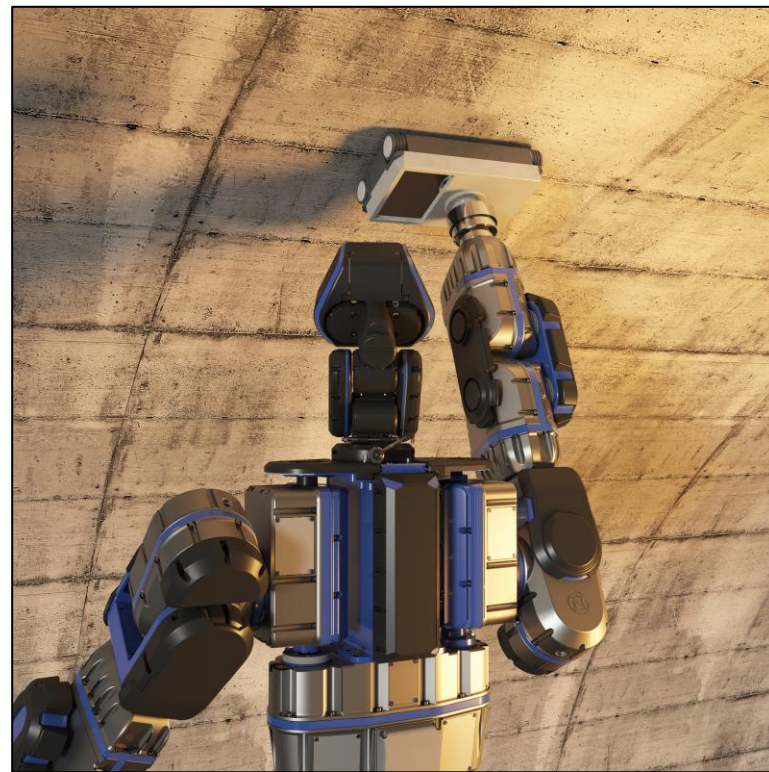
ZIZAI

MULTI-FUNCTIONAL ROBOT

Dual-Arm Type



Applies inspection tool to tunnel walls and easily inspects ceilings





Multi Functional Robot

NIPPON SIGNAL

Power Distribution Work

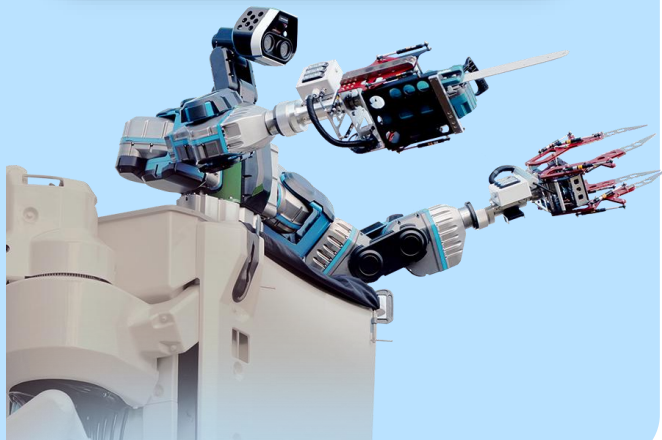
※Future Support



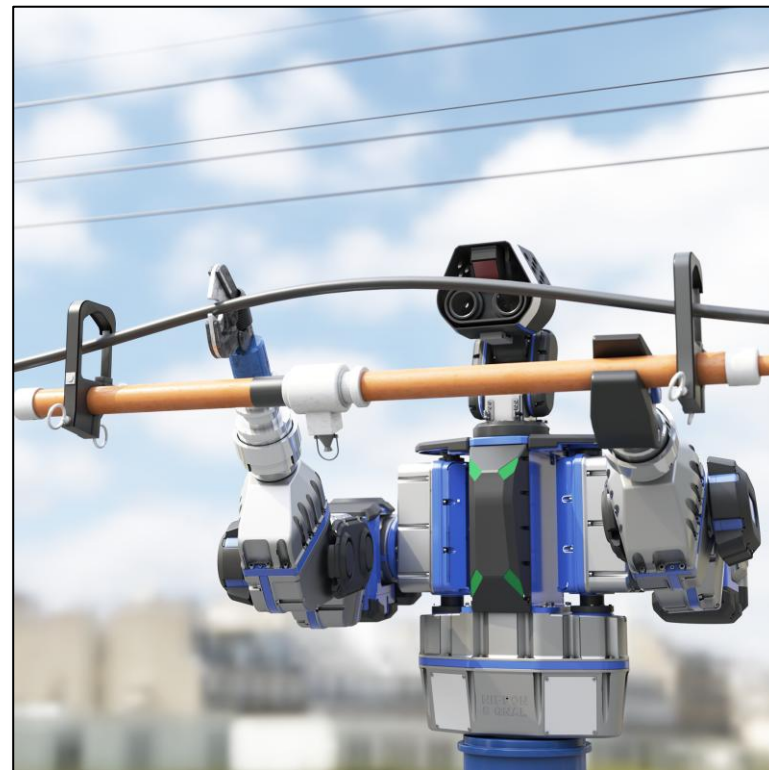
ZIZAI

MULTI-FUNCTIONAL ROBOT

Dual-Arm Type



Performs complex tasks using various tools; insulated for safety





Multi Functional Robot

NIPPON SIGNAL

Heavy Material Joining

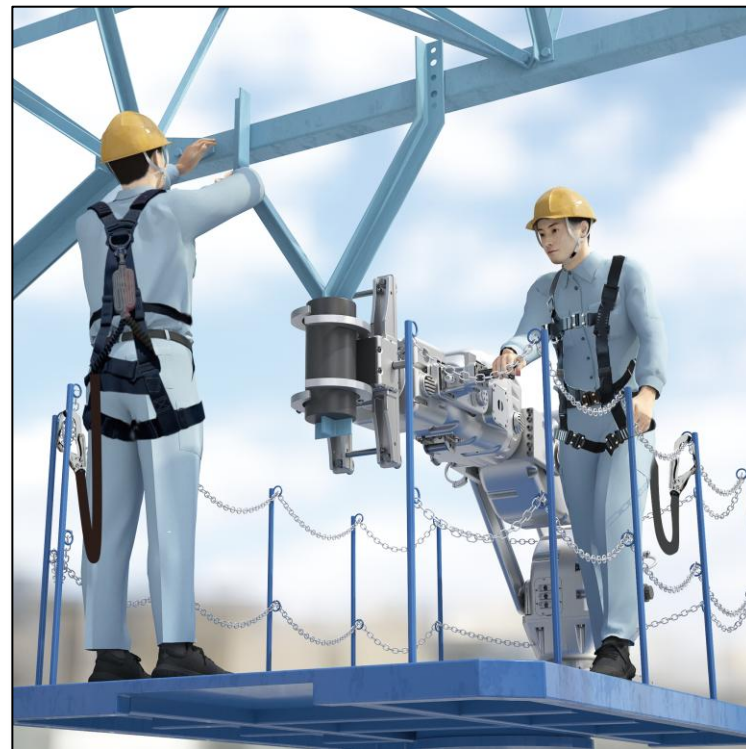
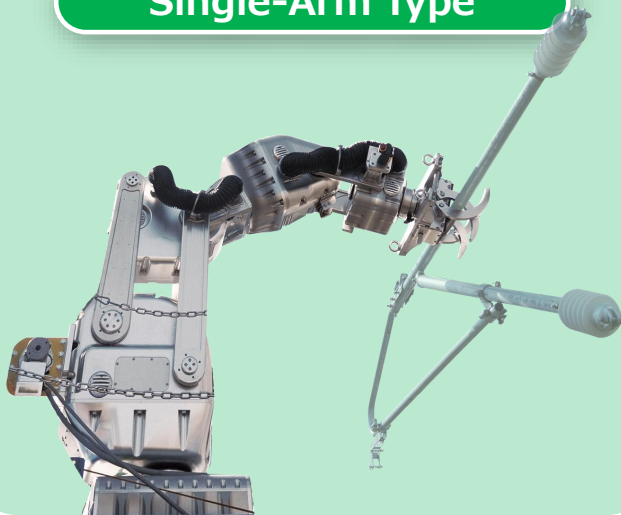
Lifts and holds heavy steel to designated position



ZIZAI

MULTI-FUNCTIONAL ROBOT

Single-Arm Type





Multi Functional Robot

NIPPON SIGNAL

Tunnel Light Replacement

Removes and installs from ceiling-mounted positions



ZIZAI

MULTI-FUNCTIONAL ROBOT

Single-Arm Type

