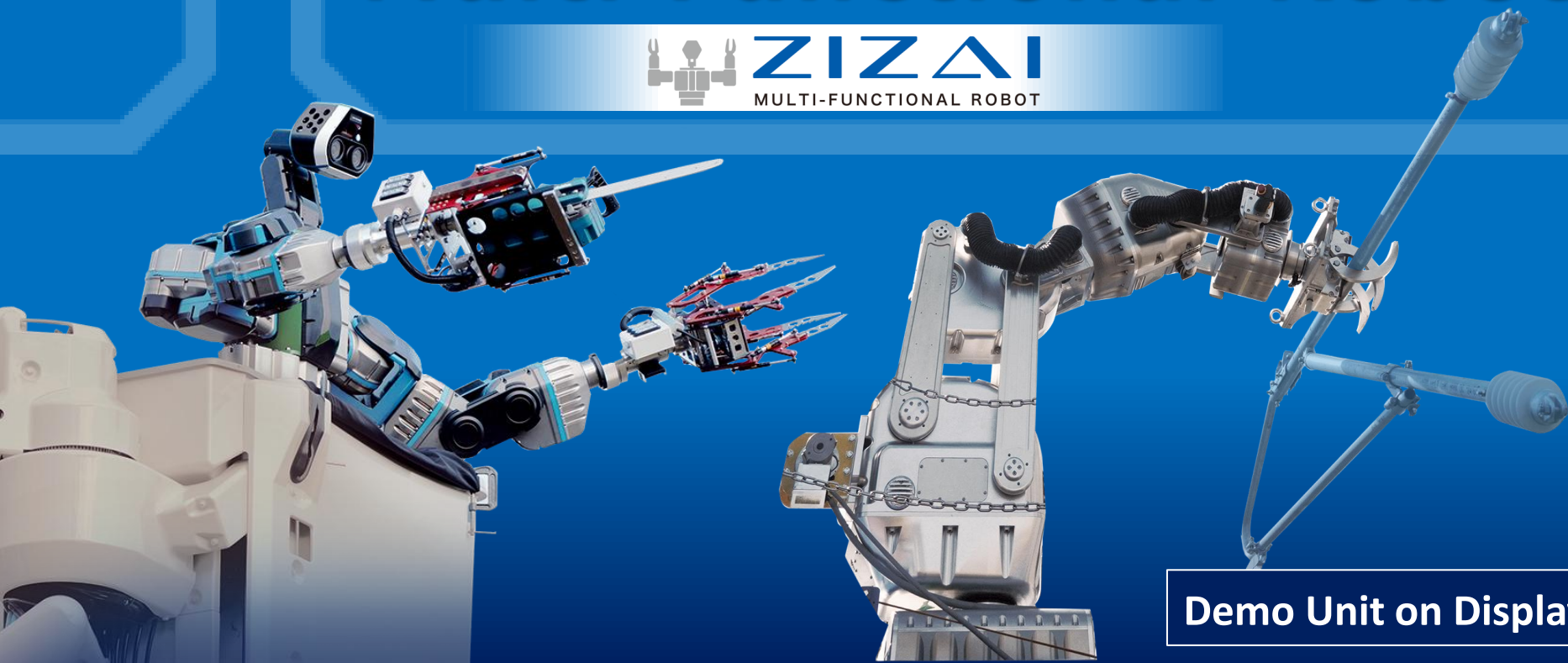


Multi Functional Robot



Demo Unit on Display



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

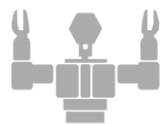
Labor
Saving

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

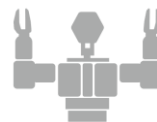




Multi Functional Robot

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

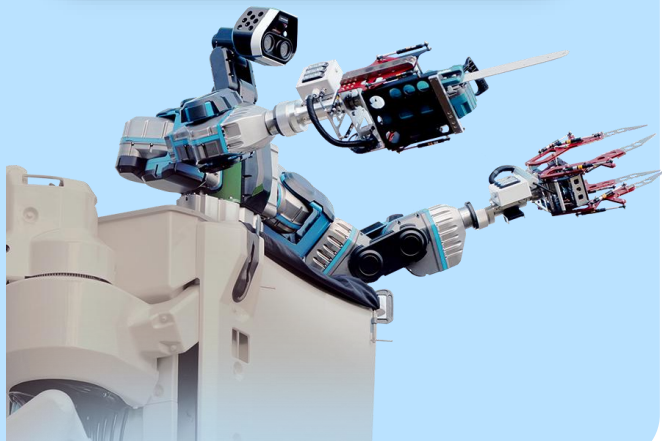
Grips trees with one arm and cuts by using chainsaw hand



ZIZAI

MULTI-FUNCTIONAL ROBOT

Dual-Arm Type





Multi Functional Robot

NIPPON SIGNAL

Insulator Cleaning

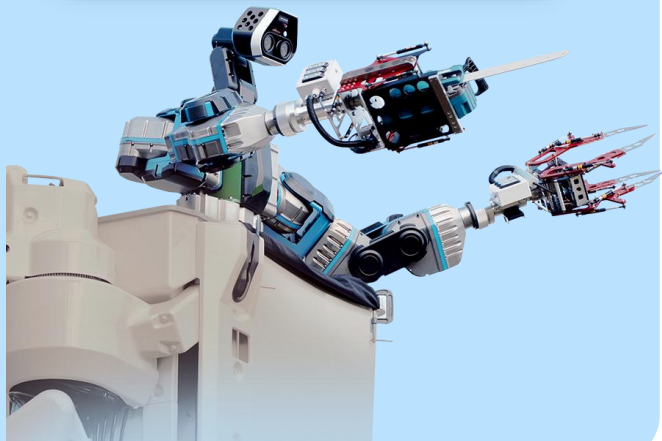
※Future Support



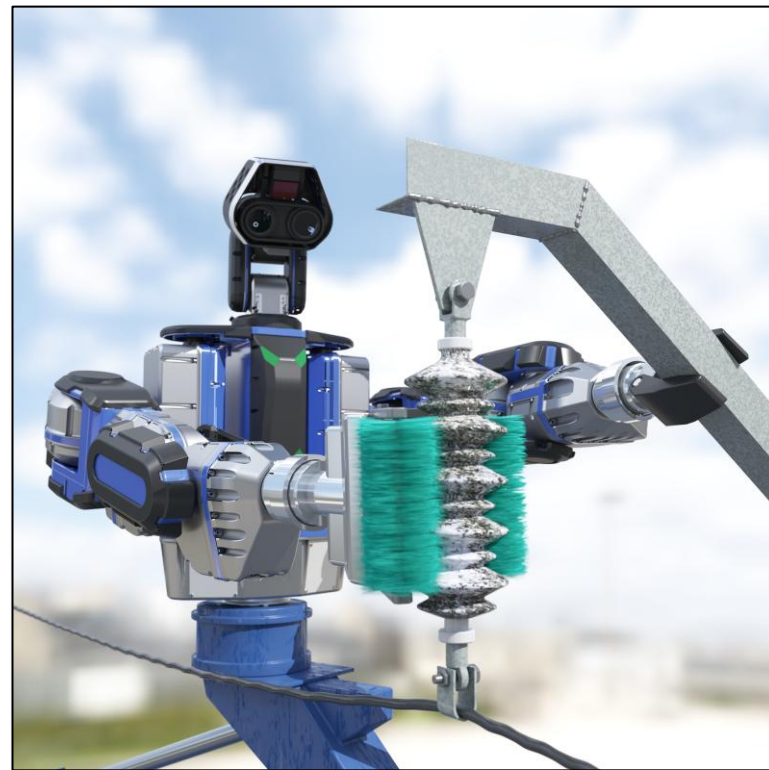
ZIZAI

MULTI-FUNCTIONAL ROBOT

Dual-Arm Type



Dispense cleaning fluid from rotating brush hand for fast cleaning





Multi Functional Robot

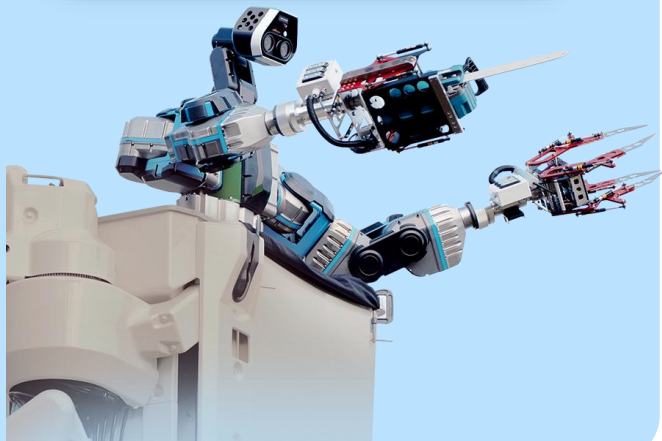
NIPPON SIGNAL

Non-Destructive Inspection

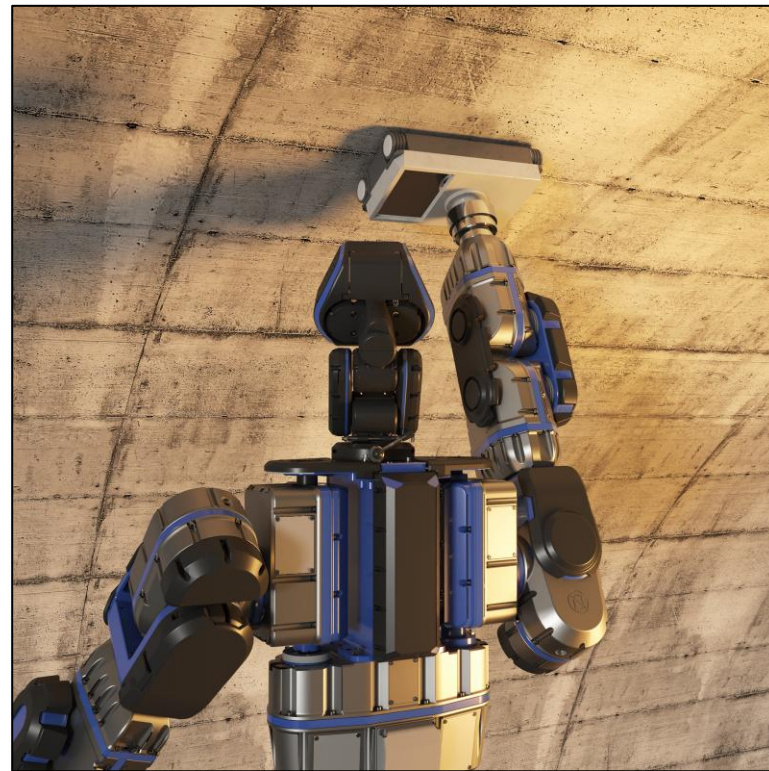
※Future Support



Dual-Arm Type



Applies inspection tool to tunnel walls
and easily inspects ceilings





Multi Functional Robot

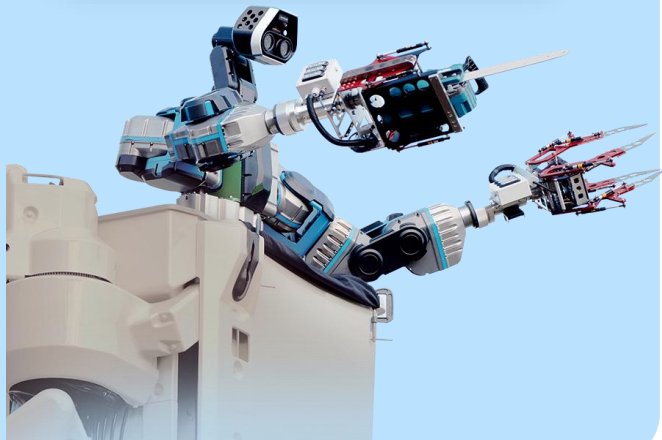
NIPPON SIGNAL

Power Distribution Work

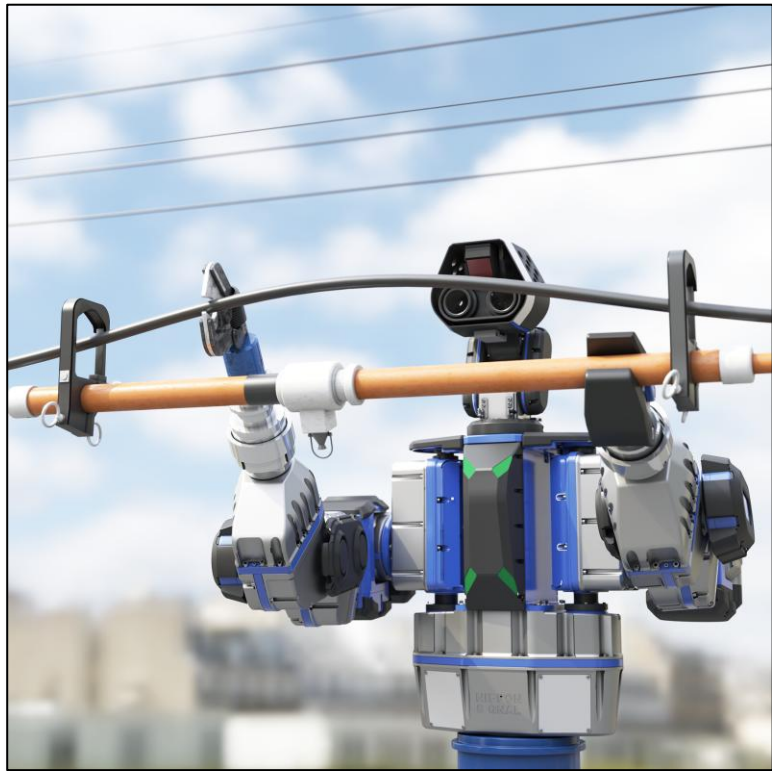
※Future Support



Dual-Arm Type



Performs complex tasks using various tools; insulated for safety





Multi Functional Robot

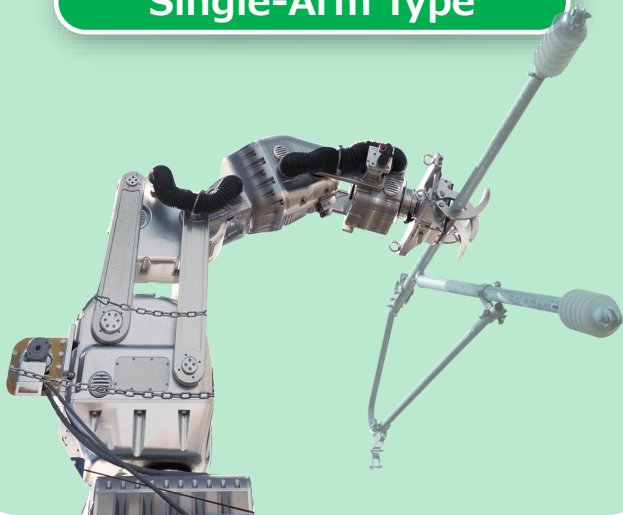
NIPPON SIGNAL

Heavy Material Joining

Lifts and holds heavy steel
to designated position



Single-Arm Type





Multi Functional Robot

NIPPON SIGNAL

Tunnel Light Replacement

Removes and installs from
ceiling-mounted positions



Single-Arm Type

