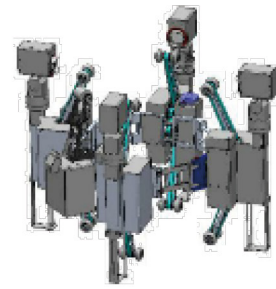


Specifications



Smart-CCR-V3

Cable diameter	140 ~ 315mm
Resolution	Full HD (1920 x 1080) x 4ea
Maximum velocity	0.2m/s
Weight	17kg
Setup of device	By 2 persons
Minimal distance to nearby cable	30 ~ 40cm
Wireless Communication Range	4km
Camera system	4ea
Drive system	Self-driven
IP Rating	IP58
Battery	5000 mA Li-Polymer intelligent battery x 4ea

Sales

Public Sector



Korea Authority of
Land & Infrastructure Safety
(Maintaining 20+ bridges)

ex Korea Expressway Corporation
Korea Expressway Corporation

Private Sector



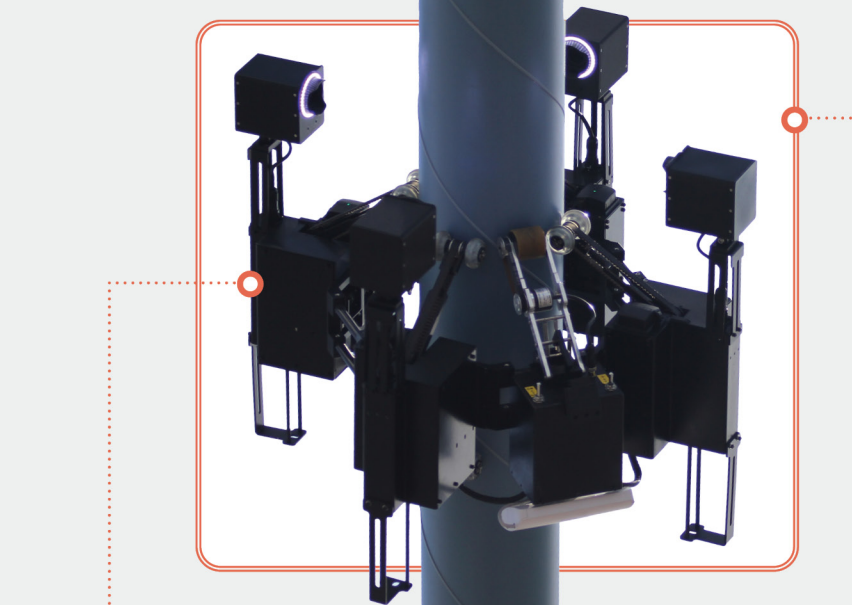
VSL, 2024
(Cable inspection projects have been
done in Saudi Arabia and Panama)

Direct inspection

Olympic Bridge
Korea, 2020

Yeongjong Grand Bridge
Korea, 2020

Busan Harbor Bridge
Korea, 2024



Measurement of Tension

Indirectly estimates tension through frequency analysis using an accelerometer.



Measurement of Tension Program

Cable Inspection and Imaging

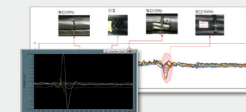
Wireless communication-based bridge cable exterior safety inspection technology using a cable inspection robot.



Non-Destructive Testing Program

Non-Destructive Testing

The detection method of wire damage using a magnetic sensor can estimate wire breakage and disconnection through waveform analysis.



Video Analysis Program

Video Analysis

Video imaging → Panorama extraction
→ Apply filter and pattern analysis
→ damage report output

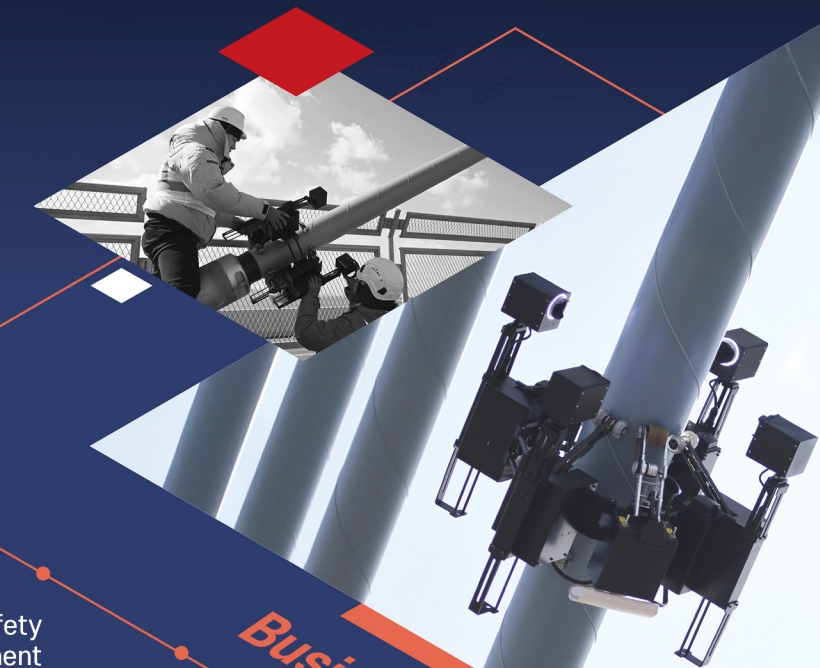


Unit 106, Bldg. A, Migun Techno World Phase II, Yongsan-dong, Yuseong-gu,
Daejeon Metropolitan City, Korea

www.smartcs.co.kr

Smart-CCR Stay-Cable Climbing Robot

Affordable and Manageable



Bridge safety management

NDT and mechanical properties equipment

Construction site safety management

IoT system of safety diagnosis for facilities

Business field



Hello, thank you for visiting

Smart C&S aims to ensure the safe maintenance and management of construction structures and other facilities.

Since our establishment, we have pursued continuous technological innovation and developed various technical solutions to meet our customers' needs, allowing us to grow.

We not only ensure facility safety through our current measurement systems but also expand into diverse business models, including SMART-ITS (IoT Total Solution), non-destructive testing technology, and professional safety inspection/diagnosis/analysis/platform functions. To respond to the evolving environment, we actively invest in research and development.

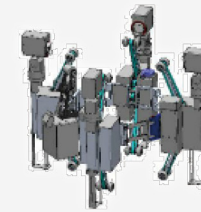
Moving forward, we will continue to create a world where sustainable safety is ensured for all through technology, together with Smart C&S.



Technical Overview

The hangers of suspension bridges and cables of cable-stayed bridges in operation face challenges in accessibility and safety, making direct visual inspections difficult.

By developing an inspection robot to improve accessibility, and incorporating a lightweight design and a convenient attachment method, we aim to enhance reliability reducing time and costs.



Features



Wireless robot control and sensor data measurement



Real-time video transmission with a high-resolution



Equipped with an internal cable damage detection system (optional)



Lightweight, durable, easy to mount, and user-friendly



Reduced inspection time and enhanced safety



External damage analysis and report generation through image processing

Expected Benefits



Quick and safe inspection

Lightweight robot of only 17kg, equipped with wireless control and high-resolution real-time video transmission capabilities

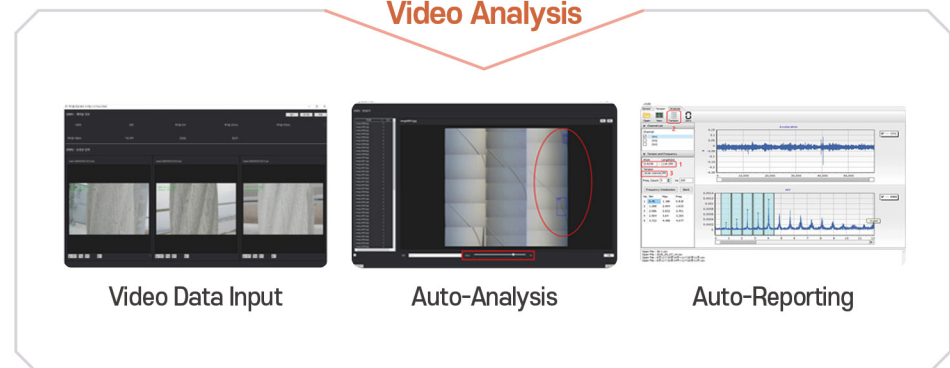
System



Procedure



Video Analysis



Function

