

Multi Fine Eye

Oeil Multi-fine



Simple road surface inspection technology using DX

- High-precision simple road surface inspection and measurement technology utilizing portable digital video camera and depth camera systems installed to a commercially available vehicle.
- The crack rate is automatically identified and evaluated by AI using video data captured by the digital video camera.
- Rutting depth and IRI are evaluated by analyzing road surface profiles derived from point cloud data captured by the depth camera.
- Evaluation results can be visualized on a map, clearly indicating damage levels. This enables screening of damaged areas and supports efficient and effective management of existing infrastructure.



Digital video camera



Depth camera

How analysis is performed

AI detects cracked areas and calculates the crack rate from the percentage of the pavement surface area that is cracked.

Point cloud data of the road surface obtained by the depth camera is used to analyze the longitudinal and transverse profiles and evaluate the level of damage.



Measurement accuracy

This technology is listed as one of the technologies to be supported by the Ministry of Land, Infrastructure, Transport and Tourism in connection with pavement inspection and road patrol, and the measurement accuracy achieved with the technology has been verified.

Detection Rate and Accuracy of Damage Classification	Detection rate of II or more ¹⁾	Accuracy of II or higher ²⁾	Detection rate of III ¹⁾	Accuracy of III ²⁾
Crack rate	90~100%	90~100%	60~70%	90~100%
Rutting depth	90~100%	90~100%	80~90%	90~100%
IRI	90~100%	80~90%	90~100%	80~90%

1) Detection rate; an indicator used to evaluate whether damage can be detected and whether anything is overlooked.

2) Accuracy: A metric for measuring proportion of correctly detected results over total results

