CLAIMS

1. An imaging system for a railway vehicle, comprising:

a first imaging module, placed at a front end in a leading railway vehicle, for capturing a stereo image of a first area in a traveling direction of the railway vehicle;

a second imaging module, placed in the leading railway vehicle and capable of capturing a second area including a farther area than at least the first area, for capturing a high-resolution image with resolution higher than resolution of the first imaging module; and

an image processor configured to:

calculate a first distance to a first position in the first area from the stereo image captured by the first imaging module, and

estimate a second distance to a second position in the second area from the first distance.

2. The imaging system according to claim 1, wherein

the second area captured by the second imaging module partially overlaps the first area before the farther area.

3. The imaging system according to claim 1 or 2, wherein

the first imaging module includes a first camera and a second camera, and

the second imaging module includes a third camera, the system further comprising:

a camera controller configured to:

cause the first camera and the second camera to capture a first stereo image of the first area,

cause the second camera and the third camera to capture a second stereo image containing at least part of the first area, and

cause the third camera and the first camera to capture a third stereo image containing at least part of the first area, and

an image processor configured to perform object detection processing with respect to the first area based on the first stereo image, the second stereo image, and the third stereo image.

4. The imaging system according to claim 3, wherein

the image processor causes two of the first camera, the second camera, and the third camera to continuously capture the stereo image.