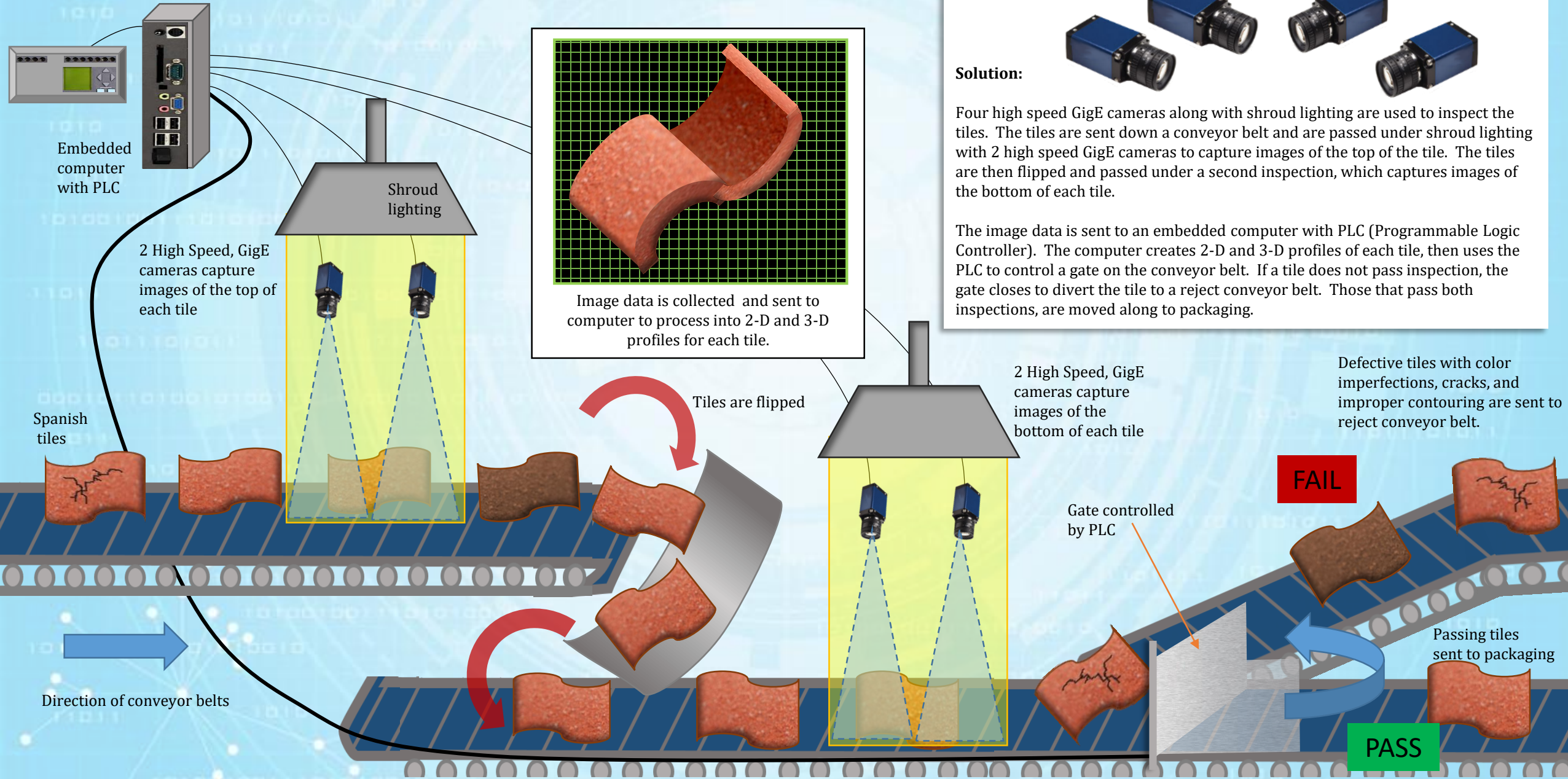


Surface Inspection of Tiles



A Spanish roofing tile manufacturer needs a system to inspect tiles for surface cracks, color, and proper contour ridging. The system must inspect quickly and accurately.



Solution:

Four high speed GigE cameras along with shroud lighting are used to inspect the tiles. The tiles are sent down a conveyor belt and are passed under shroud lighting with 2 high speed GigE cameras to capture images of the top of the tile. The tiles are then flipped and passed under a second inspection, which captures images of the bottom of each tile.

The image data is sent to an embedded computer with PLC (Programmable Logic Controller). The computer creates 2-D and 3-D profiles of each tile, then uses the PLC to control a gate on the conveyor belt. If a tile does not pass inspection, the gate closes to divert the tile to a reject conveyor belt. Those that pass both inspections, are moved along to packaging.