

Cellular Highways Ltd
Building 7100, Cambridge Research Park
Beach Drive, Waterbeach CB25 9TL
United Kingdom



2026-05-08

Eurofins Electrical and Electronic Testing NA, Inc.
914 West Patapsco Avenue
Baltimore, MD 21230

RE: Class II Permissive Change for FCC ID 2BD8H-HIGHWAY1

To Whom It May Concern:

This application for a Class II Permissive Change to the Highway1 outlines the hardware and firmware updates associated with instrument revision 1.1.

Change Contents:

1. Internal Instrument Enclosure Heaters:

- Added a new PWM heater drive circuit based on power MOSFETs to extend the circuit lifetime and offer more precise power control. To facilitate this modification, the enclosure heater connectors were changed.

2. Radio and Firmware (NFC):

- The NFC firmware has been re-written with a ground-up base-level driver to optimize connection stability. The underlying electronic circuit, matching network, and 13.56 MHz operating frequency remain unchanged from the originally certified equipment. Under the new firmware, the NFC operates with a modified write interval and releases the tag connection between operations, resulting in a reduced RF activity duty cycle.

3. Other Changes

- Added a new I2C solenoid position PCB to sense the cartridge clamp position and validate the hardware status.
- Added a new I2C stirrer position PCB, which allows the stirrer to be homed which provides more advanced position-based control.
- Removed the Nvidia Jetson processor module as this will no longer be used with revision 1.1.
- Improvements to the main instrument PCB to support reducing manufacturing costs and improving yields.
- Optimized on-board USB differential pairs and removed the unused USB FIFO device.
- Increased I2C pull-up strength to ensure more robust and reliable inter-board communication.

4. Administrative Updates

- Moved manufacturing and company address. The new address is Building 7100, Cambridge Research Park, Beach Drive, Waterbeach, Cambridge CB25 9TL

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Application Information:

Company Name: Cellular Highways Ltd

Equipment Product Code: HIGHWAY1

FCC ID: 2BD8H-HIGHWAY1

Date of Original Grant: 15th December 2023

Address: Building 7100, Cambridge Research Park, Beach Drive, Waterbeach, Cambridge
CB25 9TL

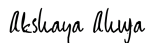
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Sincerely,

Signed by:

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