NB2 IoT User Manual

Model: SIT-03-0-x

Lyft, Inc.

185 Berry St, San Francisco, CA 94107

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FCC Notices

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Canadian Compliance Notices

EN: This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the Radio Interference Regulation of the Canadian Department of Communications.

FR: Le présent appareil numérique n'èmet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Regulatory Module Integration Instructions

This module has been granted modular approval for portable applications. OEM integrators for host products may use the module in their final products without additional FCC / IC (Industry Canada) certification if they meet the following conditions. Otherwise, additional FCC / IC approvals must be obtained.

- The host product with the module installed must be evaluated for simultaneous transmission requirements.
- The users manual for the host product must clearly indicate the operating requirements and conditions that must be observed to ensure compliance with current FCC / IC RF exposure guidelines.
- A label must be affixed to the outside of the host product with the following statement or equivalent:
  "This device contains FCC ID: 2ASMPNB2IOT"

The final host / module combination may also need to be evaluated against the FCC Part 15B criteria for unintentional radiators in order to be properly authorized for operation as a Part 15 digital device.

Module Summary

The Lyft SIT-03-0-x module is a connectivity, location, and card reader module for use on the Lyft SCT-03-0-x shared e-scooter. The module communicates with the controllers inside of the scooter to control motor speed, braking, and lighting; and to report the status of the scooter to an internet application over LTE.

This module is only intended to be used by Lyft for integration into their own products, and will not be sold to other companies or to consumers. This module should not be used in any other circumstances.

External Interfaces

The module exposes five external cables that connect to the shared scooter hardware. These connectors have the following signals:
- **Connector 1 (5 pins):** 36-42V Input Voltage, GND, UART, and power control switch
    - Julet JL-F39-Z508JG Male
- **Connector 2 (4 pins):** CAN
    - Higo Z409BMP Male
- **Connector 3 (2 pins):** Headlight Anode & Cathode
    - JST ZMR-02
- **Connector 4 (3 pins):** Output Voltage, GND, and an Analog Input
    - JST ZMR-03
- **Connector 5 (3 pins):** Output Voltage, GND, and an Analog Input
    - JST ZHR-03

Installation Instructions

The Module must only be installed on a host as approved by Lyft in the SCT-03-0-x manufacturing SOP in order to ensure compliance with applicable FCC regulations. A brief summary of the key electrical and mechanical connections is included below for reference.

Electrical Connections

The connectors on the module must be attached in this order:

1. Connector 2 (optional)
2. Connector 3
3. Connector 4
4. Connector 5
5. Connector 1

Caution should be observed when plugging in Connector 1, as this applies power to the system. For maximum reliability, the Connector 1 power should be disabled while inserting the connector.

Mechanical Connections

The Module must be mechanically affixed to the shared scooter in order to ensure that the connectors maintain connectivity during motion. Screw threads are provided for secure attachment to the shared scooter base. The mechanical mount has been designed to mate with a Lyft-designed custom plastic plate that is affixed to the SCT-03-0-x handlebar area.

The Module must be mounted by following the Lyft-approved manufacturing SOP in order to ensure that the user is more than 70mm away from all radiating elements.
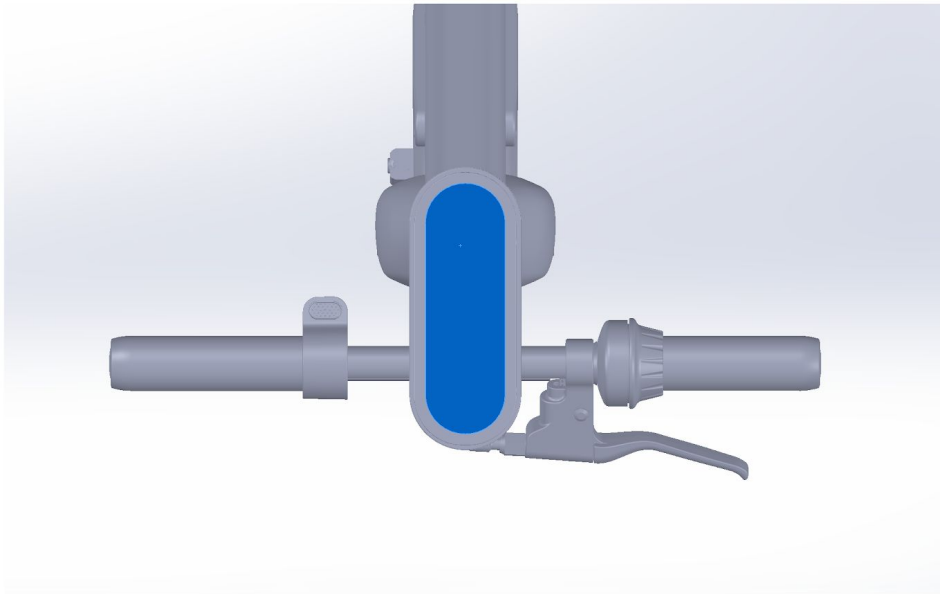
In addition, the Module must only be mounted to a stem that shares the same stem and handlebar geometry as the SCT-03-0-x in order to ensure that the NFC antenna is isolated from the metal in the scooter handlebar and stem.
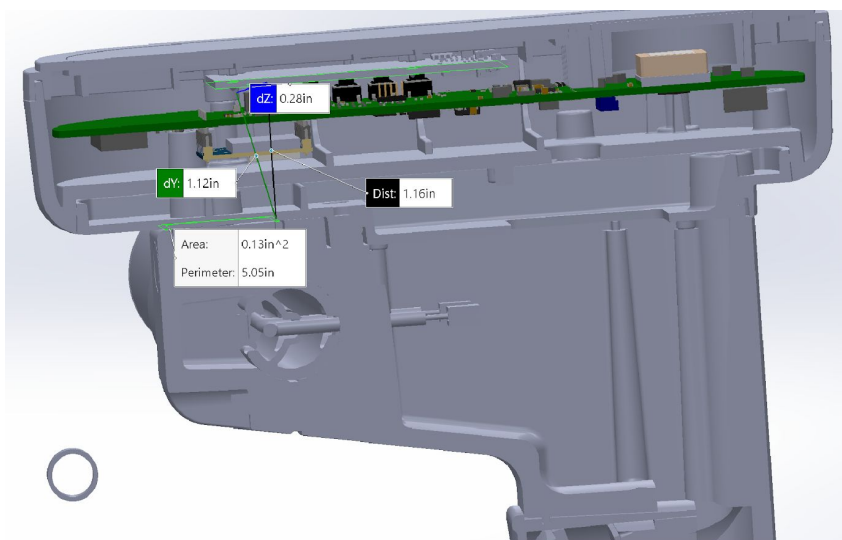
Environmental Limits

This module is intended for use in ambient operating temperatures ranging from -10C to 40C.