

V2X On-Board Unit

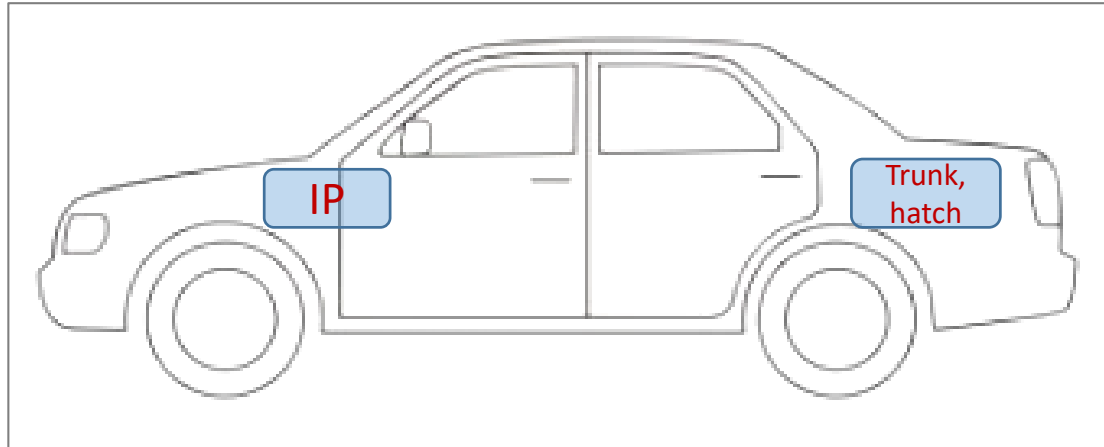
FCC ID: LXC-V2X-OBU-NAD

OBU Installation In Service or Light-Duty Vehicle

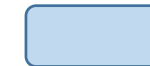
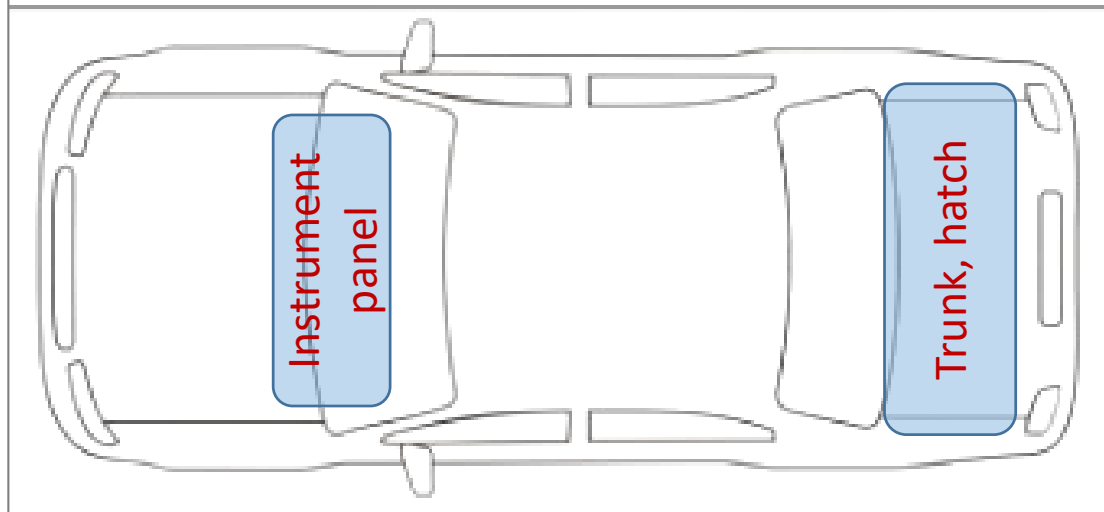
FCC ID: LXC-V2X-OBU-NAD

The MobiQ OBU-5931 is an On-Board Unit. This device is installed on a light or heavy-duty vehicle. Since this device is installed on a vehicle by either a professional installer or automaker, as depicted in the views below, and the device is not sold to general end-users directly, there is no OBU user manual presented to end-users.

Side view



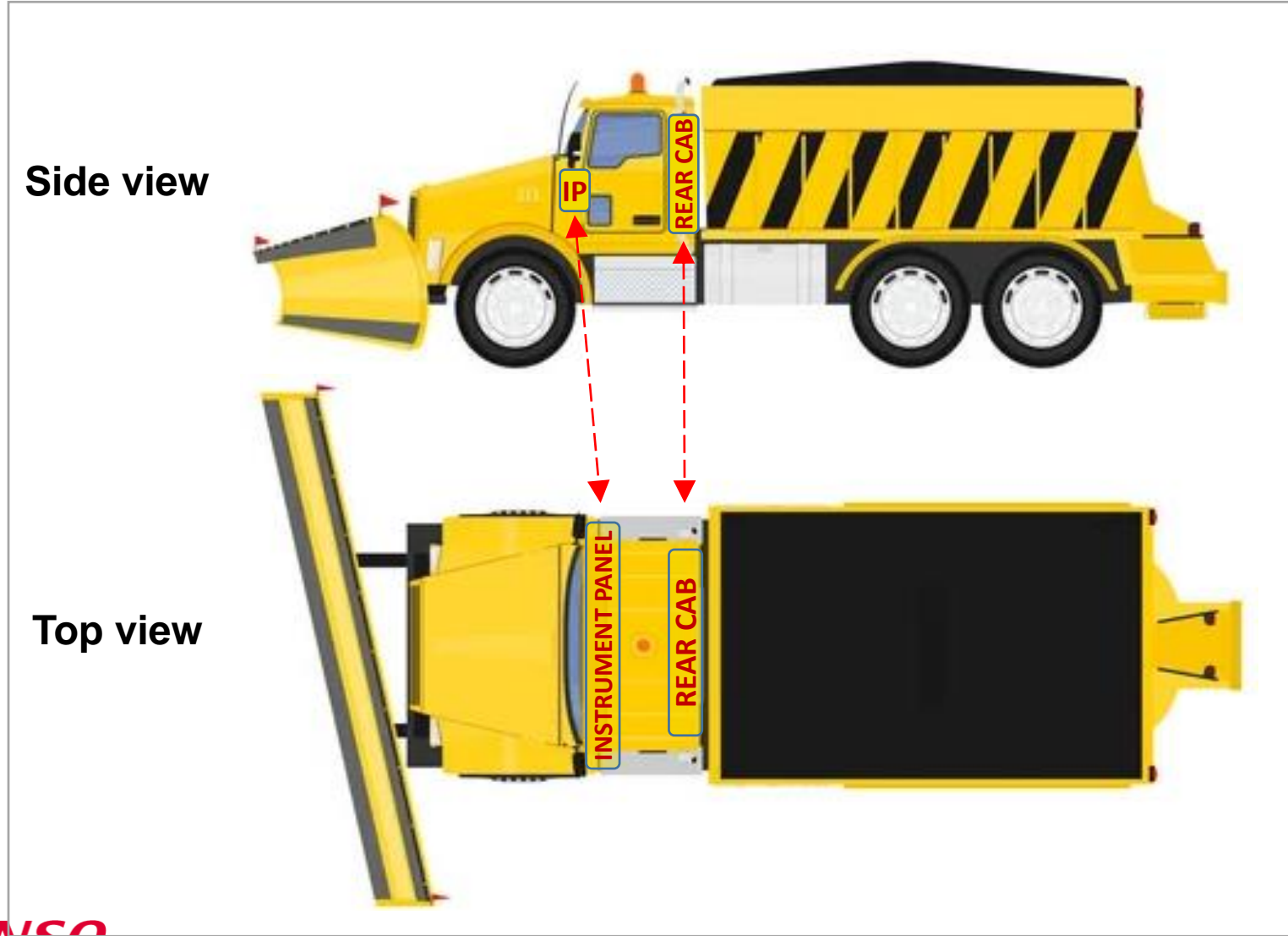
Top view



Typical mounting locations for OBU device: In Trunk or hatch area, or instrument panel (IP).

OBU Installation In Heavy-Duty Vehicle (Snowplow Emergency Vehicle example) FCC ID: LXC-V2X-OBU-NAD

Since this device is installed on a vehicle by either a professional installer or automaker, as depicted in the views below, and the device is not sold to general end-users directly, there is no OBU user manual presented to end-users.



Typical mounting locations
for OBU device: In Rear Cab
or instrument panel (IP).

This MobiQ OBU-5931 consists of a cellular (GSM/LTE) transceiver and a GNSS L1 receiver to provide position updates which are exchanged between vehicles and with infrastructure/

This device is installed in a vehicle to transmit the vehicle's information, such as vehicle position, vehicle speed and travelling direction to other vehicles. This device also receives information transmitted from other vehicles and from vulnerable road users (VRUs) and may calculate the possibility of collision with other vehicles or VRUs, based on the vehicles' mobility path. In addition, approved vehicles may transmit signals to cellular-enabled traffic lights to preempt the light durations for emergency reasons or for transit schedules. Some vehicles may also receive messages identifying the existence of nearby vulnerable road work zones.

FCC Part (Cellular): FCC Part 22, 24, 27, 90
Frequency, Channels: Various (see Test reports)

LTE Antenna Gain:

- 3.1-5.9dBi max (antenna only)
- 1.05 to 2 dBi net gain (w/ cable loss)

GNSS L1 receiver

- 1575 MHz
- Active patch antenna (RHCP)

This device is authorized for use with the specified antenna maximum gain values. Refer to the tables on the previous page.

1) Regulatory Compliance Information:

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- Replacement of any transmitter component (crystal, semiconductor, etc.) could result in a violation of FCC rules.
- The NAD transmitter should not be operated concurrently with any nearby transmitter or antenna.

2) Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm from all persons in a vehicle.

3) Locked firmware settings:

All firmware settings, including power level and frequency tuning parameters are stored in firmware by DENSO at the time of manufacture. No hardware components are adjustable after the product is manufactured.

4) Part numbers:

Software version: Firmware **v06.00**; Hardware: LXC-V2X-OBU-NAD