LANTRONIX Near Field Communication (NFC) readers are high performance and flexible ISO14443A/B MIFARE® contactless smart card readers with read capabilities of 13.56MHz, which are designed for short range applications. They can be used in a wide range of automotive, identification applications such as secure vehicle access control, contactless key, vehicle and driver identification.

The NFC-Windscreen reader is designed to be installed directly behind the windshield or anywhere else inside the vehicle in a way that it is accessible from outside the vehicle. The NFC-InCar reader is designed to be installed e.g. in the car’s centre console (inside the cabin). It has an integrated card slot, into which the NFC card can be inserted. The card remains there e.g. for hands-free operation and enables the car to start.

**PRODUCT OVERVIEW**

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**13.56MHz NFC technology**
- Built-in antenna for contactless tag access with reading distance of up to 40 mm

**Compliant with NFC standards**
- Built-in anti-collision feature.
- Support ISO 14443 Type A and B cards, MIFARE®, FeliCa, and ISO 18092 tags

**RS-232 communication**
- Interoperability with FALCOM vehicle telematics products supporting different NFC-related events to trigger actions

**Progammable Multicolour LEDs**
- Red, green and white LEDs can be controlled by FALCOM vehicle telematics products

**D2Sphere™ device management services** let you monitor, diagnose, control and update your Lantronix Mobility Solutions devices. Information such as signal strength, geographic location, battery state, temperature, device firmware and software versions can be remotely monitored, stored and presented to help you maintain connectivity, manage quality of service and prevent downtime.
**TECHNICAL SPECIFICATION**

### Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Mounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFC-Windscreen</td>
<td>Car windshield</td>
</tr>
<tr>
<td>NFC-InCar</td>
<td>Car centre console</td>
</tr>
</tbody>
</table>

### Physical Characteristics

- **Weight:**
  - 1: 57g (with cable)
  - 2: 55g (with cable)

- **Cable Length:** 1.5 meters

- **Interface Cable:** RS-232 (4pin UCOM connector)
  - 1 x Power input: +12...+24 VDC
  - 1 x Serial Port V24 (RX, TX)
  - 1 x Ground (GND)

- **Dimensions:**
  - 1: 68 x 108 x 8 mm (WxLxH)
  - 2: 58 x 111 x 7 mm (WxLxH)

- **Status Indicators:**
  - 1: 3 x colour LED (Green / Red / White)
  - 2: 3 x colour LED (Green / Red / White)

- **Buzzer:**
  - 1: 1 x Buzzer
  - 2: 1 x Buzzer

- **Casing Colour:** Black

### Electrical Characteristics

- **Supply Voltage:** +12 VDC to +24 VDC ±5%

- **Stand by (Max.):** 8 mA; **Operation (Max.):** 33\(^{1}/62\) mA
  - 1: 8 mA; **Operation (Max.):** 32\(^{1}/52\) mA

### Performance

- **Operating Freq.:** 13.56 MHz

- **Compliance:**
  - ISO14443 Type A & B
  - ISO 15693 ISO 18092 Tag

- **MIFARE, FeliCa**

- **Operating Distance:** Up to 40 mm

### Environmentals

- **Operating Temp.:** -45°C to 85°C
- **Storage Temp.:** -20°C to 70°C
- **Relative Humidity:** 5% to 95% non-condensing

### NFC-Tags

- The NFC tags can be ordered separately:
  - Ordering name: RFID-TAGS-TYPE-A

  1) Three LEDs are off; 2) Three LEDs are permanently on

### CONNECTION CABLES TO FOX3-2G/3G/4G SERIES

The connection cables can be ordered separately:

- **CA31:** Used to connect NFC with FOX3 to the 1st serial port (Main port)
- **CA69:** Used to connect NFC with FOX3 to the 2nd serial port (Accessory port)

### DRAWINGS

- **1 NFC-Windscreen**
- **2 NFC-InCar**