

## TapKey (SGNFC-001) Datasheet

The **Step Global TapKey** is a programable swipe card, smartphone and fob reader that uses the NFC (Near Field Communications) protocol. The reader can be used in a wide range of applications from keyless vehicle entry, fare collection, passenger ID, to door access control.

### Key features:

- Supports all NFC protocols
- Supports NFC enabled Smartphones
- Has external antenna for easy placement. In a vehicle the antenna can be adhered to the windscreen, or a side window and the reader can be placed under the dash to protect it from direct sunlight high temperatures.
- Can use a covert antenna for security purposes
- A second antenna port is available for those applications where two entry points require monitoring.
- The reader provides a custom firmware area where either the control functions and/or messaging to/from a telematics device, modem or security system can be programmed to suit.
- 2 LEDs and 1 buzzer to indicate successful tap on/tap off
- Manual/Automatic turn on/off

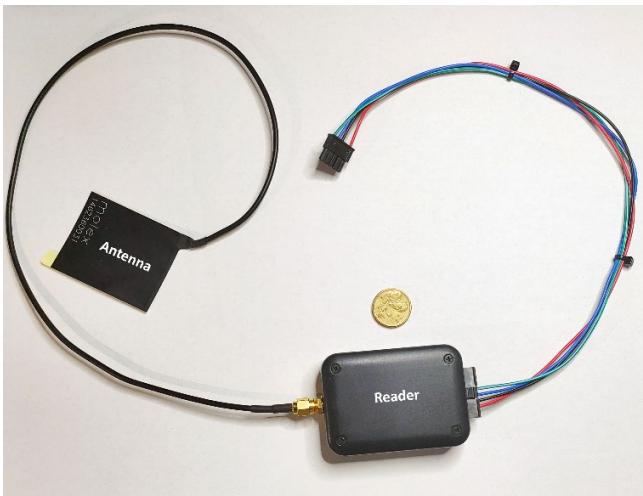


Figure 1 Dimension: LxWxD (mm): 70x50x22 (mm)



Figure 2 TapKey options



## Typical applications:

Near-field communication devices take advantage of the short read range limitations of its radio frequency. NFC devices must be near each other, usually no more than a few centimetres, it has become a popular choice for secure communication for a range of applications.

- **Car sharing.** A customer wants to use a vehicle for a day. They call up the car share company to request the closest available vehicle. The in-vehicle TapKey reader will be remotely loaded with the customer code. When the customer taps on with their Smartphone or dedicated card/fob, then the reader will verify access and unlock the vehicle.
- **Passenger ID.** Where safety requirements call for knowing the occupants of a vehicle, then each occupant can swipe their ID card/fob, and then the reader will send those IDs to the Telematics system or other personnel management system.
- **Access control.** Can be used as a low-cost access control for doors and gates.
- **Fare collection.** The persons ID can be captured and sent onto the billing system for processing.
- **Secure access to desktop computers.** The reader is programmed to only allow login when an authorised NFC tag is detected. This can be a dedicated card, fob or smartphone.

## Typical Vehicle Installation

- Install the window mount antenna in the bottom corner of the windscreen
- Install the reader module under the dash
- Connect the serial port to the vehicles Telematics unit
- Connect a Body Control module from the Telematics unit to control the door lock

## Recommended Antennas

- Windscreen Mount
- Dash Mount

## Customised Serial communications

- The reader module is programmable and can be customised to match any common Telematics serial communications.
- Contact [sales@stepglobal.com](mailto:sales@stepglobal.com) to enquire about this capability.

## Specifications

Part Number:	SGNFC – 001
Dimensions:	LxWxD (mm): 70x50x22
Operating Frequency:	13.56 MHz
Power Input:	30V (max) 7.5V (min)
Power Consumption:	TBA
Operating Temperature Range:	-40°C to 85°C
Storage Temperature Range:	-40°C to 100°C
Humidity:	90% RH @ 50° C non-condensing
Supported NFC Protocols:	ISO 1433A, Mifare Classic 1k, Mifare Classic 4k, Mifare Classic Ultralight, Mifare Plus, DES fire, NTAGS
Serial Interface:	RS 232, UART
IP Rating:	IP 54
Tag Read Distance:	5.5cm for 50cm antenna cable

NOTE: Some parameters may be impacted by the placement of antenna, specifically the tag read distance. It is best to ask Step Global tech support for optimum placement of the antenna.