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Introduction

This document describes how to create a key card to be used in the Sushi Sensor system. The key card is used to store security information that is used for authentication and encryption processing of LoRaWAN communication. The key card must be created before LoRaWAN gateway and Sushi Sensor settings are configured.

An Android device and NFC card are required to create a key card. The Android device must satisfy the GS 01W06E01-10EN software specifications.

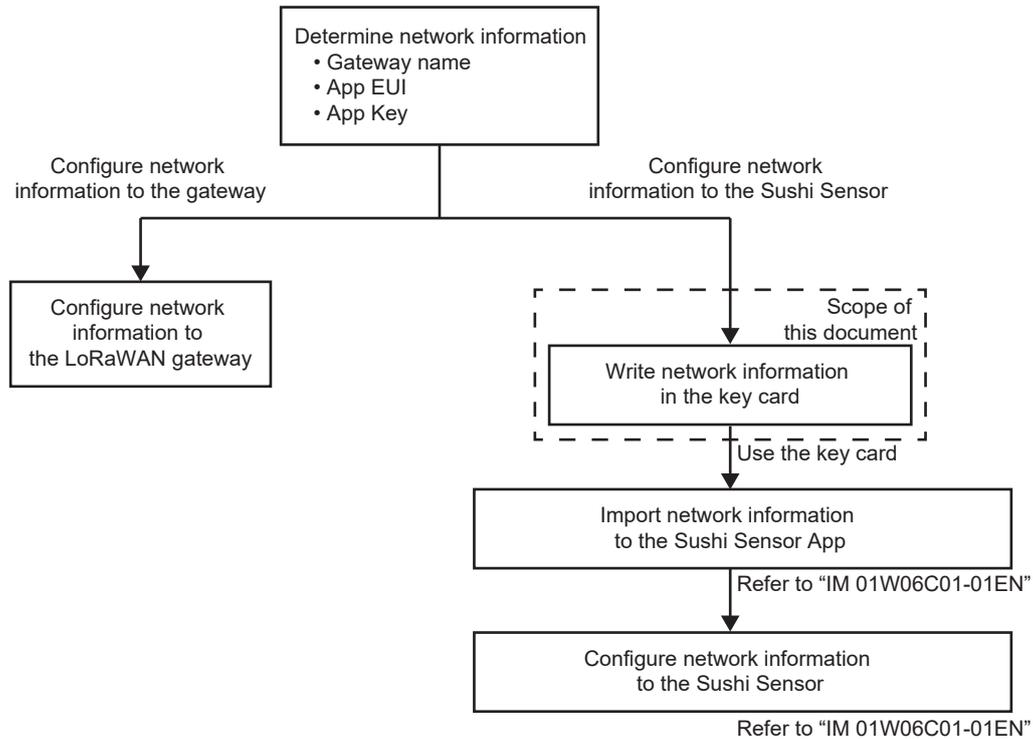
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1. Role of Key Cards

Network Information (Gateway name, App EUI and APP Key) is required to configure network settings in the Sushi Sensor system. Set the same information to both the Sushi Sensor and LoRaWAN gateway. Network information is created and distributed using the method shown in Figure 1-1.

This document describes “Write network information in the key card”.



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Figure 1-1 Creating and distributing network information

2. Creating a Key Card

2.1 Preparations

Determine the network management information that will be used in the Sushi Sensor system shown in Table 2-1. These information items are written to a key card and used to configure Sushi Sensor settings. They are also required to configure LoRaWAN gateway settings.

Table 2-1 Network management information list

Parameter	Description	Setting
Gateway name	Specify the name of the LoRaWAN gateway. This name is indicated as the gateway name in the Sushi Sensor App.	Specify this name using up to 10 characters. Single-byte uppercase alphabet characters, single-byte numerals, "-" (hyphen), and "_" (underscore) can be used.
App EUI	Identifier of the LoRaWAN gateway. Used together with the App Key to connect to the LoRaWAN gateway.	Specify the EUI-64 address of the LoRaWAN gateway.
App Key	Gateway encryption key. Used together with the App EUI to connect to the LoRaWAN gateway.	Specify this key using arbitrary 128 bits data. Thirty-two characters in hexadecimal notation. It can be automatically generated using the dedicated "Key Card Editor" tool.

For information on the App EUI creation rules, refer to "Sushi Sensor System Setup Guide - MultiConnect Conduit IP67 Base Station Manufactured by Multi-Tech Systems" (TI 01W06A51-50EN).

2.2 Installing Key Card Editor

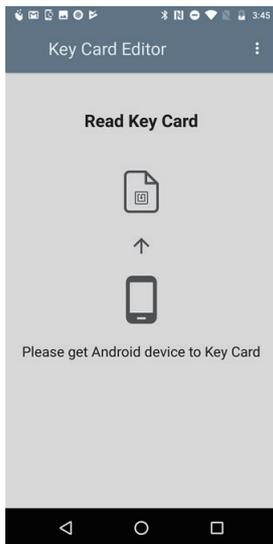
Key Card Editor is required to create a key card. Key Card Editor is a tool that can only be used on Android device. Access Google Play to install Key Card Editor.

- (1) Open Google Play Store.
- (2) Enter "Key Card Editor" in the "Search bar" at the top of the screen.
- (3) Select [Key Card Editor] from the search result screen.
- (4) Press the [Install] button to start installation.

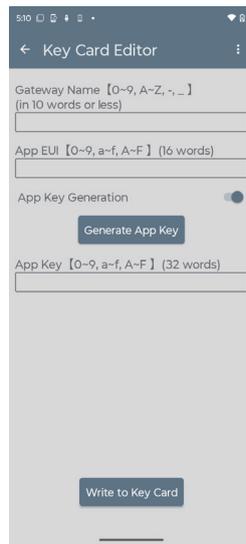
2.3 Creating a Key Card

This section describes how to create a key card. Prepare a card on which no information is written.

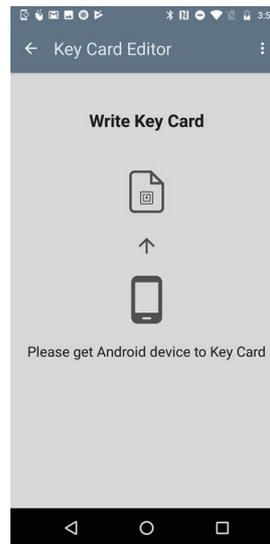
- (1) Launch Key Card Editor, and put the prepared card close to the Android device.
- (2) Enter Gateway name, App EUI, and App Key you determined in Section 2.1. If you turn on [Auto-generate App Key], App Key will be generated automatically. When the entry is completed, press the [Write to Key Card] button.
- (3) When the “Write Key Card” screen is displayed, put the prepared card close to the Android device.
- (4) When the “Write Complete” screen is displayed, writing is completed. Press the [Done] button.



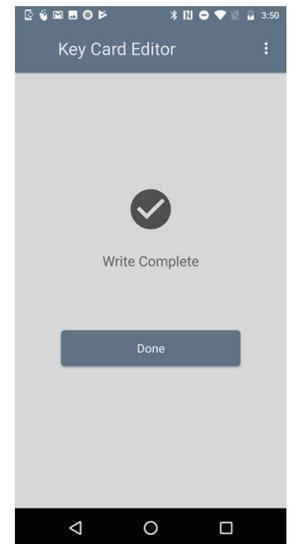
Read Key Card screen



Parameter entry screen



Write Key Card screen



Write Complete screen



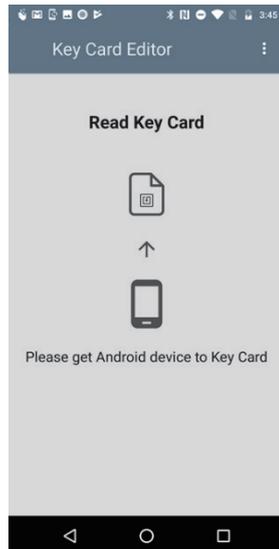
NOTE

You can write your key card only once. The settings written to the key card cannot be erased or overwritten. Before finishing writing, carefully confirm the settings, and press the [Write to Key Card] button when they are correct.

2.4 Checking the Key Card

This section describes how to check the contents of the key card.

- (1) Launch Key Card Editor, and put the prepared card close to the Android device.
- (2) Check that “Gateway Name” matches the value you wrote.



Read Key Card screen



Parameter confirmation screen



NOTE

In Key Card Editor, the values other than Gateway name are indicated by asterisks (*).

3. Software

3.1 Key Card Editor Software License Agreement

Key Card Editor Software License Agreement

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Revision Information

Title : Sushi Sensor System Key Card Creation Guide

Manual number : TI 01W06A51-41EN

Edition	Date	Revised Item
1st	March 2019	New issue
2nd	March 2026	Removed support server usage Added automatic App Key generation function Correction of parameter descriptions