



NFC BCA Integration Guide

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Revision History

Version	Name	Date	Remarks
1.0	Vallabh		
1.1	Vallabh	19 Nov 2011	Revised with comments from Sabrina

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1. Introduction

Sonim NFC BCA has a NFC chipset based circuitry with a proprietary bus interface designed for using with the Sonim mobile phones. The NFC BCA has been designed and tested with phone models having the corresponding bus connector interface only.

The Sonim NFC BCA is primarily targeted for reader mode deployments.

The NFC BCA uses the following pins from the Sonim connector interface –

- I2C (with interrupt)
- Power

In the context of NFC BCA, the user mostly refers to a corporate customer who requires deploying a NFC based solution for the enterprise wide usage.

It is recommended that before deployment, the user makes a complete integration test run in order to validate the NFC functionality, compatibility and suitability for deployment.

Mobile phone models such as **Sonim XP1301 Core** come with the NFC BCA pre-integrated with the phone. Here, the phone is ready to start integration tests of the phone.

Where the phone does not have the NFC BCA, the user needs to first place order for sample units. The user must have a compatible Sonim mobile phone with an appropriate firmware version flashed on the phone or place an order for phones along with the NFC BCA units. If the phone firmware does not support the NFC BCA function, the user must request for firmware upgrade while placing an order for the NFC BCA. The users must arrange for NFC tags by themselves. Sonim does not provide any test tags.

Sonim shall provide the required support by providing the appropriate firmware upgrade and a simple Java (JSR 257) based NFC test application. The user can install the application on the phone following the standard Java application installation procedures as mentioned in the user guide.

In order to connect the NFC BCA, the user must follow the standard instructions of inserting the battery cover as mentioned in the user guide.

1.1 Sample NFC BCA Pictures



2. Integration Test Procedure

2.1 Initialization

The user must power cycle the phone after connecting the battery cover. This is a mandatory requirement for the NFC to function properly.

The user must launch the NFC Test application on the phone. If the application launches successfully – it indicates that the phone has successfully initialized the NFC module on the BCA and ready for actual NFC based operations.



2.2 Reader mode

The NFC test application initializes the phone as reader. On launching successfully, the phone is ready to read NFC ISO 14443 compliant tags. Hold the phone with the NFC BCA at a distance less than 3 cm in order to activate the read operation. The NFC application must now read the NFC tag successfully and show the properties of the NFC tag – within three seconds. This confirms the NFC integration on the phone.





3. Usage Information

Based on tests performed on a reference Sonim product (Sonim XP1301 Core), it is inferred that the usage of the NFC BCA integrated on any supported Sonim product can be used by end customers safely.

The NFC BCA device may not cause harmful interference, and this device must accept any interference received, including interference that may cause undesired operation.