RN00425

PN76AC firmware release notes v03.01.01

Rev. 1.0 — 29 June 2026 **Release notes**

Document information

Information	Content
Keywords	PN76AC, FW, NFC
Abstract	PN76AC release notes

1 Introduction

This document provides information on the content of the firmware v03.01.01 delivery for PN76AC. It includes the following sections:

- Firmware release content list
- Firmware revision history

Note: *For more information, refer to the PN76AC product page on nxp.com ref.[1].*

2 Scope of the release

This release package is the initial production release of the PN76AC firmware v03.01.01 in secure binary format.

The release is tested with PN76AC customer evaluation board consisting of a PN76AC IC with a 45 mm x 45 mm RF antenna, an MCXW72 as the host controller, and NCI middleware release v01.01.00.

3 Test environment used for the release

3.1 Default SW/HW configuration

The table below details the default configuration about some important parameters:

Parameters	Values
Board used	OM76ACB customer evaluation board.
Antenna	45 x 45 mm
Clock configuration	XTAL
Firmware version	v03.01.01
Host controller	FRDM-MCXW72
Middleware Package	NciLib v01.01.00

4 Features released

Table 1. RF features list

Mode	Protocol	Techno	NFCEE	Other	Completeness
R/W – NFC Forum	ISO-DEP	NFC-A	DH	Frame RF IF 106 kb/s	Functional verified
				ISO-DEP RF IF 106 kb/s	Functional verified
				ISO-DEP RF IF 212, 424, 848 kb/s	Functional verified
		NFC-B	DH	Frame RF IF 106 kb/s	Functional verified
				ISO-DEP RF IF 106 kb/s	Functional verified
				ISO-DEP RF IF 212, 424, 848 kb/s	Functional verified
	FeliCa	NFC-F	DH	Frame RF IF 212, 424 kb/s	Functional verified
Card Emulation	ISO-DEP	NFC-A	HCE	ISO-DEP RF IF 106 kb/s	Functional verified
				ISO-DEP RF IF 212, 424, 848 kb/s	Functional verified

Table 2. Other FW features released

Sl.no	Feature	Completeness
1	Secure FW download	Functional verified
2	ULPCD Feature	Functional verified
3	Standby mode	Functional verified
4	PRBS	Functional verified
6	Dynamic Power Control (DPC)	Functional verified
7	Automatic Waveshape Control	Functional verified
8	Clock management (PLL / XTAL)	Functional verified

Table 3. Certifications

Sl.no	Feature	Completeness
1	NFC Forum CR15 - Digital Compliance (Internal)	To be verified
2	NFC Forum CR15 - Analog Compliance (Internal)	To be verified

5 Firmware release content

The release contains a firmware subpackage intended for use with the PN76AC IC.

The zip file of this release contains:

- Firmware (code and data) in secure format *PN76AC.esfwu* to perform firmware update on the PN76AC IC (part of the customer evaluation board)
- C file *phDnldNfc_UpdateSeq.c* containing the secure firmware image sequence of the above binary in C programing format
- SCR and license file

Table 4. FW version corresponding to this release note

FW version	Antenna type	IC revision	ROM version	Flash Version
v03.01.01	45 mm x 45 mm	PN76AC 0x53	03	01.01

6 Firmware release history

Table 5. Firmware release history

Firmware Version	Release purpose
v03.01.01	Initial production release
v03.01.00	RFP release
v03.00.03	EAR release

6.1 v03.01.01

Table 6. Initial production release

Sl No.	Description
1	Extend CORE_RESET_NTF with more detailed information about the reset and boot reason.

Table 6. Initial production release*...continued*

Sl No.	Description
2	Add ULPCD wake-up notification. By enabling this notification the host is immediately notified about a wake-up from ULPCD, before the actual polling loop starts.
3	Resolve CTS capturing.

6.2 v03.01.00

Table 7. RFP release

Sl No.	Description
1	Solved GPIO3 handling of stopping RF-polling cycle in active mode.
2	Solved wrong handling of wait time before enter standby.
3	Solved case where PN76AC goes back to standby if the standby enabled bit is cleared while GPIO3 is high.
4	Solved ULPCD check period incorrectly handled if set very short.
5	Solved incorrectly sent `RF_INTF_ACTIVATED_NTF` for `RF_DISCOVER_SELECT_CMD`.
6	New NFC Cockpit related ULPCD API added.
7	Improve active power consumption in case ULPCD is enabled. CLIF initialization is moved after receiving `RF_DISCOVER_CMD`.

6.3 v03.00.03

EAR release

7 Precautionary notes

Table 8. Precautions and recommendations

Limitation	Recommendation
TX driver may be damaged due to overcurrent.	Do not disable DPC on PN76AC.

8 Abbreviations

Table 9. Abbreviations

Abbreviation	Description
DH	device host
FW	firmware
HIF	Host Interface
MW	middleware
NCI	NFC controller interface
NFC	near-field communication
NFCC	NFC controller
NFCEE	NFC execution environment
LPCD	low power card detection

Table 9. Abbreviations...*continued*

Abbreviation	Description
ULPCD	ultra low power card detection
PRBS	pseudo random binary sequence
RF	radio frequency
R/W	NFC reader/writer mode

9 References

[1] Web page – PN76AC – Plug-and-Play NFC Controller Connecting to NXP's MCU and MPU Portfolio (link)

10 Revision history

Table 10. Revision history

Document ID	Release date	Description
RN00425 v.1.0	29 June 2026	Initial version

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