

Security NFC Tag Specification

The dedicated NFC tag will have an **NTAG213** chip (made by NXP™) , as specified in https://www.nxp.com/docs/en/data-sheet/NTAG213_215_216.pdf

As discussed in our last meeting, we decided to perform some changes to the specification and the capabilities of the tag, as described below.

1. We removed some command capabilities from the tag, such as the WRITE and READ_CNT commands.
2. We added a new line to table 23 in the specification:

| Code (4-bit) | ACK/NAK |
|--------------|-----------------------------|
| 6h | NAK for unsupported command |

3. We added a new command:

GET_CFG

The GET_CFG command is used to retrieve the configuration bytes defined on the specific NTAG213.

This command can be used without any authentication.

The GET_CFG command has no arguments and replies the the values of CFG0 and CFG1 for the specific NTAG21x type. The command structure is shown below.

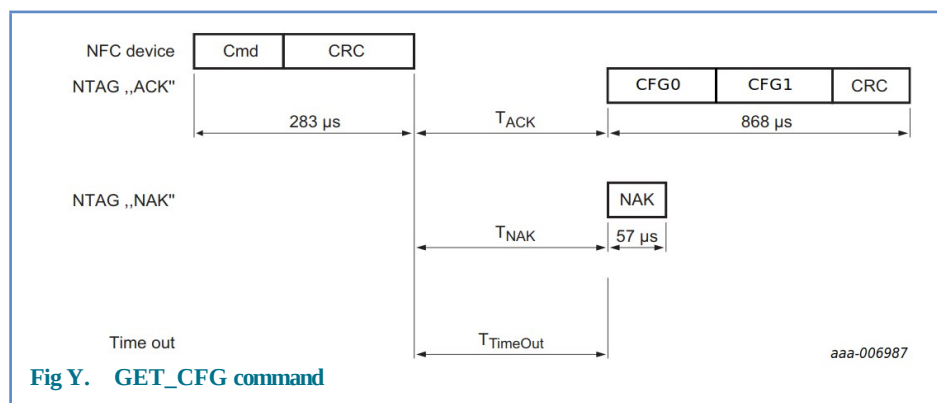


Table Y. GET_CFG command

| Name | Code | Description | Length |
|------|--------------|-------------------------|---------|
| Cmd | 66h | Get configuration bytes | 1 byte |
| CRC | - | CRC according to Ref. 1 | 2 bytes |
| CFG0 | - | Value of CFG 0 | 4 bytes |
| CFG1 | - | Value of CFG 1 | 4 bytes |
| NAK | See Table 23 | See Section 9.3 | 4-bit |

-Top Secret-

In addition, as a result of our discussion about the CRC calculation, I add a clarification regarding this issue:

ISO 14443 refers to CRC_A and CRC_B described in ISO 13239. The initial register value shall be 0x6363 or 0xC6C6 in reversed bit order. Polynomial is 0x1021 and no final XOR is done. CRC result value should be reflected to least significant bit (LSB) and little-endian byte order.

Best regards,

<<Censored>>