NXP Semiconductor

Custom and Proprietary Commands
Note

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General information's regarding this document

- If bits within one byte are filled with "-", these bit spaces are reserved for future extensions or for internal testing- and manufacturing-functions. These bit spaces must not be changed, as this may cause faulty operation of the reader.
- The following figure formats are used:
  0...9: for decimal figures
  0x00...0xFF: for hexadecimal figures,
  b0...1 for binary figures.
- The hexadecimal value in brackets "[ ]" marks a control byte (command).
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1. Introduction

This document describes the NXP custom and proprietary commands additional to the system manual of the according reader which describes only the standard ISO Host commands and general configuration settings.

Beyond the standard ISO15683 commands some transponder manufacturers offers special commands which are not common on other transponder types. These special commands are called custom commands.

Additional to this documentation we recommend to consult the transponder specification from the transponder manufacturer.

The chapter 2. Overview of Supported Custom and Proprietary Commands describes which reader can support which customer commands depending on the different transponder type.

The chapter 3. Configuration Settings describes the necessary configuration settings to allow the reader the use of customer commands automatically by using the standard ISO Host commands.

The chapter 4. Protocols for Commands describes the detailed protocols.

The chapter 5. Special Commands can be used for I-Code1 transponder

The chapter 6. Supported ISO15693 Host commands for ISO15693 Transponder gives an overview of the supported ISOHost commands on the different transponder types.
2. Overview of Supported Custom and Proprietary Commands

The following tables show the supported custom and proprietary commands in dependence of the reader and the transponder type. On the assumption that the current firmware version is installed in the reader you will see in Table 1 the supported customer commands.

Table 2 shows the availability of optional configuration settings to achieve the special customer options.

Table 1 Supported custom commands

<table>
<thead>
<tr>
<th>Transponder</th>
<th>Custom Commands</th>
<th>Reader Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-Code SLI</td>
<td>[0xA0] Inventory Read</td>
<td>✓ ✓</td>
</tr>
<tr>
<td></td>
<td>[0xA1] Fast Inventory Read</td>
<td>✓ ✓</td>
</tr>
<tr>
<td></td>
<td>[0xA2] Set EAS</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>[0xA3] Reset EAS</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>[0xA4] Lock EAS</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>[0xA5] EAS Alarm</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>I-Code SLI-S</td>
<td>[0xB0] Inventory Page Read</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xB1] Fast Inventory Page Read</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xA2] Set EAS</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>[0xA3] Reset EAS</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>[0xA4] Lock EAS</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>[0xA5] EAS Alarm</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>[0xA6] Password Protect EAS</td>
<td>✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>[0xA7] Write EAS ID</td>
<td>✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>[0xA8] Read EPC</td>
<td>✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>[0xB2] Get Random Number</td>
<td>✓ ✓ ✓</td>
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<tr>
<td>Reader Types</td>
<td>Custom Commands</td>
<td>ID ISC. LR2000 LR2500</td>
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<tr>
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<tr>
<td>Transponder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[0xB3] Set Password</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>[0xB4] Write Password</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>[0xB5] Lock Password</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>I-Code SLI-S</td>
<td>[0xB6] Protect Page</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xB7] Lock Page Protection Condition</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xB8] Get Multiple Block Protection Status</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xB9] Destroy SLI-S</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xBA] Enable Privacy</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xBB] 64 Bit Password Protection</td>
<td>✓</td>
</tr>
<tr>
<td>I-Code SLI-L</td>
<td>[0xB0] Inventory Page Read</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xB1] Fast Inventory Page Read</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xA2] Set EAS</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xA3] Reset EAS</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xA4] Lock EAS</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xA5] EAS Alarm</td>
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</tr>
<tr>
<td></td>
<td>[0xA6] Password Protect EAS</td>
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</tr>
<tr>
<td></td>
<td>[0xA7] Write EAS ID</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xB2] Get Random Number</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xB3] Set Password</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xB4] Write Password</td>
<td>✓</td>
</tr>
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## Reader Types

<table>
<thead>
<tr>
<th>Transponder</th>
<th>Custom Commands</th>
<th>ID ISC. LR2000</th>
<th>ID ISC. LR200</th>
<th>ID ISC. MR200/ ID CPR .M02-C*</th>
<th>ID ISC. MR/PR/ PRH101 MR102</th>
<th>ID ISC. M02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transponder</td>
<td>[0xB5] Lock Password</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transponder</td>
<td>[0xB9] Destroy SLI-L</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transponder</td>
<td>[0xBA] Enable Privacy</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(x): supported in future revisions

(*) Supported from Firmware Version 02.08.81

<table>
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<tr>
<th>Transponder</th>
<th>Custom Commands</th>
<th>ID ISC. LR2000</th>
<th>ID ISC. LR200</th>
<th>ID ISC. MR200/ ID CPR .M02-C*</th>
<th>ID ISC. MR/PR/ PRH101 MR102</th>
<th>ID ISC. M02</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-Code SLIX</td>
<td>[0xA0] Inventory Read</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-Code SLIX</td>
<td>[0xA1] Fast Inventory Read</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-Code SLIX</td>
<td>[0xA2] Set EAS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>I-Code SLIX</td>
<td>[0xA3] Reset EAS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>I-Code SLIX</td>
<td>[0xA4] Lock EAS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>I-Code SLIX</td>
<td>[0xA5] EAS Alarm</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>I-Code SLIX</td>
<td>[0xA6] Password Protect EAS</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-Code SLIX</td>
<td>[0xB2] Get Random Number</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-Code SLIX</td>
<td>[0xB3] Set Password</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-Code SLIX</td>
<td>[0xB4] Write Password</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-Code SLIX</td>
<td>[0xB5] Lock Password</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-Code SLIX</td>
<td>[0xBB] 64 Bit Password Protection</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reader Types</td>
<td>Custom Commands</td>
<td>ID ISC. LR2000/2500</td>
<td>ID ISC. MR200/200 ID CPR .M02-C*</td>
<td>ID ISC. MR/PR/PRH101</td>
<td>ID ISC. MR102</td>
<td>ID ISC. M02</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------</td>
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<td>Transponder</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[0xB0] Inventory Page Read</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[0xB1] Fast Inventory Page Read</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[0xA2] Set EAS</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>[0xA3] Reset EAS</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>[0xA4] Lock EAS</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>[0xA5] EAS Alarm</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>I-Code SLIX-L</td>
<td>[0xA6] Password Protect EAS</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>I-Code SLIX-S</td>
<td>[0xA7] Write EAS ID</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td></td>
<td>[0xB2] Get Random Number</td>
<td></td>
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<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td></td>
<td>[0xB3] Set Password</td>
<td></td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td></td>
<td>[0xB4] Write Password</td>
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<td>✓</td>
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<tr>
<td></td>
<td>[0xB5] Lock Password</td>
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<td>✓</td>
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<tr>
<td></td>
<td>[0xB9] Destroy SLIX</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xBA] Enable Privacy</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>I-Code SLIX-S</td>
<td>[0xB6] Protect Page</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xB7] Lock Page Protection Condition</td>
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<td></td>
<td>[0xB8] Get Multiple Block Protection Status</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>[0xBB] 64 Bit Password Protection</td>
<td></td>
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<td>✓</td>
<td>✓</td>
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</tr>
</tbody>
</table>

(x): supported in future revisions

(*) Supported from Firmware Version 02.08.81
### Table 2: Optional configuration settings

<table>
<thead>
<tr>
<th>Transponder</th>
<th>Reader Types</th>
<th>ID ISC.</th>
<th>ID ISC.</th>
<th>ID ISC.</th>
<th>ID ISC.</th>
<th>ID ISC.</th>
</tr>
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<td></td>
<td>Custom Options</td>
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<td>MR200</td>
<td>MR/PR/</td>
<td>M02</td>
</tr>
<tr>
<td>I-Code SLI</td>
<td>Inventory Read Block</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fast Inventory Read Block</td>
<td>✓</td>
<td>✓</td>
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<td>I-Code SLI-S</td>
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<tr>
<td>I-Code SLI-L</td>
<td>Fast Inventory Read Page</td>
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<td>I-Code SLIX</td>
<td>Long Range Command</td>
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<td>I-Code SLIX-L</td>
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<td>I-Code SLIX-S</td>
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3. Configuration Settings

3.1. CFG6: Customer Command Option Bytes (*ID ISC.LR2000*)

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<td>Default</td>
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<table>
<thead>
<tr>
<th>Byte</th>
<th>7</th>
<th>8</th>
<th>9</th>
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</table>

**NXP:**

Switch’s ON/OFF the use of customer commands of NXP Transponders:

<table>
<thead>
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<th>Bit</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>LRC</td>
<td>INV_RD_BLK</td>
<td>INV_RD_PAGE</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Fast</td>
</tr>
</tbody>
</table>

**FAST:**
- **b0:** Standard Return Link (26kBaud) for INV_RD_BLK or INV_RD_PAGE
- **b1:** Fast Return Link (52kBaud) for INV_RD_BLK or INV_RD_PAGE

**LRC:**
- **b1:** The Reader sends a Long Range Command for EPC-Transponder instead a Begin Round Command

**INV_RD_BLK:**
- **b1:** Reads the user data with an inventory command from an I-Code SLI (only for BRM, Scan and Notification-Mode)

**INV_RD_PAGE:**
- **b1:** Reads the user data with an inventory command from an I-Code SLI-S an I-Code SLI-L or I-Code SLIX
  (only for BRM, Scan and Notification-Mode)
3.2. CFG8: General Transponder Parameters *(ID ISC.LR200)*

The parameters of the CFG8 configuration block contain general transponder settings.

<table>
<thead>
<tr>
<th>Byte</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contents</td>
<td>0x00</td>
<td>0x00</td>
<td>0x00</td>
<td>0x00</td>
<td>ISO-MODE</td>
<td>ISO-AFI</td>
<td>ISO-OPTION</td>
</tr>
<tr>
<td>Default</td>
<td>Dev: 0x01</td>
<td>0xF</td>
<td>0x00</td>
<td>0x00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Byte</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contents</td>
<td>ISO-CMD-OPTION</td>
<td>0x00</td>
<td>0x00</td>
<td>ISOICODE-OPTION</td>
<td>0x00</td>
<td>0x00</td>
<td>0x00</td>
</tr>
<tr>
<td>Default</td>
<td>0x03</td>
<td>0x00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ISO-ICODE-OPTION:** (only ISO tag driver)

Manufacturers specific options

<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>EN</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>INV_READ</td>
<td>FAST_INV_READ</td>
</tr>
</tbody>
</table>

**FAST-INV-READ**

<table>
<thead>
<tr>
<th>INV-READ</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b0</td>
<td>Fast Inventory Read is disabled</td>
</tr>
<tr>
<td>b1</td>
<td>Fast Inventory Read is enabled</td>
</tr>
</tbody>
</table>

**INV-READ**

<table>
<thead>
<tr>
<th>INV-READ</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b0</td>
<td>Inventory Read is disabled</td>
</tr>
<tr>
<td>b1</td>
<td>Inventory Read is enabled</td>
</tr>
</tbody>
</table>

**EN**

<table>
<thead>
<tr>
<th>EN</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b0</td>
<td>Icode options disabled</td>
</tr>
<tr>
<td>b1</td>
<td>Icode options enabled</td>
</tr>
</tbody>
</table>
4. Protocols for Commands

4.1. [0xB1] Custom and Proprietary Commands

This command sends custom defined commands to the transponder.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5...n-2</th>
<th>n-1,n</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>COM-ADR</td>
<td>[0xB1]</td>
<td>MFR</td>
<td>REQUEST-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DATA</td>
<td>CRC16</td>
</tr>
</tbody>
</table>

Host → Reader

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5...n-2</th>
<th>n-1,n</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>COM-ADR</td>
<td>[0xB1]</td>
<td>STATUS</td>
<td>RESPONSE-</td>
<td>CRC16</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>^</td>
<td>DATA</td>
<td></td>
</tr>
</tbody>
</table>

MFR:

Manufacturer code

<table>
<thead>
<tr>
<th>MFR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0x04</td>
<td>NXP</td>
</tr>
</tbody>
</table>

REQUEST-DATA:

Manufacturer specific request

RESPONSE-DATA:

Manufacturer specific response

Note:

- Data is only transferred if STATUS = {0x00, 0x83, 0x84, 0x90, 0x93, 0x94, 0x95}.
- This command isn’t available if the Buffered Read Mode is switched on.

^ see System Manual, Annex D: Index of Status Bytes
4.1.1. NXP Custom Commands

4.1.1.1. [0xA0] Inventory Read and [0xA1] Fast Inventory Read (only for I-Code SLI)

This command reads one or more data blocks of all transponders inside the antenna field.

REQUEST-DATA (Inventory Read)

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xA0</td>
<td>MODE</td>
<td>DB-ADR</td>
<td>DB-N</td>
</tr>
</tbody>
</table>

REQUEST-DATA (Fast Inventory Read)

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xA1</td>
<td>MODE</td>
<td>DB-ADR</td>
<td>DB-N</td>
</tr>
</tbody>
</table>

RESPONSE-DATA (STATUS = 0x95)

<table>
<thead>
<tr>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO-ERROR</td>
</tr>
</tbody>
</table>

RESPONSE-DATA

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8-15</th>
<th>16</th>
<th>17-n</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATA-SETS</td>
<td>DB-SIZE</td>
<td>DSFID</td>
<td>UID</td>
<td>SEC-STATUS</td>
<td>DB</td>
</tr>
</tbody>
</table>

Repeated DB-N times
Repeated DATA-SETS times

MODE:

<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>MORE</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>OPTION</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

OPTION:

<table>
<thead>
<tr>
<th>OPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>b0</td>
</tr>
<tr>
<td>b1</td>
</tr>
</tbody>
</table>

MORE:

<table>
<thead>
<tr>
<th>MORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>b0</td>
</tr>
<tr>
<td>b1</td>
</tr>
</tbody>
</table>

DB-ADR:

First block number to be read. First Block can be any value between 0 and 255.

DB-N:

Number of data blocks to be read from the transponder, starting at DB-ADR. Maximum number of DB-N is 32.
ISO-ERROR: (only ISO transponders)
ISO error code of transponder response. This byte is only available if STATUS = {0x95}.

DATA-SETS:
Number of transponder data sets to be transferred.
DATA-SETS is only send once in a response protocol.

DB-SIZE:
Number of bytes of one data block.

DSFID:
Data Storage Format Identifier of the transponder.
If not used (OPTION = 0), this value will return {0x00}

UID:
Read only serial no. of the transponder.
If not used (OPTION = 0), this value will return {0x00}

SEC-STATUS:
Block security status of followed data block. If not used, this value will return {0x00}.

DB:
Requested data block. The block size is defined by DB-SIZE.
4.1.1.2. [0xB0] Inventory Page Read and [0xB1] Fast Inventory Page Read
(only for I-Code SLI-S, I-Code SLI-L, , I-Code SLIX)

This command reads one or more data blocks of all transponders inside the antenna field.

REQUEST-DATA (Inventory Page Read)

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xB0</td>
<td>MODE</td>
<td>DB-ADR</td>
<td>DB-N</td>
</tr>
</tbody>
</table>

REQUEST-DATA (Fast Inventory Page Read)

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xB1</td>
<td>MODE</td>
<td>DB-ADR</td>
<td>DB-N</td>
</tr>
</tbody>
</table>

RESPONSE-DATA (STATUS = {0x95})

<table>
<thead>
<tr>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO-ERROR</td>
</tr>
</tbody>
</table>

RESPONSE-DATA

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8-15</th>
<th>16</th>
<th>17-n</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATA-SETS</td>
<td>DB-SIZE</td>
<td>DSFID</td>
<td>UID</td>
<td>SEC-STATUS</td>
<td>DB</td>
</tr>
</tbody>
</table>

Repeated DB-N times

Repeated DATA-SETS times

MODE:

<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>MORE</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>OPTION</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

OPTION:

<table>
<thead>
<tr>
<th>OPTION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b0</td>
<td>without UID (only data blocks and page status)</td>
</tr>
<tr>
<td>b1</td>
<td>UID, page status and data blocks</td>
</tr>
</tbody>
</table>

MORE:

<table>
<thead>
<tr>
<th>MORE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b0</td>
<td>new Command requested</td>
</tr>
<tr>
<td>b1</td>
<td>more data requested</td>
</tr>
</tbody>
</table>

DB-ADR:

First block number to be read. First Block can be any value between 0 and 255.

DB-N:

Number of data blocks to be read from the transponder, starting at DB-ADR. Maximum number of DB-N is 32.
ISO-ERROR: (only ISO transponders)
ISO error code of transponder response. This byte is only available if STATUS = {0x95}.

DATA-SETS:
Number of transponder data sets to be transferred.
DATA-SETS is only send once in a response protocol.

DB-SIZE:
Number of bytes of one data block.

DSFID:
Data Storage Format Identifier of the transponder.
If not used (OPTION = 0), this value will return {0x00}

UID:
Read only serial no. of the transponder.
If not used (OPTION = 0), this value will return {0x00}

SEC-STATUS:
Block security status of followed data block. If not used, this value will return {0x00}.

DB:
Requested data block. The block size is defined by DB-SIZE.
4.1.1.3. [0xA2] Set EAS

This command sets the EAS bit to 1.

**REQUEST-DATA**

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>(7-14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xA2</td>
<td>MODE</td>
<td>UID</td>
</tr>
</tbody>
</table>

**RESPONSE-DATA (STATUS = {0x95})**

<table>
<thead>
<tr>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO-ERROR</td>
</tr>
</tbody>
</table>

**MODE:**

<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td>ADR</td>
</tr>
</tbody>
</table>

**ADR:**

<table>
<thead>
<tr>
<th>ADR</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>b000</td>
<td>non addressed</td>
</tr>
<tr>
<td>b001</td>
<td>addressed</td>
</tr>
<tr>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>

**UID:**

Read only serial no. of the transponder. The UID is required only in the addressed mode.

**ISO-ERROR:**

ISO error code of transponder response. This byte is only available if STATUS = {0x95}. 
4.1.1.4. [0xA3] Reset EAS

This command sets the EAS bit to 0.

REQUEST-DATA

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>(7-14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xA3</td>
<td>MODE</td>
<td>UID</td>
</tr>
</tbody>
</table>

RESPONSE-DATA (STATUS = {0x95})

<table>
<thead>
<tr>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO-ERROR</td>
</tr>
</tbody>
</table>

MODE:

<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td>ADR</td>
</tr>
</tbody>
</table>

ADR:

<table>
<thead>
<tr>
<th>ADR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b000</td>
<td>non addressed</td>
</tr>
<tr>
<td>b001</td>
<td>addressed</td>
</tr>
<tr>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>

UID:

Read only serial no. of the transponder. The UID is required only in the addressed mode.

ISO-ERROR:

ISO error code of transponder response. This byte is only available if STATUS = {0x95}.
4.1.1.5. [0xA4] Lock EAS

This command locks the EAS bit.

**REQUEST-DATA**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>(7-14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>6</td>
<td>0xA4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MODE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UID</td>
</tr>
</tbody>
</table>

**RESPONSE-DATA (STATUS = {0x95})**

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
<tr>
<td>ISO-ERROR</td>
</tr>
</tbody>
</table>

**MODE:**

<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td>ADR</td>
</tr>
</tbody>
</table>

**ADR:**

<table>
<thead>
<tr>
<th>ADR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b000</td>
<td>non addressed</td>
</tr>
<tr>
<td>b001</td>
<td>addressed</td>
</tr>
<tr>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>

**UID:**

Read only serial no. of the transponder. The UID is required only in the addressed mode.

**ISO-ERROR:**

ISO error code of transponder response. This byte is only available if STATUS = {0x95}. 
4.1.1.6. [0xA5] EAS Alarm

If the EAS bit is set to 1 the EAS response is returned from the transponder. This command is available in all modes (non addressed, addressed and selected). Weather the reader receives the sequence or not is shown to the host by setting the status byte.

**REQUEST-DATA**

<table>
<thead>
<tr>
<th>Bit</th>
<th>MODE</th>
<th>UID</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xA5</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

**MODE:**

<table>
<thead>
<tr>
<th>Bit</th>
<th>Function</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>ADR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ADR:**

<table>
<thead>
<tr>
<th>ADR</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>b000</td>
<td>non addressed</td>
</tr>
<tr>
<td>b010</td>
<td>addressed</td>
</tr>
<tr>
<td>b10</td>
<td>selected</td>
</tr>
</tbody>
</table>

**UID:**

Read only serial no. of the transponder. The UID is required only in the addressed mode.

**Note:**

- If an error is detected or the EAS bit is set to 0 the transponder remains silent
4.1.1.7. [0xA6] Password Protect EAS / AFI

This command enables the password protection for EAS if the EAS password has to be transmitted before with the Set Password command.

REQUEST-DATA

```
<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>(7-14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xA6</td>
<td>MODE</td>
<td>UID</td>
</tr>
</tbody>
</table>
```

RESPONSE-DATA (STATUS = {0x95})

<table>
<thead>
<tr>
<th>5</th>
</tr>
</thead>
</table>

ISO-ERROR

MODE:

```
<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>AFI</td>
<td>-</td>
<td>-</td>
<td>ADR</td>
<td></td>
</tr>
</tbody>
</table>
```

ADR:

```
<table>
<thead>
<tr>
<th>ADR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b00</td>
<td>non addressed</td>
</tr>
<tr>
<td>b001</td>
<td>addressed</td>
</tr>
<tr>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>
```

AFI:

```
<table>
<thead>
<tr>
<th>AFI</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b0</td>
<td>EAS</td>
</tr>
<tr>
<td>b1</td>
<td>AFI</td>
</tr>
</tbody>
</table>
```

UID:

Read only serial no. of the transponder. The UID is required only in the addressed mode.

ISO-ERROR:

ISO error code of transponder response. This byte is only available if STATUS = {0x95}. 
4.1.1.8. [0xA7] Write EAS ID

With the command Write EAS ID a new EAS Identifier is stored in the corresponding configuration memory. If EAS is password protected (for Set and Reset EAS) the EAS password has to be transmitted before with the Set Password command.

**REQUEST-DATA**

<table>
<thead>
<tr>
<th>7-8 (15-16)</th>
<th>6</th>
<th>(7-14)</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xA7 MODE</td>
<td>UID</td>
<td>EAS ID</td>
<td></td>
</tr>
</tbody>
</table>

**RESPONSE-DATA (STATUS = {0x95})**

<table>
<thead>
<tr>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO-ERROR</td>
</tr>
</tbody>
</table>

**MODE:**

<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td>ADR</td>
</tr>
</tbody>
</table>

**ADR:**

<table>
<thead>
<tr>
<th>ADR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b00</td>
<td>non addressed</td>
</tr>
<tr>
<td>b001</td>
<td>addressed</td>
</tr>
<tr>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>

**UID:**

Read only serial no. of the transponder. The UID is required only in the addressed mode.

**EAS ID:**

A new EAS ID will be stored.

**ISO-ERROR:**

ISO error code of transponder response. This byte is only available if STATUS = {0x95}. 
4.1.1.9. [0xA8] Read EPC

On the command Read EPC the I•CODE SLI-S/I•CODE SLI-S HC ICs will respond with the EPC Data, if a Destroy EPC command had not been executed before.

**REQUEST-DATA**

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>6</td>
<td>(7-14)</td>
<td>0xA8</td>
<td>MODE</td>
<td>UID</td>
<td></td>
</tr>
</tbody>
</table>

**RESPONSE-DATA (STATUS = {0x95})**

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

**MODE:**

<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>ADR</td>
<td></td>
</tr>
</tbody>
</table>

**ADR:**

<table>
<thead>
<tr>
<th>ADR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b00</td>
<td>non addressed</td>
</tr>
<tr>
<td>b001</td>
<td>addressed</td>
</tr>
<tr>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>

**UID:**

Read only serial no. of the transponder. The UID is required only in the addressed mode.

**EPC DATA:**

96 Bit EPC Data.

**ISO-ERROR:**

ISO error code of transponder response. This byte is only available if STATUS = {0x95}.
4.1.1.10. [0xB2] Get Random Number

The Get Random Number command is required to receive a random number from the label IC. The passwords that will be transmitted with the Set Password command have to be calculated with the Password and the Random Number.

**REQUEST-DATA**

<table>
<thead>
<tr>
<th>Bit</th>
<th>Function</th>
<th>ADR</th>
<th>READ</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>-</td>
<td>b000</td>
<td>non addressed</td>
</tr>
<tr>
<td>6</td>
<td>-</td>
<td>b001</td>
<td>addressed</td>
</tr>
<tr>
<td>7</td>
<td>-</td>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>

**RESPONSE-DATA (STATUS = {0x95})**

<table>
<thead>
<tr>
<th>Bit</th>
<th>Function</th>
<th>ADR</th>
<th>READ</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MODE:**

- **Bit:** 7 6 5 4 3 2 1 0
- **Function:** - - - - - ADR

**ADR:**

- b000: non addressed
- b001: addressed
- b010: selected

**UID:**

Read only serial no. of the transponder. The UID is required only in the addressed mode.

**RANDOM NUMBER:**

16 Bit Random Number for password calculation.

**ISO-ERROR:**

ISO error code of transponder response. This byte is only available if STATUS = {0x95}. 
4.1.1.11. [0xB3] Set Password

With the Set Password command the different Passwords can be transmitted to the Label to get access to the different protected functionality’s on the following commands. The Set Password command has to be executed just once for the related passwords if the label is powered.

REQUEST-DATA

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>(7-14)</th>
<th>7 (15)</th>
<th>8-11 (16-19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xB3</td>
<td>MODE</td>
<td>UID</td>
<td>PASSWORD IDENTIFIER</td>
<td>PASSWORD</td>
</tr>
</tbody>
</table>

RESPONSE-DATA (STATUS = {0x95})

<table>
<thead>
<tr>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO-ERROR</td>
</tr>
</tbody>
</table>

MODE:

<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>ADR</td>
<td></td>
</tr>
</tbody>
</table>

ADR:

<table>
<thead>
<tr>
<th>ADR</th>
<th>non addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>b00</td>
<td>addressed</td>
</tr>
<tr>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>

UID:

Read only serial no. of the transponder. The UID is required only in the addressed mode.

PASSWORD IDENTIFIER:

The different passwords are addressed with the Password Identifier

<table>
<thead>
<tr>
<th>Password Identifier</th>
<th>Password</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x01</td>
<td>Read</td>
</tr>
<tr>
<td>0x02</td>
<td>Write</td>
</tr>
<tr>
<td>0x04</td>
<td>Privacy</td>
</tr>
<tr>
<td>0x08</td>
<td>Destroy SLI-S / SLI-L</td>
</tr>
<tr>
<td>0x10</td>
<td>EAS</td>
</tr>
</tbody>
</table>

PASSWORD:

Password to get access to the different protected functionality.

ISO-ERROR:

ISO error code of transponder response. This byte is only available if STATUS = {0x95}. 
Note:

- The Set Password command can only be executed in addressed or selected modes except of the Privacy Password.
4.1.1.12. \[0xB4\] Write Password

With the Write Password command a new password will be written into the related memory, if the related old password has already been transmitted with a Set Password command before and the addressed password is not locked.

**REQUEST-DATA**

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>6</th>
<th>(7-14)</th>
<th>7 (15)</th>
<th>8-11 (16-19)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0xB4</td>
<td>MODE</td>
<td>UID</td>
<td>PASSWORD IDENTIFIER</td>
<td>PASSWORD</td>
</tr>
</tbody>
</table>

**RESPONSE-DATA (STATUS = \{0x95\})**

<table>
<thead>
<tr>
<th></th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ISO-ERROR</td>
</tr>
</tbody>
</table>

**MODE:**

<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>ADR</td>
<td></td>
</tr>
</tbody>
</table>

**ADR:**

<table>
<thead>
<tr>
<th>ADR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b001</td>
<td>addressed</td>
</tr>
<tr>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>

**UID:**

Read only serial no. of the transponder. The UID is required only in the addressed mode.

**PASSWORD IDENTIFIER:**

The different passwords are addressed with the Password Identifier

<table>
<thead>
<tr>
<th>Password Identifier</th>
<th>Password</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x01</td>
<td>Read</td>
</tr>
<tr>
<td>0x02</td>
<td>Write</td>
</tr>
<tr>
<td>0x04</td>
<td>Privacy</td>
</tr>
<tr>
<td>0x08</td>
<td>Destroy SLI-S / SLI-L</td>
</tr>
<tr>
<td>0x10</td>
<td>EAS</td>
</tr>
</tbody>
</table>

**PASSWORD:**

A new password will be written to the related memory

**ISO-ERROR:**

ISO error code of transponder response. This byte is only available if STATUS = \{0x95\}. 
4.1.1.13. [0xB5] Lock Password

With the Lock Password command the addressed password will be locked, if the related password has already been transmitted with a Set Password command before. A locked password can not be changed any longer.

**REQUEST-DATA**

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>(7-14)</th>
<th>7 (15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xB5</td>
<td>MODE</td>
<td>UID</td>
<td>PASSWORD IDENTIFIER</td>
</tr>
</tbody>
</table>

**RESPONSE-DATA** (STATUS = {0x95})

<table>
<thead>
<tr>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO-ERROR</td>
</tr>
</tbody>
</table>

**MODE:**

<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>ADR</td>
<td></td>
</tr>
</tbody>
</table>

**ADR:**

<table>
<thead>
<tr>
<th>ADR</th>
<th>addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>b001</td>
<td>addressed</td>
</tr>
<tr>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>

**UID:**

Read only serial no. of the transponder. The UID is required only in the addressed mode.

**PASSWORD IDENTIFIER:**

The different passwords are addressed with the Password Identifier

<table>
<thead>
<tr>
<th>Password Identifier</th>
<th>Password</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x01</td>
<td>Read</td>
</tr>
<tr>
<td>0x02</td>
<td>Write</td>
</tr>
<tr>
<td>0x04</td>
<td>Privacy</td>
</tr>
<tr>
<td>0x08</td>
<td>Destroy SLI-S / SLI-L</td>
</tr>
<tr>
<td>0x10</td>
<td>EAS</td>
</tr>
</tbody>
</table>

**ISO-ERROR:**

ISO error code of transponder response. This byte is only available if STATUS = {0x95}.
4.1.1.14. [0xB6] Protect Page

With the Page Protection command the page protection condition can be changed under the following circumstances:
• The related passwords (Read and/or Write password) have been transmitted before with the Set Password command. If the page is public no password is required.
• The addressed page Protection condition is not locked (see Page Protection Condition Lock)

REQUEST-DATA

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>6</th>
<th>(7-14)</th>
<th>7 (15)</th>
<th>8 (16)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0xB6</td>
<td>MODE</td>
<td>UID</td>
<td>PAGE NUMBER</td>
<td>PROTECTION STATUS</td>
</tr>
</tbody>
</table>

RESPONSE-DATA (STATUS = {0x95})

<table>
<thead>
<tr>
<th></th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ISO-ERROR</td>
</tr>
</tbody>
</table>

MODE:

<table>
<thead>
<tr>
<th>Bit</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>ADR</td>
<td></td>
</tr>
</tbody>
</table>

ADR:

<table>
<thead>
<tr>
<th>ADR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b00</td>
<td>non addressed</td>
</tr>
<tr>
<td>b001</td>
<td>addressed</td>
</tr>
<tr>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>

UID:

Read only serial no. of the transponder. The UID is required only in the addressed mode.

PAGE NUMBER:

Number of the page

PROTECTION STATUS:

<table>
<thead>
<tr>
<th>Protection Status</th>
<th>32 bit Password Protection</th>
<th>64 bit Password Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x00</td>
<td>Public</td>
<td>Public</td>
</tr>
<tr>
<td>0x01</td>
<td>Read and Write protected by the Read password</td>
<td>Read and Write protected by the Read plus Write password</td>
</tr>
<tr>
<td>0x10</td>
<td>Write protected by the Write password</td>
<td>Write protected by the Read plus Write password</td>
</tr>
<tr>
<td>0x11</td>
<td>Read protected by the Read password and Write protected by the Write password</td>
<td>Read and Write protected by the Read plus Write password</td>
</tr>
</tbody>
</table>

ISO-ERROR:

ISO error code of transponder response. This byte is only available if STATUS = {0x95}.
4.1.1.15. [0xB7] Lock Page Protection Condition

With the Lock Page Protection Condition command the status of the Page Protection Condition of the related page will be locked if the related passwords (Read and/or Write password) have been transmitted before with the Set Password command. If the page is public no password is required.

REQUEST-DATA

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>(7-14)</th>
<th>7 (15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xB7</td>
<td>MODE</td>
<td>UID</td>
<td>PAGE NUMBER</td>
</tr>
</tbody>
</table>

RESPONSE-DATA (STATUS = {0x95})

<table>
<thead>
<tr>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO-ERROR</td>
</tr>
</tbody>
</table>

MODE:

<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>ADR</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ADR:

<table>
<thead>
<tr>
<th>ADR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b00</td>
<td>non addressed</td>
</tr>
<tr>
<td>b001</td>
<td>addressed</td>
</tr>
<tr>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>

UID:
Read only serial no. of the transponder. The UID is required only in the addressed mode.

PAGE NUMBER:
Number of the page.

ISO-ERROR:
ISO error code of transponder response. This byte is only available if STATUS = {0x95}. 
4.1.1.16. [0xB8] Get Multiple Block Protection Status

To the Get multiple Block Protection Status command the label responds with the block protection status of the requested blocks.

**REQUEST-DATA**

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>(7-14)</th>
<th>7 (15)</th>
<th>8 (16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xB8</td>
<td>MODE</td>
<td>UID</td>
<td>DB-ADR</td>
<td>DB-N</td>
</tr>
</tbody>
</table>

**RESPONSE-DATA (STATUS = {0x95})**

<table>
<thead>
<tr>
<th>5</th>
<th>6-n</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB-N</td>
<td>Block Protection Status</td>
</tr>
<tr>
<td></td>
<td>Repeated as needed</td>
</tr>
</tbody>
</table>

**MODE:**

<table>
<thead>
<tr>
<th>Bit</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td>ADR</td>
</tr>
</tbody>
</table>

**ADR:**

<table>
<thead>
<tr>
<th>ADR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b00</td>
<td>non addressed</td>
</tr>
<tr>
<td>b001</td>
<td>addressed</td>
</tr>
<tr>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>

**UID:**

Read only serial no. of the transponder. The UID is required only in the addressed mode.

**DB-ADR:**

First number of block.

**DB-N:**

Number of blocks.

**BLOCK PROTECTION STATUS:**

<table>
<thead>
<tr>
<th>Bit</th>
<th>Name</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Lock bit</td>
<td>0</td>
<td>Block is not locked</td>
</tr>
<tr>
<td>1</td>
<td>Read password protected</td>
<td>1</td>
<td>Block is locked (Lock Block command)</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>disabled</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>enabled</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Write password protected</td>
<td>0</td>
<td>disabled</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>enabled</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Page protected</td>
<td>0</td>
<td>disabled</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>enabled</td>
<td></td>
</tr>
<tr>
<td>4-7</td>
<td>-</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

**ISO-ERROR:**

ISO error code of transponder response. This byte is only available if STATUS = {0x95}.
4.1.1.17. [0xB9] Destroy SLI-S / SLI-L / SLIX

With the Destroy SLI-S/SLI-L command the I•CODE SLI-S/I•CODE SLI-S HC or I•CODE SLI-L / I•CODE SLI-L HC Label IC can be destroyed if the Destroy SLI-S/SLI-L password has been transmitted before. This command is irreversible and the I•CODE SLI-S/I•CODE SLI-S HC or I•CODE SLI-L / I•CODE SLI-L HC will never respond to any command again (ISO and EPC commands).

**REQUEST-DATA**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>6</td>
<td>(7-14)</td>
<td></td>
</tr>
<tr>
<td>0xB2</td>
<td>MODE</td>
<td>UID</td>
<td></td>
</tr>
</tbody>
</table>

**RESPONSE-DATA (STATUS = {0x95})**

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
<tr>
<td>ISO-ERROR</td>
</tr>
</tbody>
</table>

**MODE:**

<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>ADR</td>
<td></td>
</tr>
</tbody>
</table>

**ADR:**

<table>
<thead>
<tr>
<th>ADR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b001</td>
<td>addressed</td>
</tr>
<tr>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>

**UID:**

Read only serial no. of the transponder. The UID is required only in the addressed mode.

**ISO-ERROR:**

ISO error code of transponder response. This byte is only available if STATUS = {0x95}.
4.1.1.18. [0xBA] Enable Privacy

With the Enable Privacy command the I•CODE SLI-S/I•CODE SLI-S HC or or I•CODE SLI-L / I•CODE SLI-L HC Label IC can be set into the Privacy mode. The I•CODE SLI-S/I•CODE SLI-S HC or I•CODE SLI-L / I•CODE SLI-L HC will not respond to any command except Get Random Number and Set Password. To get out of the Privacy Status the valid Privacy password has to be transmitted to the IC with the Set Password command.

REQUEST-DATA

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>6</th>
<th>(7-14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xBA</td>
<td>MODE</td>
<td>UID</td>
<td></td>
</tr>
</tbody>
</table>

RESPONSE-DATA (STATUS = {0x95})

<table>
<thead>
<tr>
<th></th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO-ERROR</td>
<td></td>
</tr>
</tbody>
</table>

MODE:

<table>
<thead>
<tr>
<th>Bit</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>ADR</td>
<td></td>
</tr>
</tbody>
</table>

ADR:

<table>
<thead>
<tr>
<th>ADR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b001</td>
<td>addressed</td>
</tr>
<tr>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>

UID:

Read only serial no. of the transponder. The UID is required only in the addressed mode.

ISO-ERROR:

ISO error code of transponder response. This byte is only available if STATUS = {0x95}. 
4.1.1.19. [0xBB] 64 Bit Password Protection

With the 64-bit Password Protection command the Label IC can be instructed that the Read and Write passwords are required to get access to password protected blocks (pages). This mode can be enabled or disabled if the Read and Write passwords have already been transmitted with a Set Password command before. If the 64-bit password protection is enabled both passwords are required for read & write access to protected blocks (pages).

REQUEST-DATA

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>(7-14)</th>
<th>7 (15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xB8</td>
<td>MODE</td>
<td>UID</td>
<td>64BIT PWD PARAMETER</td>
</tr>
</tbody>
</table>

RESPONSE-DATA (STATUS = {0x95})

<table>
<thead>
<tr>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO-ERROR</td>
</tr>
</tbody>
</table>

MODE:

<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>ADR</td>
<td></td>
</tr>
</tbody>
</table>

ADR:

<table>
<thead>
<tr>
<th>ADR</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>b00</td>
<td>non addressed</td>
</tr>
<tr>
<td>b001</td>
<td>addressed</td>
</tr>
<tr>
<td>b010</td>
<td>selected</td>
</tr>
</tbody>
</table>

UID:

Read only serial no. of the transponder. The UID is required only in the addressed mode.

64BIT PWD PARAMETER:

<table>
<thead>
<tr>
<th>64bit Password Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x00</td>
<td>Disable 64 bit password protection</td>
</tr>
<tr>
<td>0x01</td>
<td>Enable 64 bit password protection</td>
</tr>
</tbody>
</table>

ISO-ERROR:

ISO error code of transponder response. This byte is only available if STATUS = {0x95}.
5. Special Commands

5.1. [0x18] Destroy (only I-Code EPC/UID Transponders)

This command will render the I-CODE EPC/UID Transponder permanently unable to give any replies.

**Host → Reader (TYPE – I-Code EPC)**

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5...16</td>
<td>17...19</td>
<td>20...21</td>
</tr>
<tr>
<td>0x15</td>
<td>COM-ADR</td>
<td>0x18</td>
<td>Mode</td>
<td>EPC</td>
<td>Password</td>
<td>CRC16</td>
</tr>
</tbody>
</table>

**Host → Reader (TYPE – I-Code UID)**

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5...23</td>
<td>24...26</td>
<td>27...28</td>
</tr>
<tr>
<td>0x1C</td>
<td>COM-ADR</td>
<td>0x18</td>
<td>Mode</td>
<td>IDD</td>
<td>Password</td>
<td>CRC16</td>
</tr>
</tbody>
</table>

**Host ← Reader**

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5...6</td>
</tr>
<tr>
<td>6</td>
<td>COM-ADR</td>
<td>0x18</td>
<td>STATUS</td>
<td>CRC16</td>
</tr>
</tbody>
</table>

**MODE:**

<table>
<thead>
<tr>
<th>Bit:</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>TYPE</td>
</tr>
</tbody>
</table>

**TYPER:**

- b000 I-Code EPC
- b001 I-Code UID

**EPC:**

12 Byte EPC Data (electronic product code) If the EPC data has only a length of 8 Byte, the EPC must be written left-justified (Byte 5-12). The last 4 Bytes will be ignored.

**IDD:**

19 Byte IDD Data of I-Code UID

**Password:**

The password is of length 24 bits and must match with the content which was previously written into the relevant section of the I-Code UID or EPC memory.

**Notes:**

- *Only one Transponder may be in the RF-field. If more than one transponder in the field the reader returns with status [0x83] (RF Communication Error.)*
- *If the EPC doesn't match, the reader also answers with status [0x83].*
- *If the command was not successfully (reader may continue read the EPC), the reader answers with status [0x03].*
5.2. [0x1B] Reset QUIET Bit (only I-Code 1 Transponders)

This command resets the Quiet Bit of all I-Code 1 Transponders in the antenna field. After using this command a Transponder once placed in QUIET mode is activated again. For activating the QUIET mode in I-Code 1 Transponders see I-Code 1 specification for details.

Host → Reader

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4...5</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>COM-ADR</td>
<td>0x1B</td>
<td>CRC16</td>
</tr>
</tbody>
</table>

Host ← Reader

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5...6</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>COM-ADR</td>
<td>0x1B</td>
<td>STATUS²</td>
<td>CRC16</td>
</tr>
</tbody>
</table>

5.3. [0x1C] EAS (only I-Code 1 Transponders)

This command sends an EAS request to the Transponder. If the EAS function of the Transponder is active, the Transponder answers with a special EAS sequence. For this command a Transponder does not need to be selected. Whether the Reader receives this sequence or not is shown to the host by setting the status byte. The EAS level has to be set in the configuration.

Host → Reader

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4...5</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>COM-ADR</td>
<td>0x1C</td>
<td>CRC16</td>
</tr>
</tbody>
</table>

Host ← Reader

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5...6</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>COM-ADR</td>
<td>0x1C</td>
<td>STATUS¹</td>
<td>CRC16</td>
</tr>
</tbody>
</table>
6. Supported ISO15693 Host commands for ISO15693 Transponder

IC manufacturer identifier: 0x04

6.1. NXP (I-Code SLI)

Chip ID: 1h = 00000001b (Bit 47 - 40 of UID)

Memory organization: 32 x 4 Byte = 1kBit

- Number of blocks: 32 (user area: 0 – 27)
- Block size: 4 byte

<table>
<thead>
<tr>
<th>Command Code</th>
<th>Function</th>
<th>Mode</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>non-addressed</td>
<td>addressed</td>
</tr>
<tr>
<td>0x01</td>
<td>Inventory</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>0x02</td>
<td>Stay Quiet</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>0x22</td>
<td>Lock Multiple Blocks</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>0x23</td>
<td>Read Multiple Blocks</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>0x24</td>
<td>Write Multiple Blocks</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>0x25</td>
<td>Select</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>0x26</td>
<td>Reset to Ready</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>0x27</td>
<td>Write AFI</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>0x28</td>
<td>Lock AFI</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>0x29</td>
<td>Write DSFID</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>0x2A</td>
<td>Lock DSFID</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>0x2B</td>
<td>Get System Information</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>0x2C</td>
<td>Get Multiple Block Security Status</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

* The WR-OPTION will be set automatically by the FEIG Readers if the WR-OPTION parameter in “CFG8 General” is set to “00: automatically set”. 

**Note:** WR-OPTION = 0 * signifies that the WR-OPTION will be set automatically by the FEIG Readers.
### 6.2. NXP (I-Code SLI-S)

- **Chip ID**: 2h = 00000010b (Bit 47 - 40 of UID)
- **Memory organization**: 40 x 4 Byte = 1280Bit

<table>
<thead>
<tr>
<th>Number of blocks</th>
<th>40 (user area: 0 – 39)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block size</td>
<td>4 byte</td>
</tr>
<tr>
<td>Number of pages</td>
<td>10 (user area: 0 – 9)</td>
</tr>
<tr>
<td>Page size</td>
<td>16 byte = 4 Blocks</td>
</tr>
</tbody>
</table>

#### Command Code Table

<table>
<thead>
<tr>
<th>Code</th>
<th>Function</th>
<th>Mode</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x01</td>
<td>Inventory</td>
<td>√</td>
<td>- - -</td>
</tr>
<tr>
<td>0x02</td>
<td>Stay Quiet</td>
<td>√</td>
<td>- √ -</td>
</tr>
<tr>
<td>0x22</td>
<td>Lock Multiple Blocks</td>
<td>√</td>
<td>√ √ √</td>
</tr>
<tr>
<td>0x23</td>
<td>Read Multiple Blocks</td>
<td>√</td>
<td>√ ** √</td>
</tr>
<tr>
<td>0x24</td>
<td>Write Multiple Blocks</td>
<td>√</td>
<td>√ √ √</td>
</tr>
<tr>
<td>0x25</td>
<td>Select</td>
<td>√</td>
<td>- √ -</td>
</tr>
<tr>
<td>0x26</td>
<td>Reset to Ready</td>
<td>√</td>
<td>√ √ √</td>
</tr>
<tr>
<td>0x27</td>
<td>Write AFI</td>
<td>√</td>
<td>√ √ √</td>
</tr>
<tr>
<td>0x28</td>
<td>Lock AFI</td>
<td>√</td>
<td>√ √ √</td>
</tr>
<tr>
<td>0x29</td>
<td>Write DSFID</td>
<td>√</td>
<td>√ √ √</td>
</tr>
<tr>
<td>0x2A</td>
<td>Lock DSFID</td>
<td>√</td>
<td>√ √ √</td>
</tr>
<tr>
<td>0x2B</td>
<td>Get System Information</td>
<td>√</td>
<td>√ √ √</td>
</tr>
<tr>
<td>0x2C</td>
<td>Get Multiple Block Security Status</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* The WR-OPTION will be set automatically by the FEIG Readers if the WR-OPTION parameter in “CFG4 General” is set to “00: automatically set”.
6.3. NXP (I-Code SLI-L)

Chip ID: 3h = 00000110b (Bit 47 - 40 of UID)

Memory organization: 16 x 4 Byte = 512Bit

<table>
<thead>
<tr>
<th>Number of blocks</th>
<th>16 (user area: 0 – 7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block size</td>
<td>4 byte</td>
</tr>
<tr>
<td>Number of pages</td>
<td>4 (user area: 0 – 1)</td>
</tr>
<tr>
<td>Page size</td>
<td>16 byte = 4 Blocks</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Command Code</th>
<th>Function</th>
<th>Mode</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x01</td>
<td>Inventory</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>0x02</td>
<td>Stay Quiet</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>0x22</td>
<td>Lock Multiple Blocks</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>WR-OPTION = 0 *</td>
</tr>
<tr>
<td>0x23</td>
<td>Read Multiple Blocks</td>
<td>√</td>
<td>**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DB-Size = 4</td>
</tr>
<tr>
<td>0x24</td>
<td>Write Multiple Blocks</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DB-Size = 4, WR-OPTION = 0 *</td>
</tr>
<tr>
<td>0x25</td>
<td>Select</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>0x26</td>
<td>Reset to Ready</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>0x27</td>
<td>Write AFI</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>WR-OPTION = 0 *</td>
</tr>
<tr>
<td>0x28</td>
<td>Lock AFI</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>WR-OPTION = 0 *</td>
</tr>
<tr>
<td>0x29</td>
<td>Write DSFID</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>WR-OPTION = 0 *</td>
</tr>
<tr>
<td>0x2A</td>
<td>Lock DSFID</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>WR-OPTION = 0 *</td>
</tr>
<tr>
<td>0x2B</td>
<td>Get System Information</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>0x2C</td>
<td>Get Multiple Block Security Status</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* The WR-OPTION will be set automatically by the FEIG Readers if the WR-OPTION parameter in “CFG4General” is set to “00: automatically set”.

The WR-OPTION will be set automatically by the FEIG Readers if the WR-OPTION parameter in “CFG4General” is set to “00: automatically set”.
### 6.4. NXP (I-Code SLIX)

*Chip ID: 1h = 00000001b (Bit 47 - 40 of UID)*

**Memory organization: 32 x 4 Byte = 1024Bit**

<table>
<thead>
<tr>
<th>Number of blocks</th>
<th>32 (user area: 0 – 27)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block size</td>
<td>4 byte</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Command Code</th>
<th>Function</th>
<th>Mode</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x01</td>
<td>Inventory</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>0x02</td>
<td>Stay Quiet</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>0x22</td>
<td>Lock Multiple Blocks</td>
<td>✓</td>
<td>WR-OPTION = 0 *</td>
</tr>
<tr>
<td>0x23</td>
<td>Read Multiple Blocks</td>
<td>✓</td>
<td>DB-Size = 4</td>
</tr>
<tr>
<td>0x24</td>
<td>Write Multiple Blocks</td>
<td>✓</td>
<td>DB-Size = 4, WR-OPTION = 0 *</td>
</tr>
<tr>
<td>0x25</td>
<td>Select</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>0x26</td>
<td>Reset to Ready</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>0x27</td>
<td>Write AFI</td>
<td>✓</td>
<td>WR-OPTION = 0 *</td>
</tr>
<tr>
<td>0x28</td>
<td>Lock AFI</td>
<td>✓</td>
<td>WR-OPTION = 0 *</td>
</tr>
<tr>
<td>0x29</td>
<td>Write DSFID</td>
<td>✓</td>
<td>WR-OPTION = 0 *</td>
</tr>
<tr>
<td>0x2A</td>
<td>Lock DSFID</td>
<td>✓</td>
<td>WR-OPTION = 0 *</td>
</tr>
<tr>
<td>0x2B</td>
<td>Get System Information</td>
<td>✓</td>
<td>WR-OPTION = 0 *</td>
</tr>
<tr>
<td>0x2C</td>
<td>Get Multiple Block Security Status</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

* The WR-OPTION will be set automatically by the FEIG Readers if the WR-OPTION parameter in “CFG4 General” is set to “00: automatically set”.
6.5. I-Code EPC Transponders

The command codes listed in the following table support the various Transponder commands and operations that are available for I-Code EPC Transponders.

Memory organization: 17 x 1 Byte = 136 Bit

<table>
<thead>
<tr>
<th>Number of blocks</th>
<th>17 (user area: -)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block size</td>
<td>1 byte</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Command Code</th>
<th>Function</th>
<th>Mode</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>non-addressed</td>
<td>addressed</td>
<td>select</td>
</tr>
<tr>
<td>0x01</td>
<td>Inventory</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>0x02</td>
<td>Stay Quiet</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x18</td>
<td>Destroy</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>0x22</td>
<td>Lock Multiple Blocks</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x23</td>
<td>Read Multiple Blocks</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x24</td>
<td>Write Multiple Blocks</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>0x25</td>
<td>Select</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x26</td>
<td>Reset to Ready</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x27</td>
<td>Write AFI</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x28</td>
<td>Lock AFI</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x29</td>
<td>Write DSFID</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x2A</td>
<td>Lock DSFID</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x2B</td>
<td>Get System Information</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x2C</td>
<td>Get Multiple Block Security Status</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0xA0</td>
<td>Read Config Block</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0xA1</td>
<td>Write Config Block</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
### 6.6. I-Code UID Transponders

The command codes listed in the following table support the various Transponder commands and operations that are available for I-Code UID Transponders.

**Memory organization: 24 x 1 Byte = 192 Bit**

<table>
<thead>
<tr>
<th>Number of blocks</th>
<th>12 Byte User Data (UD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block size</td>
<td>1 byte</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Command Code</th>
<th>Function</th>
<th>Mode</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x01</td>
<td>Inventory</td>
<td>√</td>
<td>non-addressed</td>
</tr>
<tr>
<td>0x02</td>
<td>Stay Quiet</td>
<td></td>
<td>addressed</td>
</tr>
<tr>
<td>0x18</td>
<td>Destroy</td>
<td>√</td>
<td>select</td>
</tr>
<tr>
<td>0x22</td>
<td>Lock Multiple Blocks</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>0x23</td>
<td>Read Multiple Blocks</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>0x24</td>
<td>Write Multiple Blocks</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>0x25</td>
<td>Select</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x26</td>
<td>Reset to Ready</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x27</td>
<td>Write AFI</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x28</td>
<td>Lock AFI</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x29</td>
<td>Write DSFID</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x2A</td>
<td>Lock DSFID</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x2B</td>
<td>Get System Information</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x2C</td>
<td>Get Multiple Block Security Status</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0xA0</td>
<td>Read Config Block</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0xA1</td>
<td>Write Config Block</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
6.7. Supported ISO15693 Host commands for I-Code 1 Transponders

The command codes listed in the following table support the various Transponder commands and operations that are available for I-Code 1 Transponders.

**memory organization: 16 x 4 Byte = 512 Bit**

<table>
<thead>
<tr>
<th>Number of blocks</th>
<th>16 (user area: 0...11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block size</td>
<td>4 byte</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Command Code</th>
<th>Function</th>
<th>Mode</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x01</td>
<td>Inventory</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>0x02</td>
<td>Stay Quiet</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x22</td>
<td>Lock Multiple Blocks</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x23</td>
<td>Read Multiple Blocks</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>0x24</td>
<td>Write Multiple Blocks</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>0x25</td>
<td>Select</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x26</td>
<td>Reset to Ready</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x27</td>
<td>Write AFI</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x28</td>
<td>Lock AFI</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x29</td>
<td>Write DSFID</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x2A</td>
<td>Lock DSFID</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x2B</td>
<td>Get System Information</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0x2C</td>
<td>Get Multiple Block Security Status</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0xA0</td>
<td>Read Config Block</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>0xA1</td>
<td>Write Config Block</td>
<td>√</td>
<td>-</td>
</tr>
</tbody>
</table>

**Note:**
*Read Multiple Blocks cannot be used with the option including Security Status.*