**C7-6D Load Campus Card Key Block / Retrieve Key Block Info (Clear Text)**

Command Frame

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Byte 0-9 | Byte 10 | Byte 11 | Byte 12 | Byte 13 | Byte14 | Byte 15 | Byte 16 |
| Header Tag & Protocol Version | Command | Sub-Command | Data Length (MSB) | Data Length (LSB) | Parameter | CRC (LSB) | CRC (MSB) |
| ViVOpayV2\0 | C7h | 6Dh | Var | Var | See data table |  |  |

To retrieve loaded Key Block Info (Key block data hash), set the data length to 0.  
If the key block has never been loaded, the response status code is 0x60 (Data not exist)

To load the key block data, the data length should be > 0.  
For the command data, please refer to Data Table below.

**Data Table: (All tags after tag 0x04 are optional.)**

| Items (Tags) | Length | Description | Note |
| --- | --- | --- | --- |
| Start Bytes Header | 2 | The start bytes of the Packet 0x00,0x00 |  |
| 0x01 | Var | Packet Length (Complete Blob length including the Header) |  |
| 0x02 | 1 | Number of Tags (Including Header, Packet Length and Number of Tags. Default will be 0x03) |  |
| 0x03 | 1 | Key Set Version, Current Version 0x01 |  |
| 0x04 | Var | String Representing the Credential Provider and Campus“Allegion Swathmore” or Allegion Test” |  |
| 0x05 | 3 | TCI 1 |  |
| 0x06 | 3 | TCI 2 | RFU |
| 0x07 | 3 | TCI 3 | RFU |
| 0x08 | 3 | TCI 4 | RFU |
| 0x10 | 1 | iOS Key Number (0x00 or 0x01) |  |
| 0x11 | 1 | iOS File Id (default is 1) |  |
| 0x12 | 1 | iOS Read Offset (default is 0) |  |
| 0x13 | 1 | iOS Read Size (default is 28) |  |
| 0x14 | 3 | iOS Privacy App Id (The default setting is BBBBB0. If there is a setting, it will be set according to the setting.) |  |
| 0x15 | 16 | iOS Privacy App Key (2-TDES key for Mifare DESFire AuthenticateISO (APDU command of 0x1A)) |  |
| 0x16 | 3 | iOS Credential App Id (The default setting is BBBBB3. If there is a setting, it will be set according to the setting.) |  |
| 0x17 | 16 | iOS Credential App Key (AES-128 key for Calculate the CMAC and Derive BBBBB3 app private key) |  |
| 0x18 | 3 | iOS Security App Id | RFU |
| 0x19 | 16 | iOS Security App Key | RFU |
| 0x20 | 1 | Android Key Number  (0 or 1) |  |
| 0x21 | 1 | Android File Id (Default is 1) |  |
| 0x22 | 1 | Android Read Offset (Default is 0) |  |
| 0x23 | 1 | Android Read Size (Default is 28) |  |
| 0x24 | 3 | Android App Id ( The default setting is BBBBB3. If there is a setting, it will be set according to the setting.) |  |
| 0x25 | 16 | Android App Key (AES-128 key for calculate the CMAC and Derive BBBBB3 app private key) |  |
| 0x30 | 1 | MIFARE Key Type (0x60-Key A, 0x61- Key B) |  |
| 0x31 | 1 | MIFARE Block number (Mifare 1K default is block 52,   Mifare 4K default is block 116) |  |
| 0x32 | 1 | MIFARE Read Block Count (Default is 3) |  |
| 0x33 | 6 | MIFARE App Key (Mifare Classic Key for Mifare Authenticate) |  |
| 0x40 | 1 | DESFire Key Number ( 0 or 1) |  |
| 0x41 | 1 | DESFire File ID (Default is 1) |  |
| 0x42 | 1 | DESFire Read Offset (Default is 0) |  |
| 0x43 | 1 | DESFire Read Size (Default is 28) |  |
| 0x44 | 3 | DESFire App Id (The default setting is BBBBB3. If there is a setting, it will be set according to the setting.) |  |
| 0x45 | 16 | DESFire App Key (AES-128 key for Mifare DESFire AuthenticateAES(APDU command of 0xAA)) |  |
| 0x46 | 1 | DESFire Card Data UID  0: Use the Tag 0x40 to 0x 44 1: Tag 0x40 to 45 are not used) and   response UID to host.   (There is no authorization process   required) |  |
| 0x47 | 1 | DESFire Card UID Normal This is used along with Tag 0x46 0: UID will be byte order reversed and sent as card data 1: UID will be sent as card data |  |
| 0x48 | 1 | DESFire AID Select Reverse This is used along with Tag 0x44 0: AID will be used as it is and used for selection 1: AID will be Byte order reversed and used for selection |  |

**Response Frame**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Byte 0-9 | Byte 10 | Byte 11 | Byte 12 | Byte 13 | Byte 14…  Byte 14+n+1 | Byte 14+n | Byte 15+n |
| Header Tag & Protocol Version | Command | Sub-Command | Data Length (MSB) | Data Length (LSB) | Data | CRC (LSB) | CRC (MSB) |
| ViVOpayV2\0 | C7h | See status code table | 00h | Var | Response Data Table |  |  |

For both load and retrieve command, the response data will be the following

Response Data Table:

| Data Item | Length | Description |
| --- | --- | --- |
| Sha256 | 32 | Use sha-256 to calculate the data table |
| String Representing the Credential Provider and Campus | Var | “Allegion Swathmore” or “Allegion Test” |

Or other error status code.