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# Smartcard API

## API

- [BS2\\_ScanCard](#):
- [BS2\\_WriteCard](#): SmartCard
- [BS2\\_EraseCard](#): SmartCard

## BS2CSNCard

```
typedef struct {
    uint8_t type;
    uint8_t size;
    uint8_t data[BS2_CARD_DATA_SIZE];
} BS2CSNCard;
```

### 1. type

Access 가

|      |         |                                                                                                          |
|------|---------|----------------------------------------------------------------------------------------------------------|
|      |         |                                                                                                          |
| 0x00 |         |                                                                                                          |
| 0x01 | CSN     |                                                                                                          |
| 0x02 | Secure  |                                                                                                          |
| 0x03 | Access  |                                                                                                          |
| 0x0A | Wiegand | BS2WiegandConfig.format (                      BS2WiegandConfig.CSNIndex<br>BS2WiegandConfig.CardMask가 0 |
| 0x0B | Config  |                                                                                                          |
| 0x1A | Wiegand | BS2WiegandMultiConfig.formats[0]                                                                         |
| 0x2A | Wiegand | BS2WiegandMultiConfig.formats[1]                                                                         |
| 0x3A | Wiegand | BS2WiegandMultiConfig.formats[2]                                                                         |
| 0x4A | Wiegand | BS2WiegandMultiConfig.formats[3]                                                                         |
| 0x5A | Wiegand | BS2WiegandMultiConfig.formats[4]                                                                         |
| 0x6A | Wiegand | BS2WiegandMultiConfig.formats[5]                                                                         |
| 0x7A | Wiegand | BS2WiegandMultiConfig.formats[6]                                                                         |
| 0x8A | Wiegand | BS2WiegandMultiConfig.formats[7]                                                                         |
| 0x9A | Wiegand | BS2WiegandMultiConfig.formats[8]                                                                         |
| 0xAA | Wiegand | BS2WiegandMultiConfig.formats[9]                                                                         |
| 0xBA | Wiegand | BS2WiegandMultiConfig.formats[10]                                                                        |
| 0xCA | Wiegand | BS2WiegandMultiConfig.formats[11]                                                                        |
| 0xDA | Wiegand | BS2WiegandMultiConfig.formats[12]                                                                        |
| 0xEA | Wiegand | BS2WiegandMultiConfig.formats[13]                                                                        |

|      |         |                                   |
|------|---------|-----------------------------------|
|      |         |                                   |
| 0xFA | Wiegand | BS2WiegandMultiConfig.formats[14] |

2. size

3. data

BS2SmartCardHeader

```
typedef struct {
    uint16_t hdrCRC;
    uint16_t cardCRC;
    BS2_CARD_TYPE cardType;
    uint8_t numOfTemplate;
    uint16_t templateSize;
    uint16_t issueCount;
    uint8_t duressMask;
    uint8_t cardAuthMode;
    uint8_t useAlphanumericID;
    uint8_t cardAuthModeEx;
    uint8_t numOfFaceTemplate;
    uint8_t reserved[1];
} BS2SmartCardHeader;
```

1. **hdrCRC**  
card header . (cardCRC - reserved)
2. **cardCRC**  
card data . (BS2SmartCardHeader.cardType - BS2SmartCardData.accessOnData)
3. **cardType**  
.

|      |         |
|------|---------|
|      |         |
| 0x00 |         |
| 0x01 | CSN     |
| 0x02 | Secure  |
| 0x03 | Access  |
| 0x0A | Wiegand |
| 0x0B | Config  |

4. numOfTemplate

5. templateSize

BioStar 2

가

300

가

384

300

6. *issueCount*

7. *duressMask*

8. *cardAuthMode*

FaceStation F2  
FaceStation F2 **cardAuthModeEx**

|     |         |
|-----|---------|
|     |         |
| 2   |         |
| 3   |         |
| 4   | PIN     |
| 5   | PIN     |
| 6   | , , PIN |
| 254 |         |
| 255 | ( )     |

9. *useAlphanumericID*

Alphanumeric ID flag

10. *cardAuthModeEx*

FaceStation F2 **cardAuthMode**  
[+ V2.7.1] FaceStation F2

|     |   |     |     |
|-----|---|-----|-----|
|     | 1 | 2   | 3   |
| 21  |   |     |     |
| 22  |   |     |     |
| 23  |   |     |     |
| 24  |   | PIN |     |
| 25  |   |     |     |
| 26  |   | PIN |     |
| 27  |   | PIN |     |
| 28  |   | PIN |     |
| 29  |   |     |     |
| 30  |   |     | PIN |
| 31  |   |     |     |
| 32  |   |     | PIN |
| 33  |   |     | PIN |
| 34  |   |     | PIN |
| 35  |   |     | PIN |
| 254 |   |     |     |

|     |   |   |   |
|-----|---|---|---|
|     | 1 | 2 | 3 |
| 255 | ( |   |   |

11. *numOffFaceTemplate*

**template** 가 ( :384, :552)  
**BS2SmartCardCredentials** **templateData**

12. *reserved*

==== **BS2SmartCardCredentials** ==== <code cpp> typedef struct { uint8\_t  
**pin**[BS2\_PIN\_HASH\_SIZE]; uint8\_t **templateData**[BS2\_SMART\_CARD\_MAX\_TEMPLATE\_COUNT  
\* **BS2\_FINGER\_TEMPLATE\_SIZE**]; } **BS2SmartCardCredentials**; </code> 1. *pin*  
**pin code**

2. *templateData*

==== **BS2AccessOnCardData** ==== <code cpp> typedef struct { uint16\_t  
**accessGroupID**[BS2\_SMART\_CARD\_MAX\_ACCESS\_GROUP\_COUNT]; **BS2\_DATETIME**  
**startTime**; **BS2\_DATETIME** **endTime**; } **BS2AccessOnCardData**; </code> 1. *accessGroupID*

2. *startTime*

가 , 0

3. *endTime*

가 , 0

==== **BS2SmartCardData**==== <code cpp> typedef struct { **BS2SmartCardHeader**  
**header**; uint8\_t **cardID**[BS2\_CARD\_DATA\_SIZE]; **BS2SmartCardCredentials** **credentials**;  
**BS2AccessOnCardData** **accessOnData**; } **BS2SmartCardData**; </code> 1. *header*  
**SmartCard**

2. *cardID*

**Access on Card** 32 byte **Card ID**  
**Secure Credential card** 24 byte **Card ID**  
**Secure Credential Card(SCC)** , 32 byte **Card ID(24 bytes)**, **issueCount(4 byte)**  
**Time Stamp(4 byte)**  
, **BS2UserBlob** **cardObjs array**가 **SC Card** , **SC Card**  
**cardObjs**

3. *credentials*

**pin code**

4. *accessOnData*

**AOC** 가  
==== **BS2Card** ==== <code cpp> typedef struct { uint8\_t **isSmartCard**; union {  
**BS2CSNCard** **card**; **BS2SmartCardData** **smartCard**; }; } **BS2Card**; </code> 1. *isSmartCard*  
**SmartCard** **flag**

2. *card*

### 3. *smartCard*\*\* SmartCard

From:

<https://kb.supremainc.com/kbtest/> - **BioStar 2 Device SDK**

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