



- [YubiKey](#)
- [FIDO U2F](#)
- [NXP JCOP Javacard](#)
- [Canokey](#)
- [MIFARE Classic](#)

YubiKey

YubiKey [Yubico, Inc.](#) 支持OTP、TOTP、FIDO 2FA、Challenge-Response、PIV、OpenPGP Card

YubiKey Neo, YubiKey 5 NFC 支持 NFC YubiKey 支持 USB

功能	接口	AID
OTP/NTDEF	USB-HID/NFC	D2 76 00 00 85 01 01
U2F	USB-HID/NFC	A0 00 00 06 47 2F 00 01
OpenPGP	USB-CCID/NFC	D2 76 00 01 24 01 02 00 00 00 00 00 00 01 00 00
PIV	USB-CCID/NFC	A0 00 00 03 08 00 00 10 00 01 00
TOTP(OATH)	USB-CCID/NFC	A0 00 00 05 27 21 01 01

FIDO U2F

NXP JCOP Javacard

NXP JCOP [] NXP [] Javacard [] NXP [] Javacard []

[]

J3 A 080 G dd(d) / T 0B rr ff o

- J = NXP JCOP
 - J5=NFC(S2C)
 - J3=Dual IF,CD=PKI+DES
 - J2=CT,CD=PKI+DES
 - J1=CT,DES
- A = JCOP version
 - A=JCOP 2.4.1 R3(Java Card 2.2.2 GP 2.1.1)
 - C=JCOP 2.4.2 R1
 - D=JCOP 2.4.2 R2(Java Card 3.0.1 GP 2.2.1)
 - E=JCOP 2.4.2 R3(Java Card 3.0.1 GP 2.2.1)
 - G=JCOP 3.0
 - H=JCOP3 P60-2
 - O=JCOP 4.0
 - Q=JCOP 4.2
- 080 = EEPROM Size 80K
- G = JCOP type
 - G=Java Std-Generic
 - V=Java Std-VISA
 - C=Java Std-Customized
 - M=Java Std-MasterCard
 - C=Java Static-Generic
 - U=Java Static-VISA
 - T=Java Static-MasterCard
- dd(d) = Delivery type
 - UA=sawn wafer 150u FFC
 - X0=PDM module
 - A4=MOB4
 - A6=MOB6
 - HN1=HVQFN32 package
- T = FAB ID
- 0B = HW Version
- rr = ROM code ID

- ff = FAB key ID
- o = Option
 - 0=no Mifare
 - 1=1k Mifare
 - 4=4k Mifare
 - 7=7k DESFire
 - 8=8k DESFire

IDENTIFY 00A4040009A000000167413000FF00

Offset	Size	Name	Base mask value
0	1	FABKEY ID	xxh (customer dependent)
1	1	PATCH ID	xxh (see Patch ID in Administrator Manual)
2	1	TARGET ID	00h
3	1	MASK ID	33h (mask51)
4	4	CUSTOM MASK ID	00h 00h 00h 00h [1]
8	6	MASK NAME	NX011C
14	1	FUSE STATE	00h (not fused) or 01h (fused)
15	1	ROM INFO LENGTH	03h
16	3	ROM INFO [2]	J3A080 and J2A080: EDh 10h 3Ch J3A040 and J2A040: 23h B7h 16h

Canokey

Canokey ☐ USB ☐ 4 ☐ U2F/FIDO2 ☐ HID ☐ OpenPGP Card ☐ CCID ☐ PIV+OATH ☐ CCID ☐ WebUSB ☐

MIFARE Classic

MIFARE Classic 1K 4K 1k 4k

MIFARE Classic Sector Block Sector Block Block Sector Trailer
B Classic 4K 32 4 blocks sector 8 16 blocks sector

```
Sector 0:
Block 0
Block 1
Block 2
Block 3(Sector Trailer)
Sector 1:
Block 4
Block 5
Block 6
Block 7(Sector Trailer)
...
Sector 32:
Block 128
Block 129
...
Block 143(Sector Trailer)
...
Sector 39:
...
```

Block 16 256 block 4K Block 0

[MIFARE Classic](#) [NDEF](#)