



M.O.S.T. Toolz™

Microprocessor Card Development Kits



Each edition of M.O.S.T. Toolz includes one of the four readers/scanners shown above.

M.O.S.T. Toolz™ is a development platform for multifunction and high security M.O.S.T. Card® smart card systems. Available in contact, dual mode, and biometric editions, the kits feature user-friendly configuration and demonstration software for rapid system development, powerful middleware for advanced reader functions, and includes up to 17 microprocessor smart cards for system and card file setup. The M.O.S.T. Card Configuration Utility™ helps you build an on-card file system with direct calls to the M.O.S.T. Card. High level commands can be sent through the Winplex® API to the card reader. Fully documented C# (.NET), C++ (.NET), Java, and Visual Basic programming examples complete the kit. Programmers can create a smart card-based ID or transaction system that updates and secures files while setting a variety of defensive measures to protect user ID, card access, and file information. CardLogix gives you the power to deliver multiple products and services on a single card, allowing for fast system design and easy updating without the need for card re-issuance.

M.O.S.T. Toolz™ Development Kits Include

- M.O.S.T. Card Configuration Utility™
- Winplex® API and Middleware
- M.O.S.T. Card Demo Software (includes demo cards and programming examples)
- 12 M.O.S.T. Cards (+5 M.O.S.T. Cards with Biometric Series)
- Your choice of smart card reader and/or fingerprint scanner
- PC/SC Reader Configuration Utility
- M.O.S.T. Card Bad Select Counter Utility to reset “Bad Select” counter
- Support for Windows 7 and 8
- A variety of idbiox® CFS templates that support the idbiox ID Credential Ecosystem
- M.O.S.T. Toolz™ User Manual
- Winplex® User Manual

M.O.S.T. Card Configuration Utility™

- User-friendly interface for configuring M.O.S.T. card file structures (CFSs)
- Key configuration function to randomize all keys with one click
- On-card data editor to load and edit user data instantly
- Card file list and label manager with memory resource manager
- User configurable NFC UID lengths

Winplex® API and Middleware

- Over 160 standard functions including card latching, LED control, and reading magnetic stripes (reader-specific)
- M.O.S.T. Biometric Series kits provide additional biometric functions for capture, matching, and compression
- PC/SC card reader support
- Programming examples in C# (.NET framework)

M.O.S.T. Card Demo Software (includes demo cards and programming examples)

- Hello World Demo: How to write a large binary file to the card
- Data Protection Demo: How to protect data with a Global Password and more
- Winplex Demo: Overview of M.O.S.T. Card functions
- Transaction Demo: How to initialize value with ePurse, linear EFs and cyclic EFs
- eSignature Demo: How to sign a data package with FIPS 198-1 signature
- Fingerprint Demo: How to capture, validate, and store ICAO fingerprints (Biometric Series only)



M.O.S.T. Toolz Kit Options

| Part Number | Edition | Card Reader/Scanner |
|-------------|--|--|
| 9 700 001 | M.O.S.T. Toolz™ | Contact smart card reader |
| 9 700 009 | M.O.S.T. Toolz™ | Dual mode (contact and contactless) smart card reader |
| 9 700 010 | M.O.S.T. Toolz™ Biometric Series Fingerprint | Single-digit optical fingerprint scanner and contact smart card reader |
| 9 700 015 | M.O.S.T. Toolz™ Fingerprint Upgrade to Dual Mode Kit | Single-digit optical fingerprint scanner |

M.O.S.T. Toolz Reader/Scanner Options



Contact Smart Card Reader



Contact/Contactless Smart Card Reader



Fingerprint Scanner + Contact Smart Card Reader



Fingerprint Scanner

Card File Directory
Employee_3036_XXXXX_C8.cfs

| Filename | Type | 3F Bytes | FS Bytes | Total |
|----------|------|----------|----------|-------|
| 3F00 | MF | | 27 | 27 |
| 2F01 | ATR | | 36 | 36 |
| 3000 | DF | | 32 | 32 |
| 3040 | EF | 30 | 18 | 48 |
| 3041 | EF | 10 | 18 | 28 |
| 3042 | EF | 8 | 18 | 26 |
| 3043 | EF | 2 | 18 | 20 |
| 3090 | APP | 38 | 38 | 76 |
| 3F80 | CHV | 34 | 34 | 68 |
| 3F90 | APP | 38 | 38 | 76 |
| 4000 | DF | | 32 | 32 |
| 4043 | EF | 4000 | 18 | 4018 |
| 4044 | EF | 4000 | 18 | 4018 |
| 4048 | EF | 4000 | 18 | 4018 |
| 4049 | EF | 4000 | 18 | 4018 |
| 4080 | CHV | 34 | 34 | 68 |
| 4090 | APP | 38 | 38 | 76 |
| 4300 | DF | | 32 | 32 |
| 4340 | EF | 30 | 18 | 48 |
| 4341 | EF | 40 | 18 | 58 |
| 4342 | EF | 30 | 18 | 48 |
| 4343 | EF | 30 | 18 | 48 |
| 5000 | DF | | 32 | 32 |
| 5040 | EF | 20 | 18 | 38 |

File Properties
File Number: DB40 Encryption Status: None
File Name: CCC

Security Settings

| Protection | File |
|-----------------------------|------|
| Read: Always Accessible | - |
| Write: APP Protected | DB90 |
| Update: APP Protected | DB90 |
| Invalidate: APP Protected | DB90 |
| Rehabilitate: APP Protected | DB90 |

File Size: 144

File Description
Card Capability Container includes: ISID, CARDiss, IF#, UNICODE Version#, LDS type, LDS version number, LDS file name, Data encoding method, RID AIDs

Key Status

| Administrator | Transport |
|---------------|-----------------|
| HMAC | DES AES |
| Hash ID | Global Password |

File System Configuration - CLXSU624KC8/T=CLED
Memory Used: 42540 Available: 35460 Maximum: 78000

Edit EF File
EF File: DB40 CCC File Size: 144

File Security

| Protection Type | File |
|-----------------------------|------|
| Read: Always Accessible | - |
| Write: APP Protected | DB90 |
| Update: APP Protected | DB90 |
| Invalidate: APP Protected | DB90 |
| Rehabilitate: APP Protected | DB90 |

Encrypted Session Required BAC

File Description
Card Capability Container includes: ISID, CARDiss, IF#, UNICODE Version#, LDS type, LDS version number, LDS file name, Data encoding method, RID AIDs

Edit AES Keys

AES Key Hex Values

Key 1: C2 F4 78 C3 43 CF RE D8 H1 D4 H6 A5 F2 I1 S0 7E DA 7A AA C2 A4 EA P5 74 F2 AF FC EE H02 I4 H9F

Key 2: 75 F3 2F 23 C2 B2 S0 OC 43 A3 H6 D0 S8 SA 3F D0 SC 2A P5 P9 C1 H27 CC H0C 7A H4 S8 H0 H4 A1 C2 H0 C3 H0

Key 3: 0C 17A H9 H2 H29 C3 H01 H0 S4 H04 H9 H0C H0 H3A H4 H0D H0 H9 H19 H1C H40 H50 H4 H53 H16 H20 H03 H45 H57 H0C H4 H45

Key 4: 15 H2 H4 H4 H11 H0C H0 CF H3 H40 H9 H2C H1C H0 H09 H38 H2F H95 H28 H1A H01 H7 H0A H3 H08 H0 H0A H03 H09 H01 H0E H08 H04 H57

Key 5: 70 H17 H6 H0 H0 H08 H4 H0 H05 H0F H0 H75 H72 H8A H0E H0E H40 H4C H20 HCA H0 H0F H0A H0 H0E H08 H2A H0 C2 H74 H0 C3 H05 H0

Key 6: 70 H08 H0C H05 H4F H57 H25 H57 H5 H0 F2 H3 H0 H44 H0 H70 H15 H79 H99 H0 H90 H08 H06 H3F H09 H26 H08 H05 H07A H0 BA H7A

Note - AES Keys are not written to the smart card using this tool. Use these fields to store your keys for use during production personalization by CardLogix. When using AES128, the first 16 bytes of the key are used. When using AES192, the first 24 bytes of the key are used. When using AES256, all 32 bytes of the key are used.