

Rugged and Secure Portable Memory Systems

SECURE



RUGGED

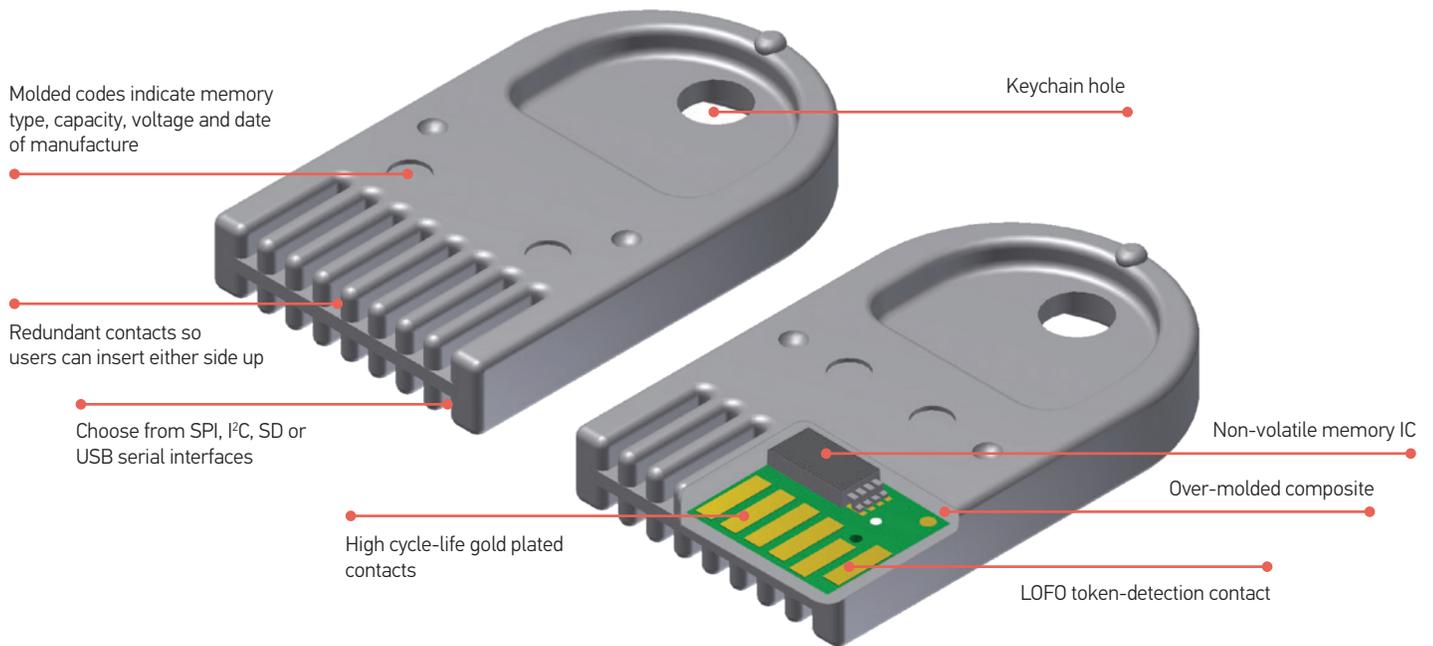




The power of memory. Secured.

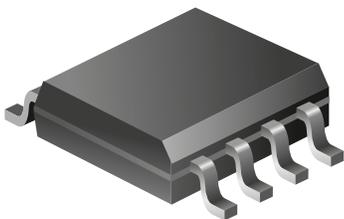
Rugged and Secure Portable Memory Systems for Demanding Embedded Applications

ATEK Access Technologies' Datakey line offers OEMs a host of rugged, secure, portable memory products. Since 1976, manufacturers of products with embedded electronics have chosen Datakey products to solve their data transfer and access control needs. Datakey products utilize industry-standard memory (EEPROM, NOR Flash, USB Flash, SD) and solid over-molded construction, resulting in a portable memory device that is rugged enough for the most demanding applications.



Industry-Standard Memory

Datakey products use industry-standard serial EEPROM, NOR Flash, USB Flash and SD memory.



Robust Form Factors

Using ultra-strong composites and solid over-molded construction, Datakey memory devices come in a variety of form factors.



High-Performance Receptacles

Datakey high cycle-life receptacles are available with optional IP65 or IP67 ratings with MIL-STD-810 environmental capabilities.



Portable Memory Products

Datakey portable memory products feature a variety of non-volatile memory technologies, serial interfaces, memory capacities, security features and form factors. The table below lists the three primary product families, explains the memory technology used, the serial interfaces associated with each, the standard memory capacities offered and the form factor choices available for each line.

Serial Memory

EEPROM

The Serial Memory line features industry-standard serial EEPROM memory with:

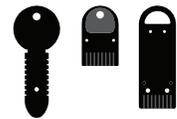
- SPI, I²C, Microwire Serial Interfaces
- Capacities: 1 Kb – 512 Kb



NOR Flash

The Serial Memory line features industry-standard serial Flash (NOR) memory with:

- SPI Serial Interface
- Capacities: 2 Mb – 64 Mb



Secure Memory

CryptoAuthentication™ EEPROM

Microchip ATSHA204 and ATECC608

CryptoAuthentication ICs are made rugged and portable. Security features include unique serial number, password-protected encrypted memory, symmetrical/asymmetric algorithms and more.

- I²C Serial Interface
- Capacity: 4.5 Kb or 10.5 kb



CryptoMemory® EEPROM

Security features include mutual authentication, encrypted communications, password-protected memory and tamper protection.

- I²C Serial Interface
- Capacity: 1 Kb – 256 Kb



RUGGEDrive™

Secure Digital (NAND Flash)

SD card functionality in the field-proven, solid over-molded RUGGEDrive form factor.

- 3D TLC NAND Flash
- -40°C to +85°C Operation
- Non-SD Form Factor
- Unique Serial Number (CID)

DFX-I

- Memory Capacities: 16GB, 32GB, 64GB
- TLC (3 bits per cell)
- 3,000 P/E Cycles Per Cell



DFX-IS

- Memory Capacities: 4GB
- pSLC (1 bit per cell)
- 30,000 P/E Cycles Per Cell



USB Flash Drive (NAND Flash)

USB flash drive functionality in the field-proven, solid over-molded RUGGEDrive form factor.

- 3D TLC NAND Flash
- -40°C to +85°C Operation
- USB 2.0 Hi-Speed Interface
- Unique Serial Number, USB VID, USB PID

UFX-I

- Memory Capacities: 16GB, 32GB, 64GB
- TLC (3 bits per cell)
- 3,000 P/E Cycles Per Cell



UFX-IS

- Memory Capacities: 4GB
- pSLC (1 bit per cell)
- 30,000 P/E Cycles Per Cell

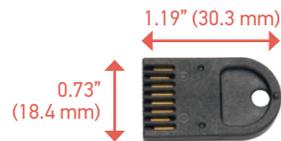


Robust Form Factors

All Datakey portable memory form factors are made using specially selected composites that are engineered to protect the internal memory against moisture, chemicals, dirt, mud, physical shock, electrostatic discharge (ESD) and pretty much anything else users might throw at them. The solid over-molded construction makes the products immune from penetration by water and virtually crush-proof.

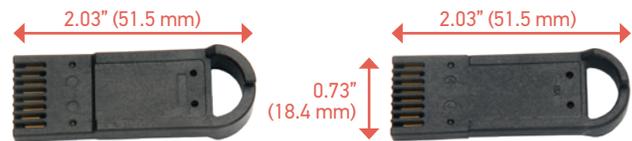
SlimLine™ Token

- Solid Over-Molded Construction
- Redundant Contacts (insert either side up)
- Contact Life: 10,000 Insertions Min.
- Available in 6 Standard Colors
- Keychain Hole



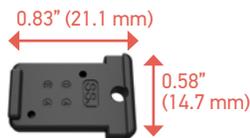
RUGGEDrive™ and Extended Tokens

- Solid Over-Molded Construction
- Redundant Contacts (insert either side up)
- Contact Life: 10,000 Insertions Min.
- Available in 6 Standard Colors
- Custom Logo Option



Mini-Bar Token

- Solid Over-Molded Construction
- MIL-STD-810 Environmental Specs
- Contact Life: 15,000 Insertions Min.
- Available in Black, Gray, and Red
- Keychain Hole



Bar Token

- Solid Over-Molded Construction
- MIL-STD-810 Environmental Specs
- Contact Life: 15,000 Insertions Min.
- Writable Label
- Keychain Hole



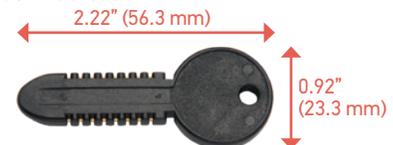
Plug Token

- Token Locks Into Receptacle For High Vibration Applications
- Foldable Handle for Flush Mount
- Contact Life: 10,000 Insertions Min.
- Corrosion-Resistant Contacts



Key

- Solid Over-Molded Construction
- Redundant Contacts (insert either side up)
- Contact Life: 15,000 Insertions Min.
- Available in 6 Standard Colors
- Keychain Hole



High-Performance Receptacles

SlimLine™ Receptacles

Used with:



Panel-Mount

Rear Connector Options:

- 10-Pin 0.10" 2x5 Header
- Molex CLIK-Mate Locking (xL)
- Flat Flex Cable FFC/FPC (xF)

SR4310, SR4310xL, SR4310xF

- Contact Life: 50,000 Insertions Min.
- Front-Mount, Secured from Inside
- IP65, IP67 & IP67/EMC Models
- Header, Locking (xL), or FFC (xF) Connectors



SR4410, SR4410xL, SR4410xF

- Contact Life: 50,000 Insertions Min.
- Inside-Mount, Two Non-Threaded Holes
- IP65, IP67 & IP67/EMC Models
- Header, Locking (xL), or FFC (xF) Connectors

Board-Mount

SR4210PCB & SR4210SM

- Contact Life: 50,000 Insertions Min.
- Board Edge, Through-Hole & SMT Models
- Dual Flange for Secure Mounting



SR4220PCB & SR4220SM

- Contact Life: 50,000 Insertions Min.
- Board Edge, Through-Hole & SMT Models
- Also in Vertical Model SR4220VRT
- Reduced Footprint



SR4230PCB & SR4230SM

- Contact Life: 50,000 Insertions Min.
- Board Edge, Through-Hole & SMT Models
- Smallest Footprint
- For Insert-and-Remove Applications

Mini-Bar Receptacles

Used with:



MBRHG / MBRHN

- Contact Life: 25,000 Insertions Min.
- Minimizes Volume Used Inside the Box
- IP67 Immersion Rated
- MIL-STD-810 Environmental Specs
- 8-Pin Header Connector



MBRFG / MBRFN

- Contact Life: 25,000 Insertions Min.
- Minimizes Volume Used Inside the Box
- IP67 Immersion Rated
- MIL-STD-810 Environmental Specs
- Flat Target Interface



Bar Receptacles

Used with:



BRLG / BRLN & BRSG / BRSN

- Contact Life: 25,000 Insertions Min.
- Minimizes Volume Used Inside the Box
- IP67 Immersion Rated
- MIL-STD-810 Environmental Specs
- Long (L) or Short (S) Pin Length



BRFG / BRFN

- Contact Life: 25,000 Insertions Min.
- Minimizes Volume Used Inside the Box
- IP67 Immersion Rated
- MIL-STD-810 Environmental Specs
- Flat Target Interface



Plug Receptacles

Used with:



KSD Receptacle

- Contact Life: 10,000 Insertions Min.
- Plug Token Locks in Place
- IP65 Rated
- Flush Panel Mounting



KSD Insert Receptacles

- Contact Life: 10,000 Insertions Min.
- Plug Token Locks in Place
- IP65 Rated
- For Use with a Threaded Shell or Pocket



Key Receptacles

Used with:



Panel-Mount

KC4210 & KC4210L

- Contact Life: 200,000 Insertions Min.
- Insert-and-Rotate, Key Locks in Place
- Receptacle has Redundant Contacts
- "L" Model Includes Status LEDs



Board-Mount

KC4210PCB

- Contact Life: 200,000 Insertions Min.
- Insert-and-Rotate, Key Locks in Place
- Receptacle has Redundant Contacts
- Board Edge, Through-Hole Model



Applications



Access Control with Audit Trail

When used as a credential, Datakey Secure Memory devices provide more robust security than a simple PIN or password. Unlike mag-stripe or prox-card solutions, Datakey devices use read/write memory, so audit trail data can be logged back to the credential. This is ideal in non-networked applications, as a user's audit trail information is available each time the credential is used.



Data Logging

The unique form factor and robust nature of Datakey portable memory products make them a perfect solution for embedded data logging applications, especially those in harsh environments. Log operational, performance and use data. Unlike SD cards and USB flash drives, the unique form factor of RUGGEDrive™ memory devices discourage theft and provide a base level of security, as they won't plug directly into standard computer ports.



User Rights/Preferences/Settings

When used in identification applications, Datakey Secure Memory products not only identify the user, they can also store the user's preferred settings for that machine, allowing every machine that a user works on to be configured automatically to his/her personalized settings. Datakey memory devices can also store rights information, only allowing users access to the functions they have been trained on.



Secure Data Transfer

For secure data transfer applications, the UFX RUGGEDrive™ memory token functions just like a USB flash drive, but has additional security features not found on consumer flash drives. The product's unique form factor means that it won't plug directly into a standard USB port, and its unique serial number can be used for user ID and/or for encrypting the on-board data.



Positively Linking Wireless Devices

When it's necessary to establish a positive link between two wireless devices, such as medical devices where the proper pairing of a transmitter and receiver is critical, Datakey Serial Memory tokens are the ideal solution. They make it easy to send ID information between the receiving and transmitting wireless devices. High cycle-life receptacles allow multiple pairings per day.



Feature Enable

Datakey Secure Memory devices make it easy for users to purchase a base model and later upgrade it by enabling additional functionality, all using the same hardware. Manufacturers can ship products with all features built in, but only enable those features that customers pay for. Additional features can be enabled after the product has been deployed by simply providing a secure feature-activation token.



Parameter/Settings Backup

Avoid dangerous and costly configuration mistakes from manually entering device settings. Datakey Serial Memory solutions excel at providing a reliable and consistent way to upload device parameters and calibration data. Prevent mistakes by having the proper information automatically uploaded when the memory device is inserted.



Program Upload

RUGGEDrive™ memory tokens provide a rugged and secure way of transporting program information from the office to the field, whether it's GPS route information for a tractor or mission data for a military computer.



Cashless Vending

Purchasing without cash is a common occurrence thanks to the popularity of credit cards. When a cashless purchase option is desired, but the user base doesn't use credit cards or the required phone/network connection is not possible (or practical), Datakey Secure Memory provides a robust and secure alternative.

For more applications visit www.datakey.com/applications

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