

swissbit®

Product Fact Sheet

Secure microSDHC / SDXC Memory Card Security Level 2

PS-66u Security Upgrade Kit UHS-I Interface, pSLC

Industrial Temperature Grade

Date: July 31, 2024
Revision: 1.0



Product Summary



Key Facts

- + pSLC memory technology
Industrial & high endurance
- + Easy to use access control
- + Self encrypting drive
SED using AES 256
- + Individual configuration of
protection profiles
- + Hardware-Based
Access Control

Use Cases

- + Copy & Cloning protection
Configurations, Privacy
Data and AI models
- + System Integrity protection
as Retrofit Secure boot
- + Data Protection for
Removable media
- + License Protection
as hardware dongle

- **Capacities:** 16 GBytes, 32 GBytes, 64 GBytes – High endurance pSLC Flash Memory
- **Form Factor:** Standard microSD Memory card form factor – 15.0mm x 11.0mm x 0.7mm (1.0mm)
- **Compliance:** Fully compliant with SD Memory Card specification 6.10
 - SDHC default/high speed mode and UHS supported
 - Speed class 10/U3/V30/A1 according SD6.10 specification
 - 16–32GB / FAT32 and 64GB / exFAT
- **Performance:**
 - SD Default speed, SD High speed, SD UHS-I
 - Read Performance: Sequential Read up to 90 MBytes/s, Random Read IOPS up to 1500
 - Write Performance: Sequential Write up to 75 MBytes/s, Random Write IOPS up to 1600
- **Operating Temperature Range¹:**
 - Industrial: -40 °C to 85 °C
- **Storage Temperature Range:**
 - Industrial: -40 °C to 100 °C
- **Operating Voltage:** 2.7...3.6V normal operating voltage (Low-power CMOS technology)
- **Data Retention:** 10 Years @ Life Begin / 1 Year @ Life End
- **Humidity:** 85% RH @85°C 1000h
- **Electromagnetic Compatibility Test:** Radiated Emission; Radiated Immunity; Electrostatic Discharge

Product Features

- Secure microSDHC / microSDXC – Technical support via community web portal and tutorial
- Easy to use configurable access control mechanism and data protection on partition level
- Optimized FW algorithms especially for high read access and long data retention applications
 - Patented power-off reliability technology, Wear Leveling technology
 - Write Endurance technology, Read Disturb Management
 - Data Care Management, Enhanced error correction (SRAM)
 - Number of card insertions/removals 20,000
- AES 256 bit self encrypting flash memory
- CmReady – Prepared for out-of-the-box use with Wibu-Systems CodeMeter (software protection & license management)
- Tools and Libraries: Lifetime Monitoring, Firmware Upgrade, Security Configuration, Access Control
- Also available as fully industrial fixed BOM “PS-66u DP” including application engineering support

¹ High Temperature storage without operation reduces the data retention, in operation the data will be refreshed, if data error issues were detected

Access Control Mechanism

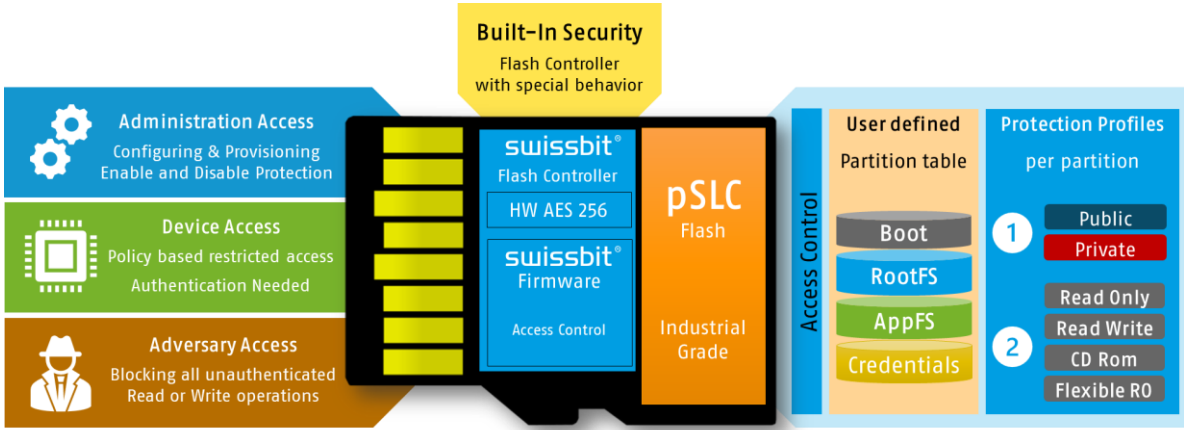


Figure 1: Swissbit S9 flash controller and the augmented Swissbit Firmware enable special security features, like the partition based and user configurable Access Control

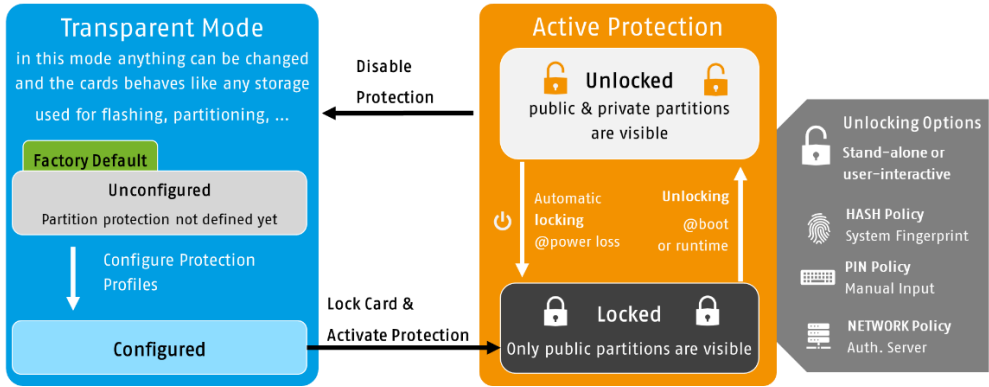


Figure 2: The Security Level 2 cards are shipped in "Transparent Mode" and can be used like any microSD card. The protection can be enabled and disabled with Swissbit tools.

Ordering Information

Security Level 2			
Product Type	Product Series	Capacity	Part Number
microSD	PS-66u Security Upgrade Kit	16 GBytes	SFSD016GN1PT1TB-I-5E-02P-SW8
microSD	PS-66u Security Upgrade Kit	32 GBytes	SFSD032GN1PT1TB-I-6F-02P-SW8
microSD	PS-66u Security Upgrade Kit	64 GBytes	SFSD064GN1PT1TB-I-7G-02P-SW8

Downloads and Documentation

Visit our community portal for Support and Tutorials: www.swissbit.com/security-upgrade-kit

Why Swissbit?

Swissbit strives to create innovative technologies for future market opportunities utilizing a highly skilled in-house research and development team. Swissbit maintains a marketing edge by continuing to manufacture world-class high-quality memory and security products and providing customers with both high value and low cost of ownership achieved through efficient processes and procedures.