

About Hyperstone

Hyperstone is a fabless semiconductor and microprocessor design company. It was founded in 1990 and is based in Konstanz, Germany. Hyperstone's portfolio includes microcontrollers for Serial-ATA and Parallel-ATA Solid State Disks (SSD), Disk-on-Module (DoM), Disk-on-Board (DoB) as well as embedded Flash solutions such as eMMC. Flash cards such as CompactFlash, SD & microSD and USB controllers complete the portfolio.

Flash controller firmware is supplied complementary to the controllers and is customized for each flash type and application. Together with subsidiaries in Taiwan, USA and with other worldwide partners, Hyperstone serves a global customer base. The company's research and development departments are based in Germany and Taiwan. Industry-leading partners provide world-class wafer subcontracting, packaging, and testing services.

General Features

- Industrial flash memory controllers for
 - USB
 - SD/eMMC
 - CompactFlash/ATA
 - SATA
- hyReliability™ Flash Management ensuring highest reliability and endurance, including
 - Superior wear leveling
 - Read disturb management
 - Power fail management
- Individual Firmware customization
- High performance 32-bit RISC/DSP Architecture
- ISO7816 Interface for SmartCard or GPIO applications
- Turnkey Solution: Hardware & complementary Firmware delivery
- Continuous support for all new flash generations
- Long term service and support



Controller	Interface	Flash Type	Channel	Temp. Range	Max. Speed	ECC	Packages	In-field FW Update	S.M.A.R.T.	Sanitize
F9	CF/PATA	SLC MLC 3D pSLC	2	0 °C...70 °C -40 °C...85 °C	R: 120MB/sec W: 120MB/sec	Up to 96-Bit/1K	TQFP-128 TFBGA-144 TFBGA-124 Die/Wafer	✓	✓	✓
A2	SATA	SLC	4	-40 °C...85 °C	R: 130MB/sec W: 110MB/sec	24-Bit	TFBGA-201 Die/Wafer	✓	✓	✓
S8	SD/eMMC	SLC MLC 3D pSLC	1	-40 °C...85 °C	R: 90MB/sec W: 80MB/sec	Up to 96-Bit/1K	LGA-52 BGA-100 Die/Wafer	✓	✓	✓
U9	USB 3.1	SLC MLC 3D pSLC	2	-40 °C...85 °C	R: 200MB/sec W: 150MB/sec	Up to 96-Bit/1K	TFBGA-124 Die/Wafer	✓	✓	✓

Featured Products

U9 USB Flash Controller

- High performance 32-bit RISC/DSP architecture
- Fully compliant with USB 3.1 Gen 1 specifications
- Secure Erase and Sanitize support
- hyReliability™ flash management
- hyMap® Flash Translation Layer and mapping
- Flexible ECC engine supporting all Flash types
- High performance on-the-fly AES 128 & 256 engine
- 16GPIO supporting SPI, I²C, ISO7816
- API and SDK for developing own FW Extensions
- Built-in temperature sensing capability

F9 CompactFlash Controller

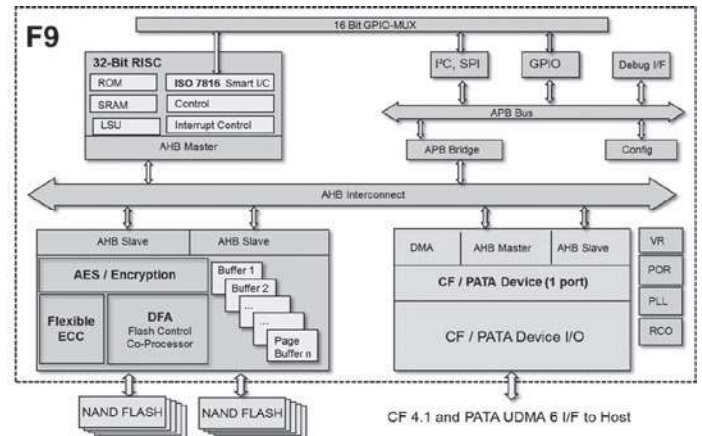
- High performance 32-bit RISC/DSP architecture
- Fully compliant with CompactFlash™ 4.1, 5.0 and compatible to 6.1 specifications
- Secure Erase and Sanitize support
- hyReliability™ flash management
- hyMap® Flash Translation Layer and mapping
- Flexible ECC engine supporting all Flash types
- High performance on-the-fly AES 128 & 256 engine
- 16GPIO supporting SPI, I²C, ISO7816
- API and SDK for developing own FW Extensions

Perfect Partners

A controller alone is only half of the solution. To provide our customers with a complete package, DACOM West works closely with memory suppliers.

Together with Hyperstone's remarkably reliable and performant controller solutions, DACOM West is able to provide a well matched, complete storage package for any requirement.

Please contact us for more information.



S8 SD/eMMC Flash Controller

- High performance 32-bit RISC/DSP architecture
- hyReliability™ flash management
- hyMap® Flash Translation Layer and mapping
- Flexible ECC engine supporting all flash types
- High performance on-the-fly AES engine
- 16GPIO supporting SDIO 3.0, SPI, I²C, ISO7816
- API and SDK for developing own FW Extensions
- Long term service and support

