An Introduction to CF2SCSI – SCSI & Floppy Emulators

SOLID STATE DISKS LTD

CF2SCSI / SCSIFLASH

Solid State Disks Ltd, design and manufacture the Solid State SCSI CF2SCSI SCSIFlash drive in the UK

SCSI SSD Manufacturer

Solid State Disks Ltd, design and manufacture the Solid State SCSI CF2SCSI SCSIFlash drive in the UK. The industrial grade SCSI SSD solves the growing and increasingly expensive problem of repairing or replacing ageing and failing SCSI-based hard disk (HDD), magneto optical (MO), tape and floppy (FDD) drives on legacy equipment.

Our customers include direct OEM vendor relationships, third party maintenance organisations and end customers globally.

Our global sales are supported through partners in USA, Europe and Asia.

Our latest SCSIFlash Network drive allows network back-up and restore capability enabling vital data back-ups to be made as a complete disk image of its CompactFlash card at any given point in time. Files can be transferred via the Ethernet network and stored remotely from the legacy equipment and restored as and if needed. Universal TCP is used for disk image transfers with remote execution of back-up and restore configuration operations controlled by user API or via a web browser and auto-online implemented on back-up completion.
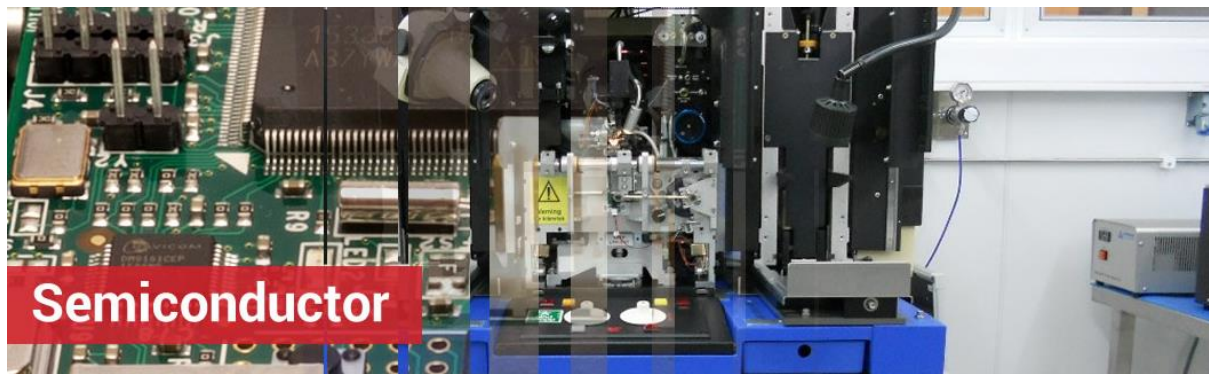
Our range of SCSI SSD drives or emulators provide a low-cost, solid state drive replacement that enables CompactFlash cards to be seen as SCSI drives by the host system allowing the system maintainers to manage critical obsolescence and *Through Life Support* (TLS) services.

The SCSI SSD CF2SCSI drive combines proven SCSI drive architectures (SASI, SCSI-1, SCSI-2) with industry-standard, solid state CompactFlash card technology to provide a highly reliable, solid state drop-in replacement for any style of SCSI-based drive including hard disk, magneto optical, tape and floppy drives.

Most importantly, the SCSI emulator is completely programmable, enabling the SCSI driver implementation nuances of all equipment manufacturers to be fully emulated. The CF2SCSI solution applies to a broad range of legacy equipment. The SCSI SSD CF2SCSI drives are also available to emulate SCSI hard disk drives (3.5 inch, 5.25 inch), magneto optical drives (Fujitsu, Sony, Ricoh, Jazz, ZIP, Bernoulli), tape drives (Pertec half-inch, QIC quarter-inch DAT, DLT 3490) and floppy drives (TEAC). Full programmability also enables other custom SCSI Bridge emulations to be easily developed.

The industrial grade SCSI SSD CF2SCSI solid state disk emulator is currently supports CompactFlash drives up to 128GB and utilizes a 3.5 inch form factor (or larger 5.25 inch form factor). It is available in two package types either with no externally removable card as a hard disk replacement or with an externally removable CompactFlash card slot as magneto optical, Jazz, ZIP, tape or floppy drive replacement.

SCSI emulation disk Sector size options available are 256 bytes, 512 bytes, 768 bytes, 1024 bytes, 2048 bytes & 4096 bytes per sector.

Semiconductor

FLOPPYFlash™ FDD UPGRADE - CF & TCP/IP NETWORK VARIANT

The FLOPPYFlash(tm) drive can emulate any existing floppy drive, with SCSI, 34pin, 26pin, slim, custom interface.

The FLOPPYFlash(tm) Drive has a long term history of advanced CF and network capabilities, combined with extreme reliability.

* True TCP/IP networking combined with CF through FLASH2GUI software. No additional software changes are required by the host. Primary Data storage is always written to the CF card.

Example emulations can be seen on the following products;
o   34pin, 26pin, slim FLOPPYFlash
o   SCSI FLOPPY SCSIFlash

SCSIFlash® HDD/MO/ZIP/JAZZ/ TAPE UPGRADE (50, 68 PIN SASI, SCSI-1, SCSI-2) - CF & TCP/IP NETWORK

The SCSIFlash® Drive can emulate many SASI, SCSI-1, or SCSI-2 drives and ca be programmed to suit the specific host system requirements. The SCSIFLASH has a long term history of advanced SCSI emulation, to match the most demanding requirements of emulation on legacy systems. Combined industrial grade CF internal memory for extreme reliability and upcoming full network capability will ensure a modern solid state upgrade for all SCSI drives.

* 100,000 RW cycles - Industrial grade CF
* 17 years of nonstop safe usage at 0% error rate
* True TCP/IP networking combined with CF through FLASH2GUI software. No additional software changes are required by the host. Primary Data storage is always written to the CF card.
* The one and only original OEM CF2SCSI /SCSIFlash drive since 2008.
Example emulations can be seen on the following products;
o   SCSIFLASH DISK DRIVE
o   SCSIFLASH MAGNETO OPTIC FLOPPY DRIVE
o   SCSIFLASH SYQUEST DRIVE
o   SCSIFLASH ZIP/JAZZ DRIVE

RELIABILITY

- o Emulators are fully accessible while production is running
- o No more tool "freeze" caused by floppy, that may cause loss of wafer and long down time

COMBINED UPGRADE

Floppy / Removable drive & hard disk combined upgrade to get rid of any maintenance issue and improve log & recipes transfer

SERVICE

- o Worldwide network of authorized installer
- o You can even get directly training to learn installation, backup and system recovery

RETROFIT & UPGRADE ON APPLIED MATERIALS (P5000, P5200, P5500, RTP)

SCSI TO CF AND SCSI TO NETWORK FLOPPY DISK UPGRADE

o Tested and approved for full reset, cpu-only cold reset, full system reload, log & recipes transfer
o Multiple configurations for user mode (recipes only) and admin mode (system files)
o Fast & simplified memory erase for security.
o Easy access on CF subdirectories or on network subdirectories using FLASH2GUI proprietary software

SCSIFLASH HARD DISK UPGRADE

o Tested and approved for normal workload, full system reload
o Preformatted images for P5000, P5200, P5500, RTP available
o No more need to waste time in formatting hard disk, simplified system recovery

DUAL MODE EMULATION

o Two disk being emulated at the same time
o Write protect to ensure recipe protection

AMAT SCSIFLASH DISK DRIVE
AMAT SCSIFLASH FLOPPY DRIVE
AMAT SCSIFLASH SYQUEST DRIVE
AMAT SCSIFLASH ZIP/JAZZ DRIVE

RETROFIT & UPGRADE ON LAM RESEARCH (CLASSIC, ENVISION)

CF AND NETWORK FLOPPY DISK UPGRADE

o Tested and approved for configurations & recipes transfer
o Multiple configurations for dual mode (config+recipes) on Classic tools
o Support for NextStep disks on Envision tools
o Fast & simplified memory erase for security
o Easy access on CF subdirectories or on network subdirectories

SIMPLIFIED BACKUP

o Main usage of floppy is for backup
o Auto-format and auto-increment help to speed up process
o Easy to create large backups, on many disks

NEXTSTEP EMULATION

o Full support of non-standard NextStep disks
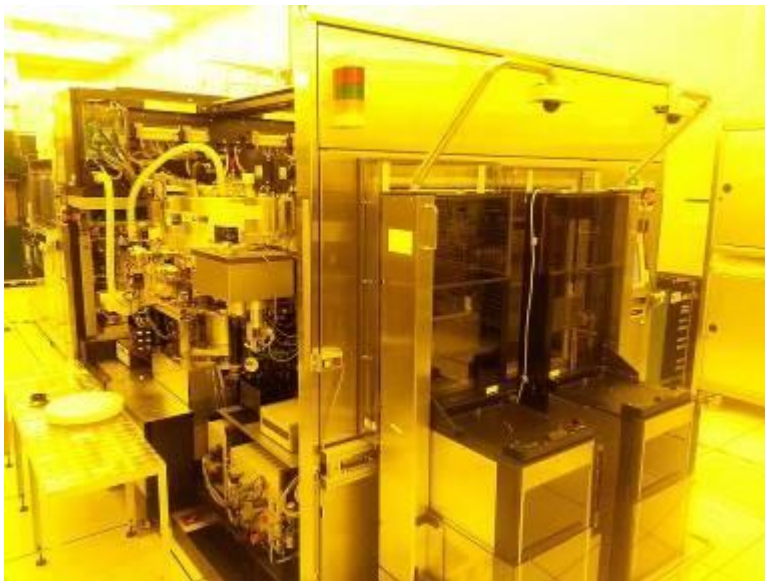o Preformatted image for empty floppy disk

RETROFIT & UPGRADE ON TOKYO ELECTRON (UNITY)

CF AND NETWORK FLOPPY DISK UPGRADE

o   Tested and approved for backup & recipes transfer
o   Multiple configurations for user mode (backup+recipes) and admin mode (system files)

SIMPLIFIED BACKUP

o   Main usage of floppy is for backup Auto-format and auto-increment help to speed up process
o   Easy to create large backups, on many disks
o   Fast & simplified CF backup on multiple disks
o   Fast & simplified memory erase for security
o   Easy access on USB subdirectories or on network subdirectories

RETROFIT & UPGRADE ON ASM (EPI)

USB/NETWORK FLOPPY AND SCSIFLASH HDD UPGRADE

- o Tested and approved for backup & recipes transfer
- o Multiple configurations for OS9 disks (recipes) and shell mode disks (log files)
- o Fast & simplified backup with OS9-to-Win conversion software
- o Fast & simplified memory erase for security
- o Easy access on CF subdirectories or on network subdirectories

ASM OFFICIAL REPLACEMENT

- o Upgrade has been developed at specific ASM request
- o Upgrade comes with official ASM usage & installation manual.
- o Please contact OEM ASM directly for further product details.

RETROFIT & UPGRADE ON PROBERS (TSK, KS,DISCO)

CF/NETWORK FLOPPY AND SCSIFLASH HDD and SCSI Removable drive (ZIP/ JAZZ/ Magneto Optic upgrades

o   All range of tools, related to semiconductor post-processing
o   Probers, analysers, dicers, wire bonders...
o   Advanced support for Japanese & non-standard tools

SERVICE

o   Worldwide network of authorized installer
o   You can even get directly training to learn installation, backup and system recovery

RETROFIT & UPGRADE ON OTHER TOOLS (TSK, DISCO, KS, HP HP9000/712 & HP3000)

CF/NETWORK FLOPPY AND SCSIFLASH HDD and SCSI Removable drive (ZIP/ JAZZ/ Magneto Optic upgrades

o All range of tools, related to semiconductor post-processing
o Probers, analysers, dicers, wire bonders...
o Advanced support for Japanese & non-standard tools

SERVICE

o Worldwide network of authorized installer
o You can even get directly training to learn installation, backup and system recovery

FLOPPYFlash™ Emulator to replace legacy floppy disk drives

An industrial/OEM grade programmable hardware emulator that uses standard industrial **CompactFlash** card technology to provide a solid state, drop-in replacement for obsolete electromechanical floppy disk drives.

More...

FLOPPYFlash Emulator to replace legacy floppy disk drives, using removable Compact Flash. No additional software or register changes are required to the legacy host. Network backup and restore capability supported through on board RJ45 ethernet port.

The FLOPPYFlash is designed as a drop in replacement to the industrial/ OEM & maintenance provider space. The FLOPPYFlash is not suitable for home/hobbyist usage.

FLASH2GUI - Optional ethernet support for centralised backup & restore capability available removing the need to rotate media. Primary data storage is always written to the CF card. No software change to the host required.

Solid State SCSIFlash Tape Replacement

The CF (Compact Flash) based SCSIFLASH-Tape drive provides a solid state, drop-in replacement for DAT, DLT and DDS SCSI tape drives. - Ethernet / Network variant available.

More...

Solid State SCSI Tape Drive Replacement

The SCSI Solid State SCSIFlash Tape Drive is designed and manufactured by the Reactive Group's SSD Division. The SCSIFLASH Network feature offers LAN network (ethernet-based) back-up and restore capability. No additional software or register changes are required to the legacy host.

FLASH2GUI Software - Optional ethernet support feature for centralised backup and restore capability removing the need to rotate media. Primary data storage is always written to the CF card.

CF2SCSI / SCSIFLASH-MO, SCSI Fujitsu Magneto Optic Emulator to CF

The SCSI MO Bridge can emulate many other Fujitsu Magneto Optic drives and can be programmed to suit the host systems requirements.

More...

The Fujitsu SCSI Emulator allows the CF Cards up to 64GB (SLC) and 256GB (MLC) to attach to the SCSI bus. It will be It will be seen as a Magneto Optic Drive by the host computer. The SCSI MO Bridge can emulate many other Fujitsu Magneto Optic drives and can be programmed to suit the host systems requirements.

FLASH2GUI - Optional ethernet support for centralised backup & restore capability available removing the need to rotate media. Primary data storage is always written to the CF card. No software change to the host required.

CF2SCSI / SCSIFLASH-RoseMount QIC ¼" Tape Drive Emulator to PCMCIA/ CF

SCSI Host will typically see the device as a RoseMount QIC ¼" Tape Drive of any emulation

More...

The SCSI Rosemount QIC emulator allows the CF Cards up to 64GB (SLC) and 256GB (MLC) to attach to the SCSI bus. It is seen as a Rosemount QIC interface Archive Tape drive by the host computer.

FLASH2GUI - Optional ethernet support for centralised backup & restore capability available removing the need to rotate media. Primary data storage is always written to the CF card. No software change to the host required.

CF2SCSI / SCSIFLASH Fixed Disk Emulations

The SCSIFLASH Network feature offers LAN network (ethernet-based) back-up and restore capability. No additional software or register changes are required to the legacy host.

More...

Fixed Disk Emulations

The SCSI Solid State SCSIFlash Drive is designed and manufactured by the Reactive Group's SSD Division. The SCSIFLASH Network feature offers LAN network (ethernet-based) back-up and restore capability. No additional software or register changes are required to the legacy host.

FLASH2GUI Software - Optional ethernet support feature for centralised backup and restore capability removing the need to rotate media. Primary data storage is always written to the CF card

FLASH2GUI
Network Software

FLASH2GUI is a graphical user interface that fully integrates with Solid State Disks' SCSIFlash™ and FLOPPYFlash™ emulation drives
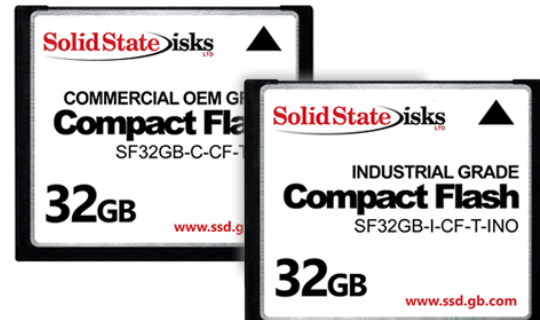
More...

FLASH2GUI is a graphical user interface that fully integrates with Solid State Disks' SCSIFlash™ and FLOPPYFlash™ emulation drives that use standard, industrial CompactFlash card technology to provide a solid state, drop-in replacement for obsolete electro-mechanical hard, floppy and tape drives.

SCSIFlash™ and FLOPPYFlash™ provide OEMs and service providers with a quick, easy and cost-efficient solution for supporting their legacy systems and equipment.

SCSIFLASH-CF : Industrial and Commercial OEM Grade Compact Flash Cards

The only Compact Flash cards approved for use in the SCSIFlash™ drive to provide optimal performance, endurance & reliability.

More...

SCSIFlash CF Cards for Industrial and Commercial use. The only Compact Flash cards approved for use in the SCSIFlash™ drive to provide optimal performance, endurance & reliability. Up to 256GB (MLC) for removable drive and non mission critical applications and up to 64GB (SLC) for fixed disk heavy read/write mission critical applications.

CF2SCSI / SCSIFLASH iSMART

The **CF2SCSI / SCSIFLASH iSMART** 5.0.0 is designed to simplify the SMART information and provide and easy to read interface of the cards.

The **iSMART** tool monitors the health and lifespan of the CF as well as providing details on usage patterns and setting up alert settings before total failure.

With **iSMART** our customers are able to are fully monitor the behavior and lifespan during development, integration, and mass production.
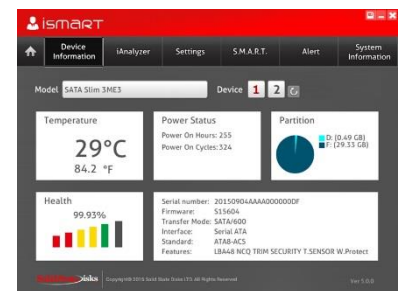
Dashboard

The Dashboard's home tab aims to provide a summary or quick snapshot of each installed disks in the system. This page offers accurate data information regarding Temperature, Health, Capacity, Lifespan, iAnalyzer, and Notifications.
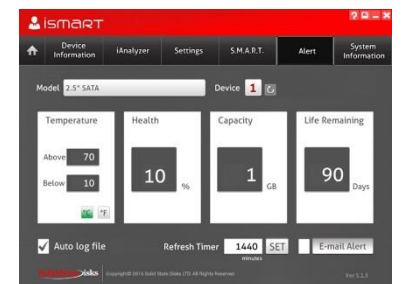
Device Information

The Device Information page provides additional functions, such as Power Status, Partitions, and detailed information of the device such as Serial Number, Firmware Vision, Interface, and Features. To learn more about SMART information, go to SMART values and refer to the SMART tab.
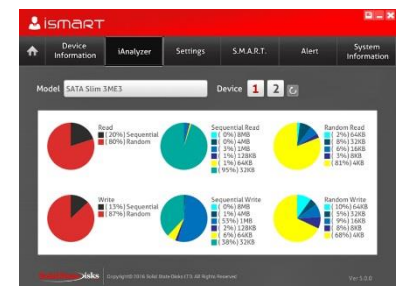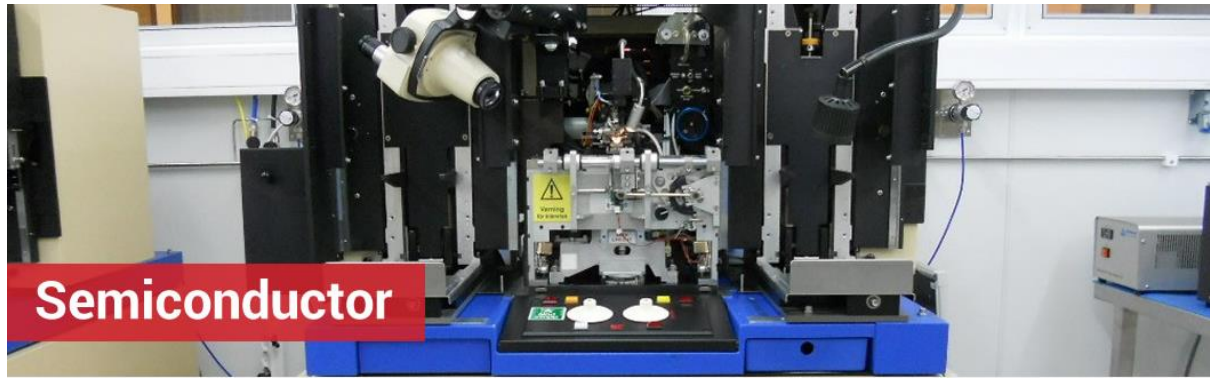

SMART Attribute

The Alert tab helps the user set trigger points with Temperature, Health percentage, Remaining Capacity or Life Remaining. If these trigger points exceed their boundaries, the iSMART utility can send a warning and email to the user notifying them that something may fail.

iAnalyzer

When activated, the iAnalyzer tab displays the read/write behaviors of the SSD in real time. This allows the user to understand their application usage of the SSD. Sequential and Random I/Os are easily broken down into percentages making them easy to read.

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