DARC-ssd 600

Data At Rest Cryptography

M.2 NVMe™ AES-256 hardware encrypted solid state drive

Data breach threats loom daily, putting classified and sensitive data at risk. The Viasat DARC-ssd 600 is a highly secure Data At Rest (DAR) storage solution for protecting SENSITIVE and CLASSIFIED information in compatible Commercial Off The Shelf (COTS) laptops, tablet computers and small form factor PCs in the enterprise and tactical environments, as well as data stored in vehicles, aircraft and ships.

During high-risk operations, this secure storage solution protects your valuable data on manned and unmanned mobile platforms with hardware-based encryption.

In the event of computer theft, loss, or attack, the solid-state drive (SSD) helps ensure that data is protected and secure. The military-grade AES-256 hardware encryption and tamper evident design offers high-level security with mandatory two-factor authentication.

Viasat's DARC technology integrates sophisticated authentication, entire drive hardware encryption, and data storage within a tamper-evident internal NVMe™ M.2 SSD that safeguards your data. This provides instant data protection that is seamless to the user experience and operating system.

User and management features and benefits:

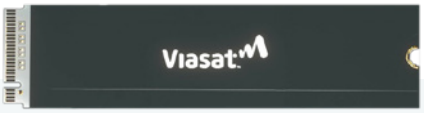
- Once the computer is powered off, all data is secure even if your drive or computer is stolen
- User requires no specialised IT knowledge
- Easy installation - setup and authentication pre-OS
- User accounts are configurable with up to 128 different accounts

Secure entry and authentication

- DARC-ssd 600 with mandatory two-factor authentication at boot-up
- Clearview password + token/iButton

Protection from brute force password attack:

The user will be suspended after the maximum failed authentication attempts, and the key will be purged after all users are suspended. Drive usage will recommence through a key replacement. Once the device is locked, it must be taken to a Crypto Officer to be unlocked.



Viasat DARC-ssd At-a-Glance

NCSC CAPS EVALUATED TO PROTECT SECRET AND TOP SECRET INFORMATION

- Reduces handling requirements during storage and or transportation of Classified data when the protected computer is turned off and the user token device is carried separately[1]

FULL DRIVE ENCRYPTION

- Including all data and OS
- Secured upon system power down and hibernation

AES-256 HARDWARE ENCRYPTION

- Authentication is performed by hardware and not in the system software layer
- Every drive sector is encrypted
- Emergency key purge available

SOLID STATE DRIVE (SSD)

- No moving parts
- Provides performance and durability
- No noise – no spin or seek time, silent operation

TAMPER EVIDENT DESIGN

- All devices are covered in conformal coating

ANTI-CLONE

- DARC-ssd 600 cannot be cloned once encryption is set
- Token is protected against cloning

[1] Dependent upon your project-specific handling instructions decided by the Senior Information Risk Owner (SIRO). Please refer to your National Authority for guidance.

DARC-ssd 600

SPECIFICATIONS

Capacity[2] (Total number of 512- byte blocks)	256 GB (500,118,192) 512 GB (1,000,215,216) 1 TB (2,000,409,264)
Physical Interface	PCIe Gen 2.0 x 2
Logical Interface	NVMe™ 1.3
Encryption	Suite B Algorithms: AES-256 (FIPS 197) in CBC mode - Hardware Encryption
Compatibility	Easy installation in most COTS computers; direct replacement for a computer's previous NVMe™ M.2 2280 SSD[3]
	Compatible with UEFI BIOS
	Operating System and service pack independent once installed[2]
	Application software independent
Security	Encryption key positively erased
	Encryption key never leaves DARC-ssd 600
	Every drive sector is encrypted
	Token is protected against cloning

PHYSICAL CHARACTERISTICS

Form Factor	M.2 (Type 2280-S4-M, 22 mm W x 80 mm L x 2.55 mm H)
Power Consumption (max)	Idle < 2.5 W Active < 3.6 W
Voltage	+3.3 V
Weight	7 g

ENVIRONMENTAL

Operating Temperature[4]	-40° to +Tj(max)
Non-Operating Temperature[5]	-40° to +80°C
MTBF (hours)	>1.5 million
TBW – SSD Endurance	
› 256 GB	120 TB
› 512 GB	240 TB
› 1 TB	480 TB
Compliance	CE UKCA

[2] The DARC-ssd has a native level of over-provisioning, which does not affect the stated device capacity. For most users, this will provide good performance and access to all of the available memory. Users with high workloads, particularly including random small block write transfers, may benefit from configuring the DARC-ssd with 10% or more over provisioning. Furthermore, 524,288 512byte blocks have been reserved for storage of PAE.

[3] Installation compatible with tested Windows/Linux operating systems and compatible COTS laptops. DARC-ssd is an ESD (Electrostatic Sensitive Device) and should be handled within an EPA (Electrostatic Discharge Protected Area) to prevent damage from static charge. Failure to handle the device in an EPA will void the warranty.

[4] The thermal performance of the DARC-ssd is dependent on the thermal environment provided by the host platform. For correct operation of the DARC-ssd, the platform integrator must maintain the ambient temperature above -40°C and the DARC-ssd critical components below their maximum thermal junction temperature. This can be achieved by monitoring the following SMART information from the DARC-ssd:

- Composite Temperature < 105°C
- Temperature Sensor1 < 100°C
- Temperature Sensor2 < 105°C

Please contact customer support for further advice where required.

[5] Non-operating temperature is based on DARC-ssd stored in clamshell packaging.

Viasat KeyStone
(Required for two-factor authentication)

PART CODE	DESCRIPTION
DCT-IL6-025655NB	256 GB DARC-ssd 600 NVMe™ M.2 2280
DCT-IL6-051255NB	512 GB DARC-ssd 600 NVMe™ M.2 2280
DCT-IL6-001T55NB	1 TB DARC-ssd 600 NVMe™ M.2 2280

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