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Report for: WIPERAPP v4.3.0
Application Reference Number: ADPA005

Author: Godfred Badu
ADISA Research Centre

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Foreword

ADISA Certification is an independent certification body specialising in product and service certification. Product certification is undertaken by the ADISA Research Centre (ARC) which is the test laboratory operated by ADISA Certification.

This report is for the assessment of how a sanitisation software meets the requirements laid out in NIST Special Publication 800-88 Revision..

The testing process is undertaken on only one media type and one interface and should not be used as evidence of compliance to the entire NIST 800-88 requirements.

This report contains information regarding the application which is permitted to be released into the public domain but does not indicate a certification award being made by ADISA Certification.

Disclaimer

The report is presented as the outcome of a test conducted in the laboratory environment under controlled conditions. Use of this certified product for the purpose of sanitizing data from devices tested needs to be done so after a risk assessment process. ADISA reserves the right to review the validity of this award upon changes in threat landscape.

Liability

ADISA makes no warranty of any kind with regards to this evaluated product and shall not accept any liability for incidental or consequential damages resulting from the use of the product.

Report Revision History

Issue	Date	Detail of changes
1.0	30th November 2022	Final for release

ADISA Research Centre trading name of ADISA Certification Limited.
Registration Number: 07390092
Registered Office: Ground Floor, 5 Kinsbourne Court, Harpenden, AL5 3BL, United Kingdom

Web: www.adisa.global
Web: www.adisarc.com
Phone: 0044 (1) 1582 361743

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Executive Summary

This report details the findings in relation to the Target of Evaluation (TOE) listed below to verify compliance with NIST 800-88 as part of application *ADPA005 – (WIPERAPP sp. z o.o)*. The test examines the specific commands that are issued to the data storage media to conduct sanitisation operations as well as examining the documentation produced by the product. The evaluation was completed at the ARC on 22nd *November 2022*. This Report only applies to the version of the product that is under evaluation.

The details for the product under evaluation.

Sanitisation Software Name	Version Number
WIPERAPP	v4.3.0

Table 1 – Target of evaluation

As part of the evaluation, the vendor submitted the following documents to be used as guidance and these are listed in the table below.

Document Name	Version Number
First launch of the application	v1.1

Table 2 – List of Guidance Documents

As part of the evaluation, the following sanitisation algorithms were tested:

Standards compliance category	Sanitisation Algorithm selected
NIST 800-88 Purge	WIPEAPP – Auto (NIST Standard 800-88 rev.1)

Table 3 – Algorithms to be tested

Results

After testing it is confirmed that the TOE does perform the sanitisation method shown in the following table.

Sanitisation Algorithm	Media Category (standard/guideline references)	Result
NIST 800-88 Purge	SSD – ATA-SATA (Table A-8)	Compliant

Table 4 – Category of NIST 800-88r1 compliance

1. Target of Evaluation (TOE)

1.1 Background

WIPERAPP sp. z o.o submitted their sanitisation software to the ADISA Research Centre to conduct a test in a controlled laboratory environment. The test was carried out in accordance with ADISA Testing Methodology document.

This test examines the specific commands that are issued to the data storage media to conduct sanitisation operations as well as examining the documentation produced by the product.

1.2 Identification

Details of the software submitted for testing is in table below:

	Description
Software Name and Version	WIPERAPP v4.30
User Manual	'First launch of the application.pdf' v1.1
NIST 800-88 Purge option	WIPEAPP – Purge (NIST Standard 800-88 rev.1)

Table 5 – Product Details & NIST / selection options

The product under evaluation requires additional components (i.e. software/hardware/firmware) for its operation. These components include:

	Description
Host Operating System	N/A
Device Operating System	N/A
Hardware Requirements	USB drive 2GB minimum capacity
Deployment	USB boot disk

Table 6 – Operational Requirements

1.4 Test Media

The software was executed on the following device:

Make	*Model*	*Media Category (standard/guideline references)*	*Media Interface Type*
SanDisk	SSD PLUS 120GB	SSD – ATA-SATA (NIST 800 - Table A-8)	SATA

Table 7 – Test Media

2. Testing Procedure

2.1 Overview

The following section provides an outline of the process that was undertaken to test the Target of Evaluation submitted to the ARC for testing.

2.2 Procedure

For each device the TOE is tested against, the following general methodology is performed:

1. The device is prepared by filling the whole media via the standard user interface with a known test pattern and verified. Appendix E lists the ARC hardware and software utilised during the preparation and verification procedure.

2. The device is then sanitised in accordance with the manufacturer's instructions provided with TOE submission to select the sanitisation algorithm operation as appropriate.

3. Should the TOE fail to operate in accordance with the manufacturer's instructions the ARC will record this, and the TOE shall be deemed 'Not Compliant'.

4. The communication protocol between the host and the test device is captured for subsequent analysis.

5. On successful completion of the sanitisation process, if required by the particular standard (e.g. NIST SP 800-88r1 section 4.8), the certificate of media disposition will be examined to determine what method was used to sanitise the device. This will be corroborated with the communication protocol log.

6. The device is then analysed to determine if the original test pattern can be found on the device. This shall be by either Full Verification or Representative Sampling as defined in NIST SP 800-88r1 section 4.7.3.

7. The results are analysed with no tolerance for remnant data and for consistency between the certificate of media disposition (if applicable). Should any discrepancy be observed then the TOE shall be deemed 'Not Compliant'. If no discrepancies are found, then the TOE shall be deemed to be compliant for the corresponding sanitisation category of test media.

8. On successful completion a report is produced and issued to applicant.

3. Summary

3.1 NIST 800-88 Purge SSD- SATA Results of Evaluation

The table below summarises the findings of the tests conducted on the device(s) listed.

Make	Model	NIST Category	Media Interface Type	NIST Sanitisation Method	Certificate Produced ?	Correct Commands Sent ?
SanDisk	SSD PLUS 120GB	A-8 – Flash – ATA SSD	SATA	Purge	Yes	Yes

Table 8 – Result

Appendix A – Shows the screenshots / pictures of the TOE version, overwrite method selection options

Appendix B – Shows the details of the devices Tested

Appendix C – Shows the Certificates of Media Disposition as produced by the TOE for each device listed above.

Appendix D – Shows details of the communication protocol issued by the TOE for each NIST Sanitisation Method tested.

Appendix E – Shows the details of ARC Testing Equipment
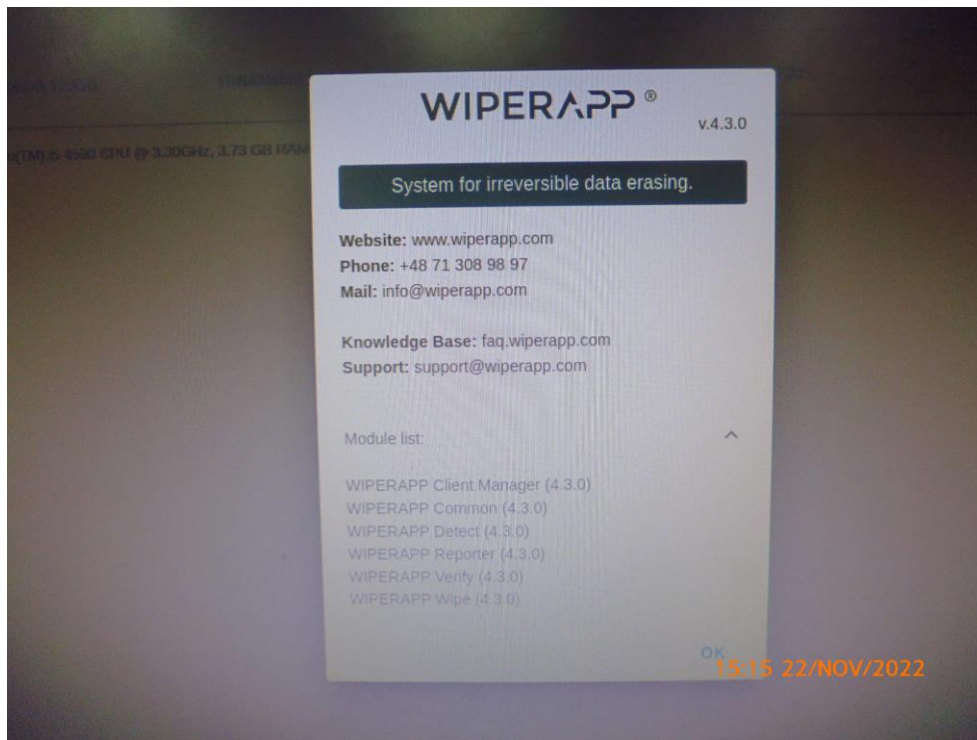
3.2 Observations

Full disk verification after device erasure shows that there is data present at LBA 0. The data appears to be wipe signature which is shown in Appendix C.
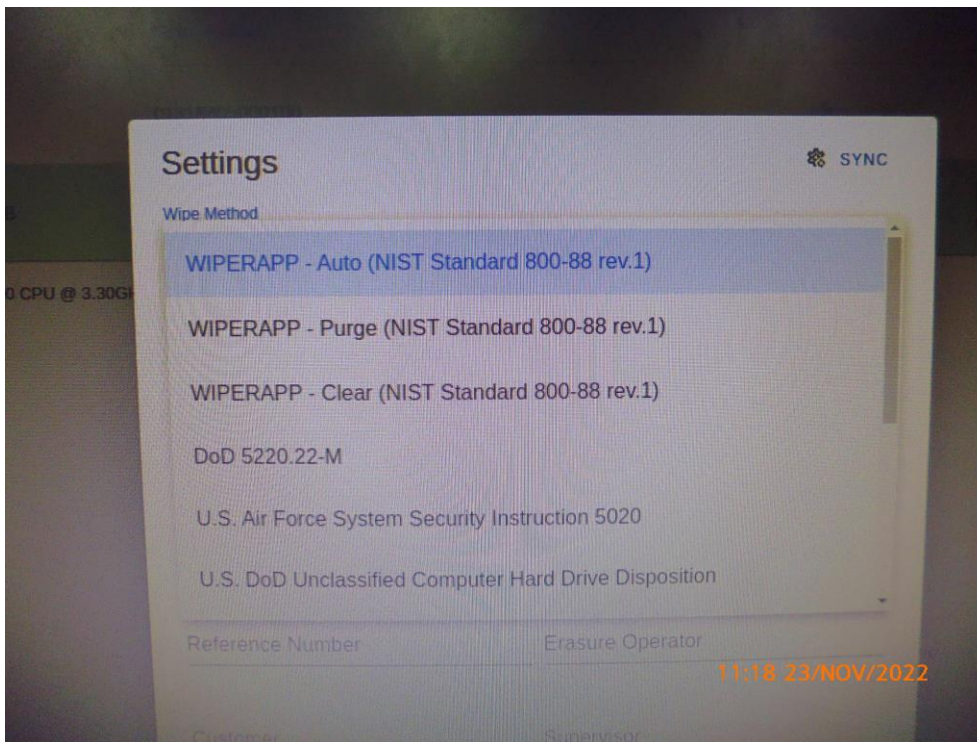
3.3 Conclusions

The ARC found the TOE to be compliant with NIST SP 800-88r1 for Purge on SSD SATA drives.

Appendix A – TOE Information

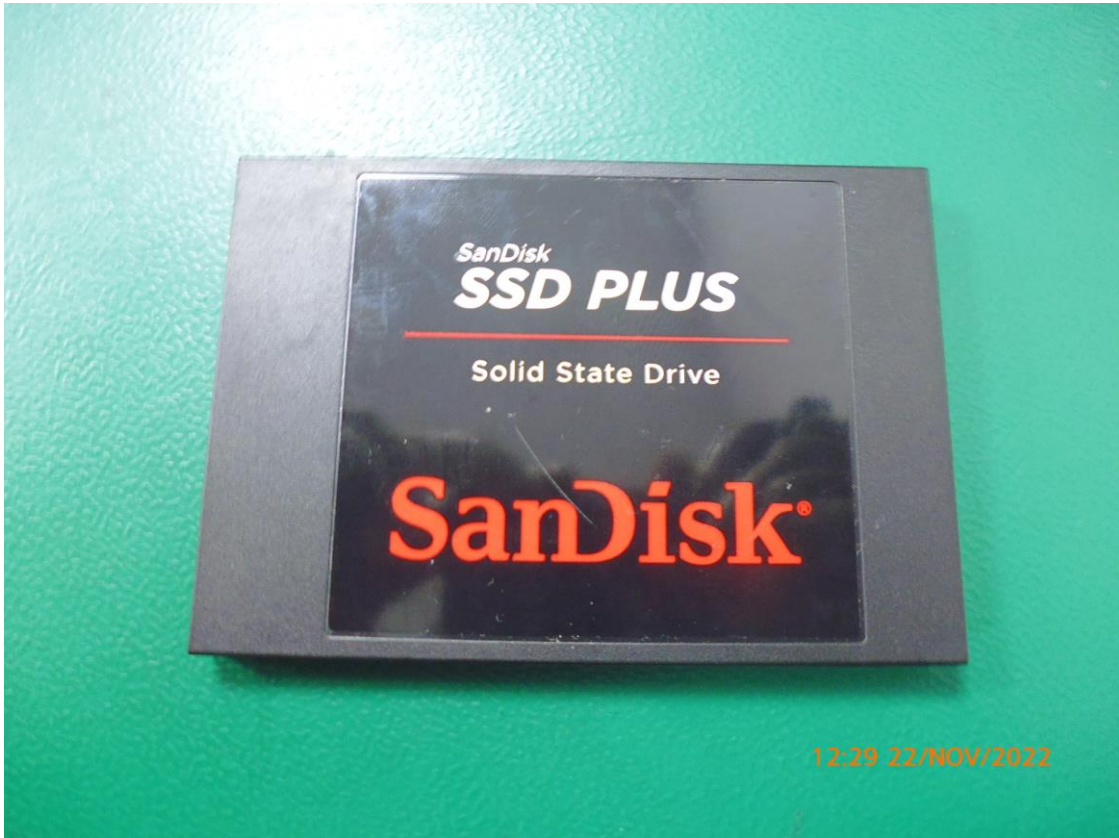Photographs of TOE screen showing version of software

Photographs of TOE screen showing overwrite method options

Appendix B – Devices Tested

Appendix B – Disk 1 – SanDisk – SDSSDA-120G

```
/dev/sg2 - SanDisk SSD PLUS 120GB - 184988455114 - UE4500RL - ATA
        Model Number: SanDisk SSD PLUS 120GB
        Serial Number: 184988455114
        Firmware Revision: UE4500RL
        World Wide Name: 5001B444A9348F69
        Drive Capacity (GB/GiB): 120.04/111.80
        Native Drive Capacity (GB/GiB): 120.04/111.80
        Temperature Data:
                Current Temperature (C): 22
                Highest Temperature (C): 48
                Lowest Temperature (C): 22
        Power On Time:  2 days 21 hours
        Power On Hours: 69.00
        MaxLBA: 234455039
        Native MaxLBA: 234455040
        Logical Sector Size (B): 512
        Physical Sector Size (B): 512
        Sector Alignment: 0
        Rotation Rate (RPM): SSD
        Form Factor: 2.5"
        Last DST information:
                DST has never been run
        Long Drive Self Test Time:  21 minutes
        Interface speed:
                Max Speed (Gb/s): 6.0
                Negotiated Speed (Gb/s): 6.0
        Annualized Workload Rate (TB/yr): 189.24
        Total Bytes Read (GB): 873.92
        Total Bytes Written (GB): 616.63
        Encryption Support: Not Supported
        Cache Size (KiB): 32.00
        Percentage Used Endurance Indicator (%): 1.00000
        Read Look-Ahead: Enabled
        Write Cache: Enabled
        SMART Status: Good
        ATA Security Information: Supported, SECURITY ERASE UNIT Normal mode supported
        Firmware Download Support: Full, Segmented
        Specifications Supported:
                ACS-2
                ATA8-ACS
                ATA/ATAPI-7
                ATA/ATAPI-6
                ATA/ATAPI-5
                ATA/ATAPI-4
                SATA 3.2
                SATA 3.1
                SATA 3.0
                SATA 2.6
                SATA 2.5
                SATA II: Extensions
                SATA 1.0a
                ATA8-AST
        Features Supported:
                Sanitize
                SATA NCQ
                SATA Device Sleep Preservation
                SATA Software Settings Preservation [Enabled]
                SATA Device Initiated Power Management
                HPA
                Power Management
                Security
                SMART [Enabled]
                DCO
                48bit Address
                APM [Enabled]
                GPL
                SMART Self-Test
                SMART Error Logging
                AMAC
                TRIM
                Host Logging
        Adapter Information:
                Adapter Type: PCI
                Vendor ID: 1000h
                Product ID: 0087h
                Revision: 0005h
```

Appendix C – Certificates of Media Disposition produced by TOE

WIPERAPP®

CERTIFICATE OF SANITIZATION

Customer   :
Ref. No.   :
Organization   : ADISA Certification

Wipe Details
Model   : SanDisk SSD PLUS 120GB (SN: 184988455114)
Type   : SSD
HPA   : Supported, NOT Enabled, Reset
DCO   : Supported, NOT Reset
S.M.A.R.T   : Supported, Enabled, PASS
Size   : 120.04 GB (LBA 234455040 Sectors)
Bad Sectors   : 0
Method   : Block Erase
Wipe Rounds   : 1
Verification   : 10%
Duration   : 0h 2min 14sec
Start / Finish (UTC) : 2022-11-23 10:57:14 / 2022-11-23 10:59:28

WIPE STATUS: PASS   VERIFY STATUS: PASS

Hardware Info
Model   : HP ProDesk 600 G1 SFF (SN: CZC506108W)
CPU   : Intel(R) Core(TM) i5-4590 CPU @ 3.30GHz
Memory Size   : 3.73 GB

Certificate Details
Report UUID   : 85f67d41-42d3-5410-9f04-6327c0b26866
Report Date (UTC)   : 2022-11-23 11:01:18
Software Version   : 4.3.0
Digital Signature   : D0C9FFB2

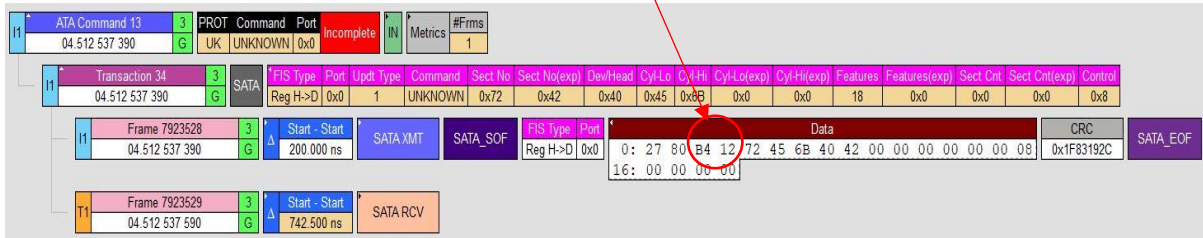I attest that the data erasure process has been performed in accordance with the given instructions.

_____   _____
    Erasure Operator   Supervisor

The certificate is according to the NIST 800-88 Rev1 (December 17th, 2014).

Appendix D – Communication Protocol Information

The protocol analyser output below shows that a SANITIZE (0xB4) BLOCK ERASE EXT (0x12) has been initiated:

Appendix E – ARC Testing Equipment

Hardware used

Make	What was it used for?
ARCPC-03	Analysis
ARCPC-05	Disk Verification
ARCPC-10	Disk Verification

Software used

Software	Version	What was it used for?
ARC Disk Utility	v1.0.1	Devices overwrite/verification
PC-3000 UDMA-E	v6.7.24	Device Analysis
LeCroy SAS Suite	v6.0	Protocol Capture