



## *Securing Mission Data*

May 2025

# Cigent Overview



Protects **mission data**  
with integrated Secure  
Storage Solutions  
providing layered  
protection

- Founded by leading expert in data recovery and sanitization for and with top Federal agencies
- Cleared personnel (TS/SCI) with decades of DoD and IC mission and data protection experience
- Data-at-rest encryption with advanced threat protection, data access controls, and sanitization capabilities
- Extensive ecosystem of OEM device and FSI partnerships

# Increasing Challenge of Securing Mission Data at the Edge

## Proliferation of devices operating at the edge...



PCs, Workstations,  
Enterprise Storage



Manned and  
Unmanned Vehicles



IOT and ICS devices

## ...That are collecting, storing, and processing sensitive data...

### Expanding Impact of AI

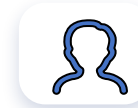


- Protection of Classified, CUI, and PII data
- Protection without compromising mission operations
- Protection across all stages of the data lifecycle

## ...Requiring protection for data-at-rest, in-use & at end of life



Advanced Data  
Recovery



Insider  
Threats



Data  
Sanitization



Compliance  
Requirements

# Cigent Mission: Protect Sensitive Data at the Edge

## Data-at-Rest Protection

CSfC for DAR  
Compliance

Inner & Outer  
Required  
Protection Layers

## Data Access Control

Zero-trust Access  
Mitigates Risk

Data Segmentation,  
Control & Log  
Access

## Verified Data Sanitization

Recycle, Repurpose,  
Emergency

Crypto & Block  
Erasure with  
Verification

Administration at Scale with Command Line Interface

# Cigent Data Protection Portfolio

## Cigent Secure Storage

Portfolio of SSDs delivering full drive hardware encryption protection

- Include **Cigent PBA**
- **Secure Firmware** addresses advanced data recovery and quantum threats
- PCs, Workstations, Servers coverage with multi-drive (RAID) support

## Pre-boot Authentication

- Software enabling SSDs
- Secure authentication environment
- Required for CSfC for DAR outer-layer

## Software Full Drive Encryption

- Pre-OS authorization and MFA capabilities
- Independent crypto-library from Cigent SSDs
- Required for CSfC for DAR inner-layer

All offerings include Command Line Interface

# Cigent Protects Data on Extensive Range of Devices

## Traditional Computing



**PCs**



**Servers**

- Address CSfC for DAR compliance
- Multi-drive (RAID) support
- Simplify administration
- Streamline acquisition & deployment

## Emerging Markets



**Manned &  
Unmanned Vehicles**



**Industrial Control  
Systems**

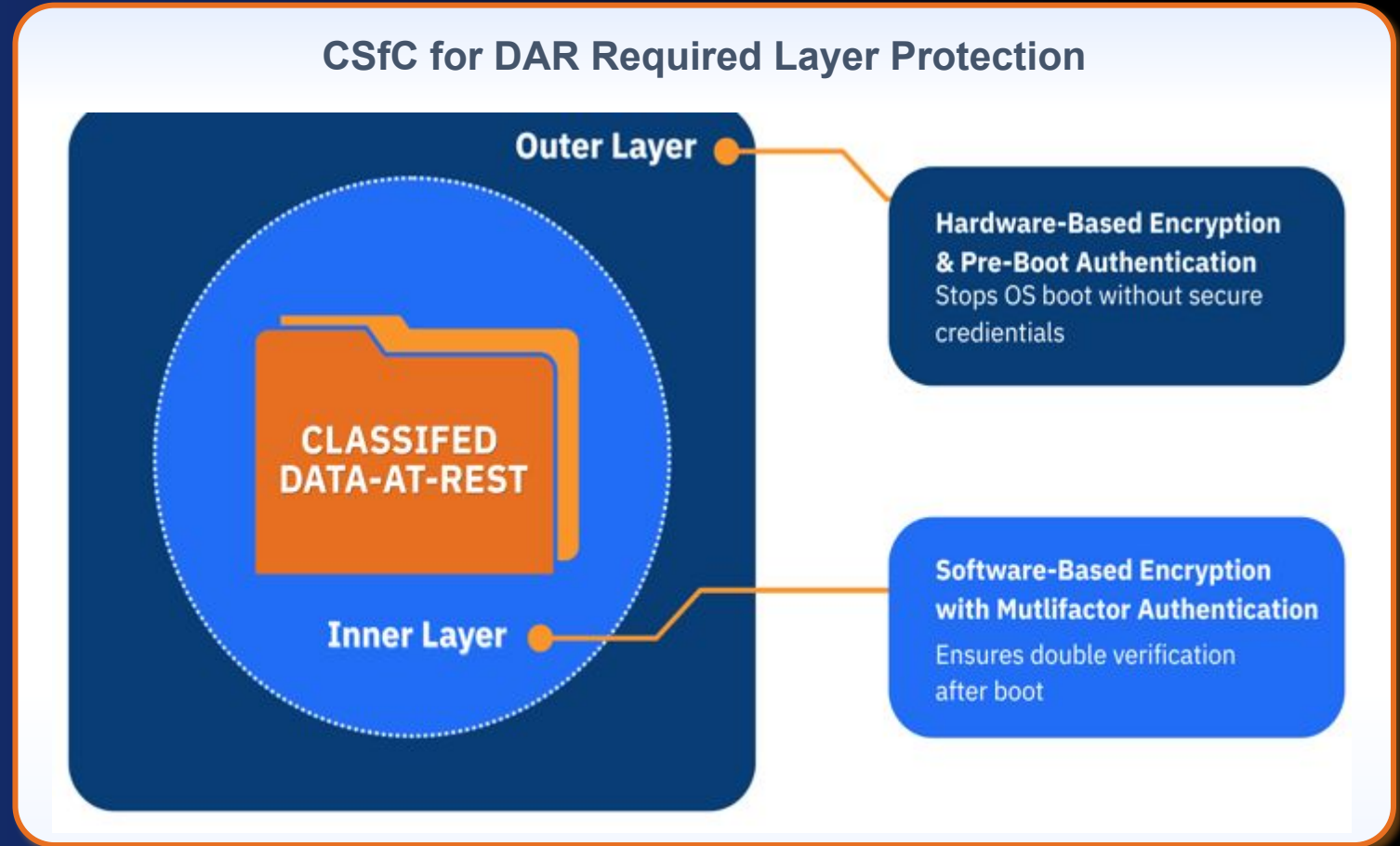


**Space Systems**

- DAR protection for high-risk assets
- Automotive standards for extreme environments
- Data segmentation, access control & logs
- Emergency data sanitization

# Data-at-Rest Protection for CSfC Compliance

- Multiple layers of quantum-resistant encryption validated by NSA, NIAP
- Cigent meets NSA “manufacturer diversity requirement” to provide single CSfC DAR solution
- Alternative option to utilize Cigent PBA and FDE with partner validated SSDs



# Data Access Control

- 1 Drives can be partitioned with distinct access controls
- 2 Locked partitions cannot be cloned or wiped; are not even visible to adversary
- 3 Step-up authentication required to access partitions
- 4 File-level encryption maintains encryption when data is exfiltrated
- 5 Encrypted data access logs record all activity – can be exported for analysis, used for forensics

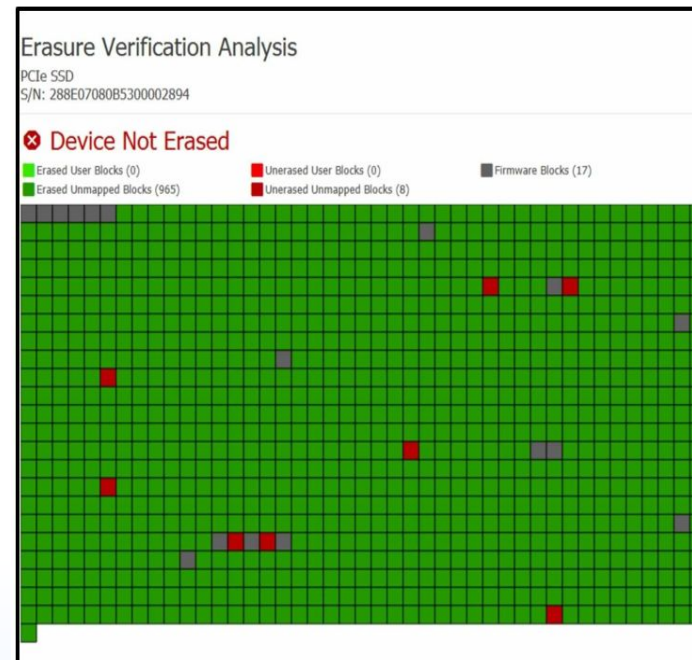
- Limit risk of malicious code insertion
- Prevent cloning and wiping attacks
- Mitigate risk of accidental or intentional data leakage
- Protect against insider threats

# Verified Data Sanitization

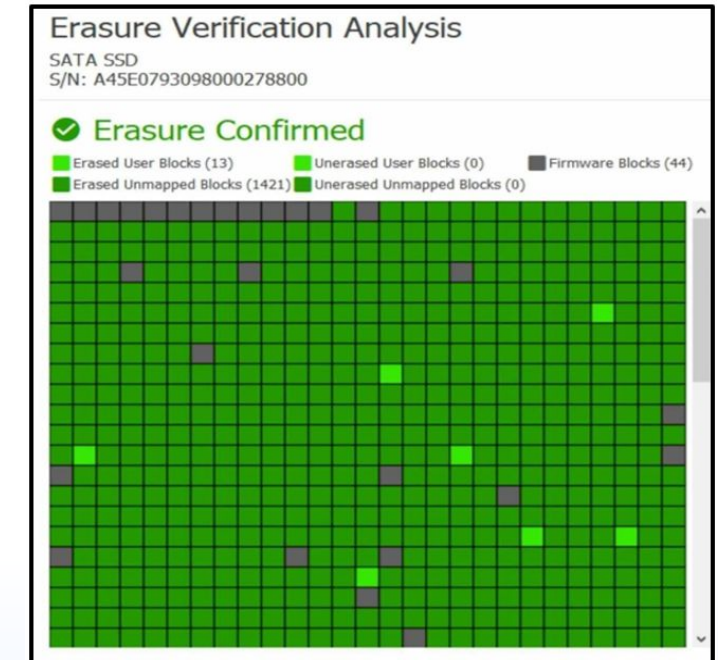
- Crypto erasure for instantaneous protection
- Block erasure for firmware data destruction
- Patented data verification to ensure all data erased
- Local, remote or rules-based execution
- Recycle or repurpose EOL drives | emergency sanitization

## CSfC for DAR Required Layer Protection

### Unsuccessful Data Erasure



### Successful Data Erasure



# Cigent Solutions Deployed Across US Defense Sector

## US Federal Government



## Federal System Integrators



# Cigent Data Solutions for Data Protection

## **Single Solution**

Cigent delivers hardware encryption, authentication, and encryption software to protect data at rest and meet CSfC compliance

## **Data Lifecycle Protection**

Cigent solutions ensure DAR integrity with features to protect data when devices are in-use and at end-of-life

## **Streamline Procurement**

Partnerships with leading device OEMs including Dell, HP, Getac, and Panasonic provides access to SSDs and software with PCs and Servers

## **Expertise & Experience**

US-based and staffed organization with leading experts in data protection and cleared personnel to support US agency requirements

# Back-up

# Cigent SSD Portfolio

	<u>Capacity</u>	<u>CSfC Cert Status</u>	<u>Temp Ranges</u>
<u>M.2 2230</u>	64 GB, 128 GB, 256GB, 512GB, 1TB	NIAP FDE_EE+AA Security Target 1.0 document (Oct 2024)	Automotive: -40°C to 105°C
<u>M.2 2280</u>	256GB, 512GB, 1TB, 2TB	NIAP FDE_EE+AA Security Target 1.0 document (Oct 2024)	Automotive: -40°C to 105°C
<u>U.2, E3.S</u>	1.92TB, 3.84TB, 7.68TB, 15.36TB	CSfC DAR Capability Package 5.0 for PBA Authorization Acquisition	Industrial: -20° C to 85°C

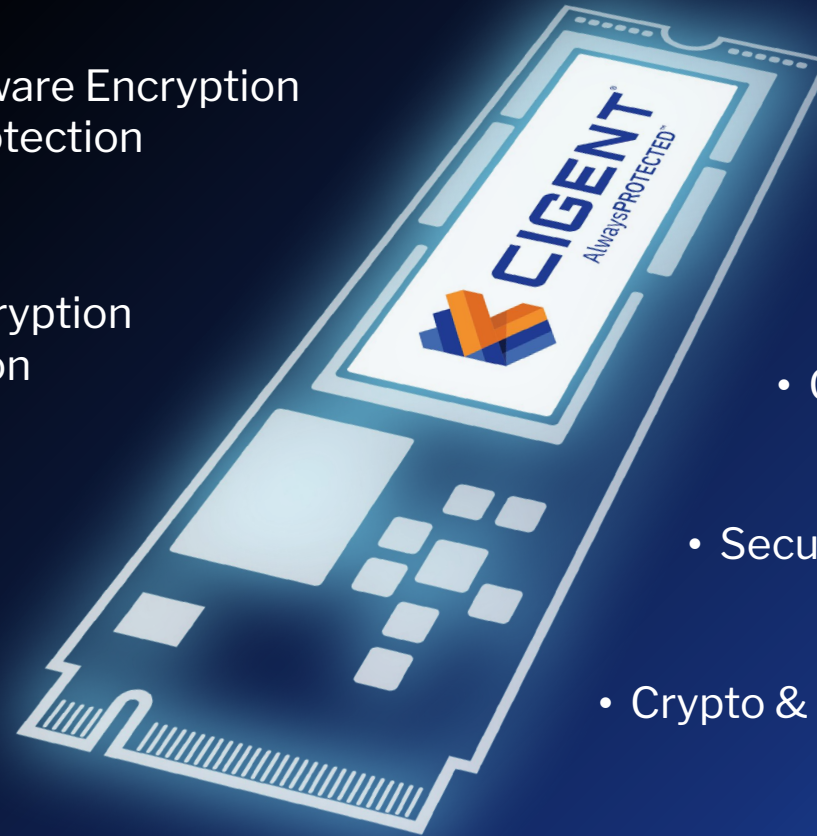
# Cigent Data Protection Capabilities

*CSfC for DAR  
Requirements*

- Full Drive Hardware Encryption  
- outer layer protection
- Full Drive Software Encryption  
- inner layer of protection
- Pre-boot Authentication
- Multifactor Authentication

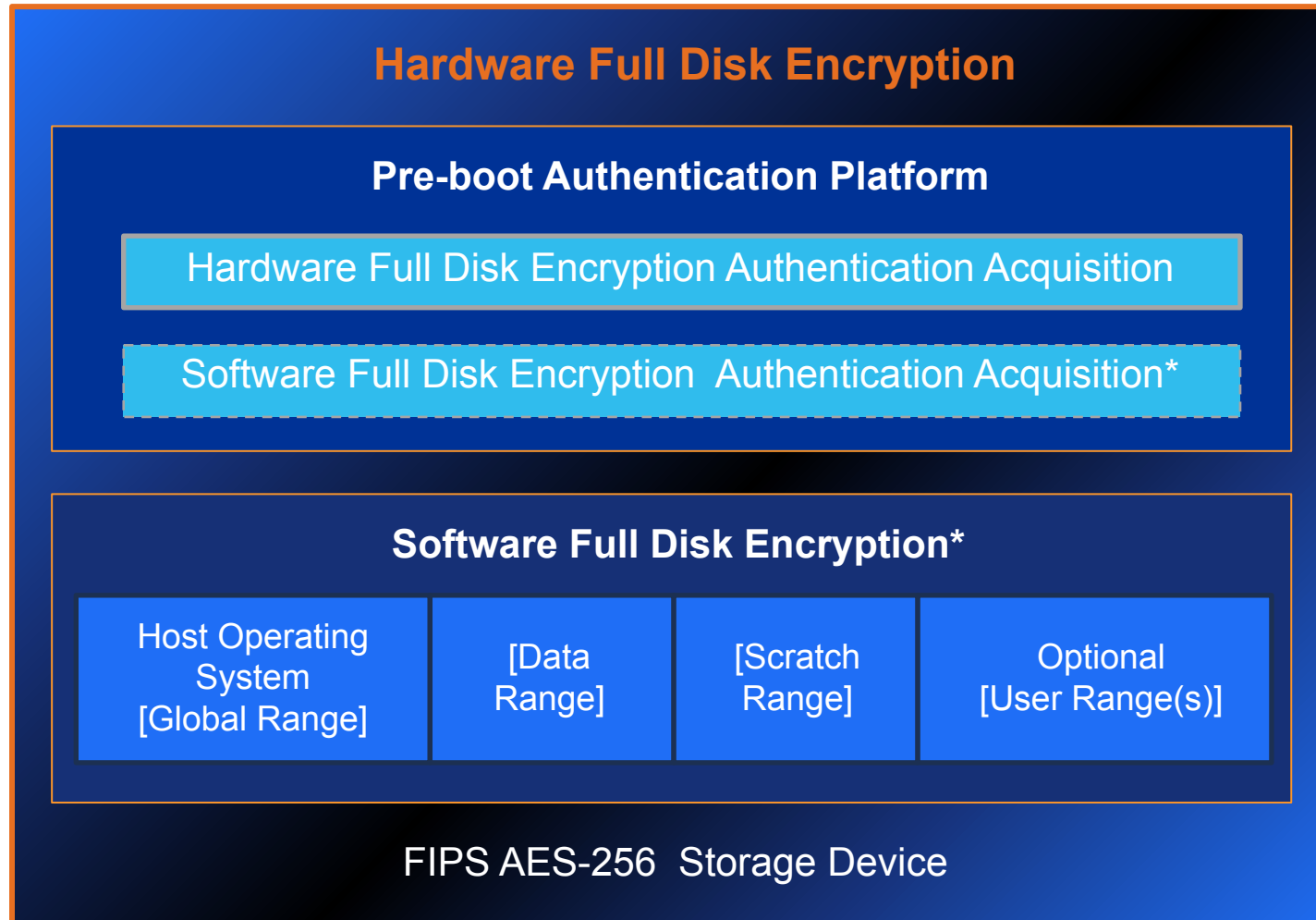
*Advanced Data  
Protection*

- File level Encryption
- Hidden Drive Partitions
- Granular Access Controls
- Secure Data Access Logs
- Crypto & Block Erase | Verified Sanitization



**10 Patents Awarded, 5 Pending**

# Cigent Secure Storage Solution Architecture



- All primary storage ranges locked
- Shadow partition running Linux + Cigent PBA software
- All data encrypted on drive (protects against direct physical attacks)
- Range 0 locks all drive including “sub-ranges”
- Range 1, 2... (up to 8 unique and individual)
- Admin User and End User auths
- SSD firmware improvements to meet FIPS, NIAP CC FDE\_EE, CSfC are activated by Cigent software

\*Software Full Disk Encryption Under Development (target Q1 GA)

# Cigent Software Data Protection for Data at the Edge

Protects sensitive data and meet CSfC for DAR compliance requirements

## Pre-boot Authentication

With Cigent SSD provides outer-layer of CSfC DAR protection

Separate, secure environment for drive authentication

Prevents adversary from compromising OS boot

## Software Full Drive Encryption

Provides inner of CSfC DAR protection

Deploy independently or complements SSD

Multifactor authentication: U/N Password and smart card (CAC) or security key

## Advanced Threat Protection\*

Prevent clone & wipe: create unreadable hidden partitions

Insider Threat: encrypted log files recording data transactions

Data sanitization: patented verification of data erasure by block

Windows & Linux ● RAID Server Coverage ● On prem enterprise mgmt. ● Command Line Interface

\*Available with optional software when using Cigent Secure Storage or Digistor Citadel Drives

# Cigent Defense Market Messaging

## Portfolio – what we offer

### Cigent Secure Storage

Portfolio of SSDs providing full drive hardware encryption protection with multiple NSA NIAP validated drives.

- All Cigent SSDs include **Secure Firmware** addressing advanced data recovery and quantum threats
- All SSDs include Cigent PBA

### Cigent PBA

Pre-boot authentication provides secure environment to authenticate SSD providing outer protection layer. PBA validated by NSA and NIAP.

### Software FDE

Cigent Software full drive encryption provides separate inner-layer of protection with multi-factor authentication. FDE is being validated by NSA and NIAP.

## Value Drivers – customer benefits

### Secure Data at Rest

Layered protection of software and hardware encryption and authentication.

Provides single solution for CSfC for DAR outer and inner layer protection

### Data Access Control

Zero-trust access mitigates risk of data loss with data segmentation, access control and secured data logs

### Verified Data Sanitization

Address compliance mandates and emerging quantum threat with only firmware verification that all data has been eradicated

### Administration at Scale

Command Line Interface (CLI) seamless integrates within existing management providing efficient administration at scale

## Differentiation – our unique capabilities

### Single Solution

Cigent provides SSDs, authentication, and encryption software to protect data at rest and meet CSfC compliance

### Data Lifecycle Protection

Cigent solutions ensure DAR integrity with features to protect data when devices are in-use and at end-of-life.

### Streamline Procurement

Partnerships with leading device OEMs including Dell, HP, Getac, and Panasonic provides access to SSDs and software with PCs and Servers

### Expertise

US-based and staffed organization with leading experts in data protection and cleared personnel to support US agency requirements