

**NIST Special Publication 800-140F**

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**CMVP Approved Non-Invasive  
Attack Mitigation Test Metrics:**

*CMVP Validation Authority Updates to ISO/IEC 24759*

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Kim Schaffer

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I N F O R M A T I O N   S E C U R I T Y

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**NIST**  
National Institute of  
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U.S. Department of Commerce

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U.S. Department of Commerce  
*Wilbur L. Ross, Jr., Secretary*

National Institute of Standards and Technology  
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### Abstract

NIST Special Publication (SP) 800-140F replaces the approved non-invasive attack mitigation test metric requirements of ISO/IEC 19790 Annex F. As a validation authority, the Cryptographic Module Validation Program (CMVP) may supersede this Annex in its entirety. This document supersedes ISO/IEC 19790 Annex F and ISO/IEC 24759 paragraph 6.18.

### Keywords

attack mitigation; Cryptographic Module Validation Program; CMVP; FIPS 140 testing; FIPS 140; ISO/IEC 19790; ISO/IEC 24759; non-invasive; testing requirement; vendor evidence; vendor documentation.

### Audience

This document is focused toward the vendors, testing labs, and CMVP for the purpose of addressing issues in cryptographic module testing.

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## 1 Scope

This document specifies the Cryptographic Module Validation Program (CMVP) modifications of the methods to be used by a Cryptographic and Security Testing Laboratory (CSTL) to demonstrate conformance. This document also specifies the modification of methods for evidence that a vendor or testing laboratory provides to demonstrate conformity. Unless otherwise specified in this document, the test requirements are specified in ISO/IEC 24759 paragraph 6.18.

## 2 Normative references

This section identifies the normative references cited as ISO/IEC 19790 and ISO/IEC 24759. The specific editions to be used are ISO/IEC 19790:2012 and ISO/IEC 24759:2017. Please note that the version 19790:2012 referenced here includes the corrections made in 2015.

National Institute of Standards and Technology (2019) *Security Requirements for Cryptographic Modules*. (U.S. Department of Commerce, Washington, DC), Federal Information Processing Standards Publication (FIPS) 140-3.  
<https://doi.org/10.6028/NIST.FIPS.140-3>

## 3 Terms and definitions

The following terms and definitions supersede or are in addition to ISO/IEC 19790 and ISO/IEC 24759.

*No additional terms at this time.*

## 4 Symbols and abbreviated terms

The following symbols and abbreviated terms supersede or are in addition to ISO/IEC 19790 and ISO/IEC 24759 throughout this document:

CCCS	Canadian Centre for Cyber Security
CMVP	Cryptographic Module Validation Program
CSD	Computer Security Division
CSTL	Cryptographic and Security Testing Laboratory
FIPS	Federal Information Processing Standard
FISMA	Federal Information Security Management/Modernization Act
NIST	National Institute of Standards and Technology

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## 5 Document organization

### 5.1 General

Section 6 of this document replaces the approved non-invasive attack mitigation test metrics requirements of ISO/IEC 19790 Annex F and ISO/IEC 24759 paragraph 6.18.

### 5.2 Modifications

Modifications will follow a similar format as in ISO/IEC 24759. For additions to test requirements, new Test Evidence (TEs) or Vendor Evidence (VEs) will be listed by increasing the “sequence\_number.” Modifications can include a combination of additions using underline and deletions using ~~striethrough~~. If no changes are required, the paragraph will indicate “No change.”

## 6 CMVP-approved non-invasive attack mitigation test metric requirements

### 6.1 Purpose

This document identifies CMVP-approved non-invasive attack mitigation test metrics.

### 6.2 Approved non-invasive attack mitigation test metrics

*No additional requirements at this time*

**Document Revisions**

Date	Change