

FIPS 201 Evaluation Program - Facial Image Capturing Camera Approval Procedure

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Approved	9.0.0	10/31/07	Updated to split approval processes from document. Processes can now be found in Suppliers Handbook.	Public

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1 Introduction

1.1 Overview

The FIPS 201 Evaluation Program (EP) is a U.S. Government entity administered by the Office of Government-wide Policy (OGP), within the General Services Administration (GSA) agency. The goal of the FIPS 201 Evaluation Program (EP) is to evaluate products and services against the requirements outlined in FIPS 201 and its supporting documents. In addition to derived test requirements developed to test conformance to the National Institute of Standards and Technology (NIST) Standard, GSA has also established interoperability and performance metrics to further determine product suitability. A set of approval and test procedures have been developed which outline the evaluation criteria, approval mechanisms and test process employed by the Laboratory during their evaluation of a Supplier's product or service against the requirements for that category.

A Supplier desiring to submit a Facial Image Capturing Camera (hereafter referred to as the Product) for evaluation must follow the Suppliers Policies and Procedures Handbook. In addition to this handbook, Supplier also need to refer to this Approval Procedure which provides the necessary category-specific details in order to have a Supplier's Product evaluated by the EP and placed on the Approved Products List (APL).

1.2 Category Description

The *Facial Image Capturing Camera* consists of the hardware (i.e. the camera) needed to capture the raw (i.e. unprocessed) facial image photographs of Applicants as part of the registration process. Additionally, the camera may utilize software to control the functions of the camera, such as optical zoom, contrast, and brightness.

1.3 Purpose

The purpose of this document is to provide the following information:

- (i) Provide a list of the artifacts and/or documentation that needs to be submitted to the Evaluation Lab as part of the application package submission.
- (ii) Document the list of the requirements that apply to this category
- (iii) Specify the evaluation criteria along with their approval mechanisms that will be used by Evaluation Labs to verify compliance of the Product against the requirements that apply to this category.

2 Application Package Contents

The Application Package Contents include the artifacts, documentation and in some cases the product itself that needs to be submitted to the Evaluation Lab so that evaluation can be performed. The Application Package Contents for this category include the following:

- Completed Application Form, provided on the Evaluation Program website. (This form will be available through the web interface once users have been assigned a login credential);
- Completed and signed Attestation Form (found in the application submission package ZIP file). The Attestation Form should be completed and scanned into a document to be uploaded to Evaluation Program website;
- Completed and signed Non-Disclosure Agreement (found in the application submission package ZIP file). The Non-Disclosure Agreement should be completed and scanned into a document to be uploaded to Evaluation Program website;

Note: This NDA can be substituted with a Supplier-provided document; however, this will slow the evaluation process as the NDA submitted will need to be reviewed by the Lab.

- Completed Supplier VDR-VTDR justification worksheet (found in the application submission package ZIP file); and
- A Vendor Test Data Report, which provides test results showing that the Product complies with the requirements for this category. In this regard, the Supplier is expected to develop and document the test procedures used to determine how the Product was tested to arrive at the conclusion that it met all necessary requirements. The VTDR must at a typically contain information as stated in Section 3.2. Wherever possible, information to be supplied as part of this Vendor Test Data Report has been described in Section 4.3;

Additionally, the Supplier needs to provide the following to the Lab:

- The native output of the photograph that was acquired by the camera during vendor testing. Acceptable formats for this photograph include raw, or uncompressed images, or JPEG/JPEG 2000 compressed images. Note that if compressed images are submitted, ROI compression is not allowed unless directly supported by the camera in its internal firmware.

3 Evaluation Procedure for Facial Image Capturing Camera

3.1 Requirements

In order to approve the Product as conformant to the requirements of PIV, it at a minimum, must comply with all the requirements listed below. The approval mechanism column describes the technique utilized by the Lab to evaluate compliance to that particular requirement.

Identifier #	Requirement Description	Source	Req. #	Approval Mechanism
FACS.1	For PIV, faces shall be acquired such that a 20 centimeter target placed on, and normal to, a camera's optical axis at a range of 1.5 meters shall be imaged with at least 240 pixels across it. This ensures that the width of the head (i.e. dimension CC in Figure 8 of [FACESTD]) shall have sufficient resolution for the printed face element of the PIV Card. This specification and Section 8.3.4 of [FACESTD] implies that the image width shall exceed 420 pixels.	SP 800-76-1, Section 5.2	2.1-61	Vendor Test Data Report Lab Test Data Report
FACS.2	The Facial resolution specification shall be attained optically without digital interpolation.	SP 800-76-1, Section 5.2	2.1-62	Vendor Documentation Review

Table 1 - Applicable Requirements

3.2 Approval Mechanism Matrix

The table below provides an indication of the total number of requirements applicable for the Product and provides a breakup of how the evaluation will be conducted based on the different approval mechanisms available to the Lab.

Total Requirements	Approval Mechanisms					
	SV	VTDR	LTDR	VDR	C	A
2	N/A	1	1	1	N/A	1
Legend: SV – Site Visit; VTDR – Vendor Test Data Report; LTDR – Lab Test Data Report; VDR – Vendor Doc. Review; C – Certification; A - Attestation						

Table 2 - Approval Mechanism Matrix

3.3 Evaluation Criteria

This section provides details on the process employed by the Lab for evaluating the Product against the requirements enumerated above.

3.3.1 Vendor Documentation Review

Reference(s):	FACS.2
Evaluation Procedure:	<ol style="list-style-type: none"> The Lab will update the status in the Web-Enabled Tool to “VDR Begun” as instructed in the Web-enabled Tool Laboratory User Guide. The Lab will review the Product’s documentation to determine the following. At a minimum the documents submitted by the Supplier must include: <ul style="list-style-type: none"> <i>Optical Acquisition (FACS.2)</i> <ul style="list-style-type: none"> A Supplier statement asserting the resolution of the Product along with the optical and digital zoom capability. A Supplier statement specifying whether the product can acquire images at the required resolution without digital interpolation. The Lab will update the status to “VDR Complete” as instructed in the Web-enabled Tool Laboratory User Guide.
Expected Results	The Product captures images without digital interpolation

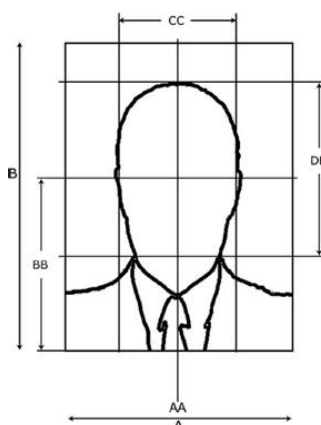
3.3.2 Vendor Test Data Report

The Lab will update the status in the Web-Enabled Tool to “VTDR Begun” as instructed in the Web-enabled Tool Laboratory User Guide.

3.3.2.1 FACS.1

Evaluation Procedure:	The Lab will review the documentation submitted by the Supplier to ascertain the following: <ul style="list-style-type: none"> <i>Full Frontal Image Type:</i> The electronic image submitted conforms
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to the diagram listed below.



At a minimum, the following test scenario must be performed to confirm compliance:

- a. Measure the image width. This value is A. The width of A should exceed 420 pixels. Measure the width of the head. This value is CC. The width of CC should exceed 240 pixels. Find the ratio of the two widths: (Image Width : Head Width). This ratio must be 7:4 (A:CC). The electronic version of this measurement may be submitted to expedite the Lab's evaluation of this requirement.

Expected Result:	The full frontal image type meets the minimum spatial resolution and specified ratio of image width to head width of 7:4.
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The Lab will update the status in the Web-Enabled Tool to "VTDR Complete" as instructed in the Web-enabled Tool Laboratory User Guide.

3.3.3 Lab Test Data Report

Reference(s):	FACS.1
Test Procedure:	<ol style="list-style-type: none"> 1. The Lab will update the status in the Web-Enabled Tool to "LTDR Begun" as instructed in the Web-enabled Tool Laboratory User Guide. 2. The Lab will execute test procedures for this category in accordance with the "<i>Facial Image Capturing Camera Test Procedure</i>". 3. The Lab will update the status to "LTDR Complete" as instructed in the Web-enabled Tool Laboratory User Guide.
Expected Results:	The Product successfully passes all the test cases documented within the test procedure.

3.3.4 Attestation

Reference(s):	N/A
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Evaluation Procedure:	<ol style="list-style-type: none">1. The Lab will update the status in the Web-Enabled Tool to “A Begun” as instructed in the Web-enabled Tool Laboratory User Guide.2. Review the Attestation Form provided by the Supplier, confirming that the Product to the best of their knowledge, conforms to all the necessary requirements of the category under which the Product applies. Verify that person signing this Attestation Form has the authority to do so (a minimum “C” level [e.g. CSO, CEO, CIO, CFO, Vice-President, President, Business Partner or Owner]).3. The Lab will update the status in the Web-Enabled Tool to “A Complete” as instructed in the Web-enabled Tool Laboratory User Guide.
Expected Results:	<ol style="list-style-type: none">1. The Attestation Form has been signed by an authorized individual (e.g. CSO, CEO, CIO, CFO, Vice-President, President, Business Partner or Owner).