

**Unique Identification Authority of India (UIDAI)  
Planning Commission, Government of India**

Reference Number: K-11020/83/2013-UIDAI(AUTH-I)



**INVITATION FOR EXPRESSION OF INTEREST**

**FOR**

**Participation in Authentication Registered Device  
Ecosystem Development**

**07<sup>th</sup> March 2014**

Unique Identification Authority of India (UIDAI) has been set up with the mandate of providing a unique identity (Aadhaar) number to all residents of India and defining usages and applicability of Aadhaar for delivery of various services. Towards Aadhaar-enabling delivery of various services, UIDAI proposes online identity authentication. The online authentication may be done using demographic data, biometric data or OTP (One Time PIN).

For the purposes of issuing Aadhaar number, UIDAI is collecting biometric data pertaining to fingerprints and iris. For authentication services too, UIDAI intends to use both types of biometrics – fingerprints and iris. To this effect Standardisation Testing and Quality Certification (STQC) Directorate published Finger Print Authentication Devices and Iris Authentication Devices (Sensor/Extractor) specifications and Certification Scheme. STQC has subsequently carried out device certification under the aforesaid schemes.

These devices are currently referred to as “Public Devices”. These devices are not registered with Aadhaar system and use its own encryption key generation scheme. Aadhaar authentication server does not individually identify public devices.

UIDAI’s next endeavour is to establish an ecosystem for Authentication “Registered Devices”. These devices would be registered with Aadhaar system for encryption key management. Aadhaar authentication server can individually identify and validate these devices and manage encryption keys on each registered device. UIDAI has published on its website the [Aadhaar Registered Devices Specification 1.0](#)

UIDAI foresees a large scale adoption of registered authentication. UIDAI would encourage a large number of players in the biometric device ecosystem to develop Authentication registered devices. Through this Expression of Interest (EOI), UIDAI invites applications from organizations specializing in biometric devices to participate in the proof of concept and lab testing of Authentication registered devices. The proof of concept and lab testing would be carried out at UIDAI Technology Centre Bangalore. The devices could either be production ready or under advanced stages of R&D.

The participants would need to provide the following to UIDAI:

- Devices – 6 in numbers for each model
- Device specifications<sup>1</sup>
- Device having either Fingerprint or Iris or both sensors
- Device having firmware implementing extraction/processing of images to templates within the secure domain of the hardware
- IRIS devices should produce output image in format JPEG 2000: KIND 7 (previously known as Cropped and Masked) compliant to ISO 19794-6 from within the secure zone
- Fingerprint devices should be able to output ISO 19794-2 for fingerprint minutiae template and ISO 19794-4 for Fingerprint Image Template from within the secure zone
- Working Java based authentication application compliant to UIDAI’s [Aadhaar Authentication API 1.6](#) along with source code and support

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<sup>1</sup> The vendor should ensure that the submitted devices do not cause any short term or long term health hazards to both operator and residents and are suitable for frequent repeat use. The devices should be compliant to the specifications laid down by STQC under [UIDAI Biometric Device Specifications](#) for Fingerprint Authentication device certification scheme and [IRIS Authentication Devices Certification-Device Specifications](#) for Iris Authentication device certification scheme.

- Support for front end and backend server configurations
- Device & support details as per Annexure 1

Timeline for responding to the EoI:

1. Last date for seeking clarifications – 14<sup>th</sup> March 2014
2. Last date for submission of EOI response (Annexure 1) – 02<sup>nd</sup> April 2014
3. Last date for submission of devices, SDK and authentication application – 15<sup>th</sup> April 2014

The responses may be sent to the following contact details:

- Shri Yashwant Kumar Singh, ADG, UIDAI, Jeevan Bharti Building, Connaught Place, New Delhi 110001; Email: [yashwant.kumar@uidai.net.in](mailto:yashwant.kumar@uidai.net.in)
- Shri Hari Om Aggarwal, Deputy Director, UIDAI, Jeevan Bharti Building, Connaught Place, New Delhi 110001; Email: [hari.aggarwal@uidai.net.in](mailto:hari.aggarwal@uidai.net.in)

For application development references and support material, <http://developer.uidai.gov.in/> may be referred.

## Annexure 1 – Response Template

One such form to be filled for each of the device type (Iris and/or fingerprint) and model being submitted:

### Organization details:

1.	Name of Organization	
2.	Contact Person's Name	
3.	Contact Person's address	
4.	Contact Person's Phone No	
5.	Contact Person's Mobile No	
6.	Contact Person's E-mail id	

### Device details:

S. No	Parameter	Required device specifications	Submitted device specifications	Remarks
<b>Iris Authentication Device Related:</b>				
1.	Compliant to specifications of Iris Authentication devices published by STQC	<a href="#">IRIS Authentication Devices Certification-Device Specifications</a> (Refer Annexure 2 for details)	Compliant / Non-Compliant / Not an Iris Auth. Device <Any one of the above only>	
<b>Fingerprint Authentication Device Related:</b>				
1.	Compliant to specifications of Fingerprint Authentication devices published	<a href="#">UIDAI Biometric Device Specifications</a> (Refer Annexure 3 for details)	Compliant / Non-Compliant / Not a fingerprint Auth. Device <Any one of the above only>	

	by STQC			
<b>Registered Device Related:</b>				
1.	Tamper Resistant Security Module (TRSM)	<a href="#">Aadhaar Registered Devices Specification 1.0</a> (Refer Annexure 4 for details)		
2.	Unique Physical ID	<a href="#">Aadhaar Registered Devices Specification 1.0</a> (Refer Annexure 4 for details)		
3.	Secure Storage	<a href="#">Aadhaar Registered Devices Specification 1.0</a> (Refer Annexure 4 for details)		
4.	Additional RAM and Storage	<a href="#">Aadhaar Registered Devices Specification 1.0</a> (Refer Annexure 4 for details)		
5.	RNG	<a href="#">Aadhaar Registered Devices Specification 1.0</a> (Refer Annexure 4 for details)		
6.	Encryption, Hashing, and Signature	<a href="#">Aadhaar Registered Devices Specification 1.0</a> (Refer Annexure 4 for details)		
7.	Firmware APIs	<a href="#">Aadhaar Registered Devices Specification 1.0</a> (Refer Annexure 4 for details)		
<b>Testing Support</b>				
1.	No. of devices that can be provided	-		
2.	No. of technical manpower that can support integration & on-site troubleshooting	-		
3.	Mechanism for upkeep, storage, management & troubleshooting of devices on-site	-		

## **Annexure 2 – Specifications of Iris Authentication devices published by STQC**

### **UIDAI Biometric Device Specifications**

([http://www.stqc.gov.in/sites/upload\\_files/stqc/files/Issue%20%20\\_May\\_%202012%201%20STQC%20UIDAI%20BDCS-03-08%20UIDAI%20Biometric%20Device%20Specifications%20\\_Authentication\\_14-05-2012.pdf](http://www.stqc.gov.in/sites/upload_files/stqc/files/Issue%20%20_May_%202012%201%20STQC%20UIDAI%20BDCS-03-08%20UIDAI%20Biometric%20Device%20Specifications%20_Authentication_14-05-2012.pdf))

## **Annexure 3 – Specifications of Fingerprint Authentication devices published by STQC**

### **IRIS Authentication Devices Certification-Device Specifications**

([http://www.stqc.gov.in/sites/upload\\_files/stqc/files/Device\\_specification\\_BDCS\\_A-I\\_-03-07\\_0.pdf](http://www.stqc.gov.in/sites/upload_files/stqc/files/Device_specification_BDCS_A-I_-03-07_0.pdf))

## **Annexure 4 – Specifications of Registered Authentication devices published by UIDAI**

### **Aadhaar Registered Devices Specification 1.0**

([http://uidai.gov.in/images/aadhaar\\_registered\\_devices\\_1\\_0.pdf](http://uidai.gov.in/images/aadhaar_registered_devices_1_0.pdf))