

F. No. HQ-16031/1/2021-EU-I-HQ  
**Unique Identification Authority of India (UIDAI)**  
(Enrolment and Update I-Division)

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Dated 1<sup>st</sup> July, 2024


**Office Memorandum no. 1 of 2024**

**Subject: Revised specifications of Aadhaar Enrolment Kit (AEK) - reg.**

In order to cope with the technological advancements at hardware and software level and in accordance with UIDAI's security policies, competent authority has approved the revised specifications of Aadhaar Enrolment Kit (AEK) functioning under Enrolment Client Multiple Platform (ECMP), Update Client Lite (UCL) and Universal Client (UC).

2. All the components/devices as mentioned in the revised specification (enclosed) shall constitute the AEK for ECMP and UC. However, Slap scanner and Dual Iris scanner do not form a part of the AEK for UCL.
3. As part of revised specifications, the System Integrator (SIs)/OEMs of Biometric Devices (Slap/Iris Scanner/Single Iris Scanner/Camera) shall provide following to the Technology Centre, Bengaluru:
  - a. Standard drivers for the devices compatible with Windows 11 professional or higher;
  - b. SDK supporting Java and .Net for Windows drivers at (a);
  - c. VDMs with source code based on the publicly available drivers and SDK versions.
4. System Integrators (SIs) and vendors are required to get the Kit tested at UIDAI Regional Offices/Tech Centre for interoperability with the latest UIDAI's enrolment application as per the existing process.
5. Regional Offices shall inform the Registrars to procure devices as per the latest specifications. Registrars can procure devices with higher/upgraded specification based on the local requirement and availability through GeM portal.
6. The enclosed specifications supersede the existing AEK specifications issued vide Circular No. 4(4)/57/122/2012/UIDAI/Pt dated 31.12.2018.
7. This is issued with the approval of competent authority.

Encl.: as above

  
(Prabhakaran C R)  
Dy. Director (E&U-I)

To

1. All UIDAI Regional Offices and Tech Centre
2. All Registrars
3. All System Integrators/OEMs
4. Guard file

# Aadhaar Enrolment Kit

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Aadhaar enrolment kit consists of a set of hardware devices required to carry out successful Aadhaar enrolments & update. This set of devices comprises of following devices.

- I. Laptop/Desktop
- II. Monitor
- III. Multifunction Device
- IV. White screen
- V. Focus Light
- VI. Surge Protector spike
- VII. Iris Scanner
- VIII. Camera
- IX. Slap scanner
- X. Global Navigation Satellite System (GNSS) Device
- XI. Single Finger Print RD L1 device
- XII. Single Iris Scanner RD device

1. All these devices shall be as per UIDAI's specifications.
2. Biometric devices (Slap/Iris Scanner/Single Iris Scanner/Camera) L0 RD device and Single Finger Print RD L1 device shall be STQC certified.
3. Complete kit warranty shall be for 3 years except White screen, Focus light & surge protector.
4. **During warranty, faulty equipment's shall be replaced/repared within 7 days.**
5. Aadhaar Enrolment Kit comprising of specific make/model of device shall be UIDAI certified for its working with latest UIDAI's enrolment client (ECMP)
6. AEK vendors to provide Manufacturers Authorization Form (MAF) issued by OEM for warranty support.
7. It is the responsibility of the AEK vendor/OEM to provide Standard drivers, java and .net supporting SDK, **digitally signed VDM** with source code based on the publicly available drivers & SDK versions and on demand support for the devices which are part of the AEK.
8. OEMs to support UIDAI for Forensic analysis in case of any requirement or need arises

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## Minimum Specification of Aadhaar Enrolment Equipment

### Item S.1.1. – Laptop

Specification	Details
Machine Form Factor	Laptop
CPU	4 Core processor or higher with minimum Frequency 4.0 GHz or higher and 10 MB Cache or higher
Display	Minimum 14" HD Anti-Glare (16:9)
Display type	LED
Connectivity	Wi-Fi (IEEE 802.11b/g/n/ac) and Ethernet (10/1000 Base-T)
MEMORY	Min. 16-GB DDR4RAM or higher expandable up to 32-GB or higher with 1 DIMM SLOT FREE
Solid-State Drive (SSD)	Minimum 512GB SSD
Input/output Ports	One HDMI – minimum
	Two(VGA/ DP Port/Type C/HDMI) port with Display Transfer feature
	Dedicated Minimum 3 USB 2.0 port*
	One Ethernet (RJ-45)
Battery Backup	6hrs backup time in case of laptop
Chipset	System-on-a-Chip
Graphics	Integrated Graphics
Keyboard	Integrated for laptop sized (Minimum 84 Keys) Windows compatible Spill-resistant keyword
Touchpad	Wide Touchpad below keyboard for laptop
Preloaded OS	Windows 11 professional or higher (Standard and Home edition of windows are not allowed)
Certification	BIS,or any other relevant Indian Certificates
ACCESSORIES	<i>USB Hub with multiple USB connections (enabling 5 devices plug-in through USB port), Laptop carrying case</i>
WARRANTY	3 years comprehensive onsite-warranty including Battery and power adapter
ANTI-VIRUS	Reputed Antivirus/EDR software with regular signature updates
TPM	System should support Trusted Platform Module (TPM) version 2.0 or higher version



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## Item S.1.1.1 – Desktop

Specification	Details
Machine Form Factor	Desktop(Small form Factor)
CPU	4 Core processor or higher with minimum Frequency 4.0 Ghz or higher and 10 MB Cache or higher
MEMORY	Min. 16-GB DDR4RAM or higher expandable up to 32-GB or higher with 1 DIMM SLOT FREE
Connectivity	Ethernet (10/1000 Base-T)
Solid-State Drive (SSD)	Minimum 512GB SSD
Input/output Ports	Min 1 HDMI
	One (VGA/ DP Port/Type C ) port with Display Transfer feature supported by Monitor
	Dedicated Minimum 5 USB 2.0 port
	One Ethernet (RJ-45)
Battery Backup	0.5KVA UPS with 30 min backup time For desktop
Chipset	Integrated with CPU or equivalent
Graphics	Integrated Graphics
Keyboard	(Minimum 104 Keys) Windows compatible Spill-resistant keyboard
Touchpad	Optical USB mouse
Preloaded OS	Windows 11 professional or higher (Standard and Home edition of windows are not allowed)
Certification	BIS, or any other relevant Indian Certificates
WARRANTY	3 years comprehensive onsite-warranty
ANTI-VIRUS	Reputed Antivirus/EDR software with regular signature updates(Licensed version required)
TPM	System should support Trusted Platform Module (TPM) version 2.0or higher version

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## Item S.1.2. - Monitor

Specification	Details
Size	15-16 inch or higher
Type	LED
Resolution	1024 x 768 or above
<b>Note:</b> One additional Monitor with Desktop & Laptop - One for Operator view and other for applicant of enrolment and update view	

## Item S.1.3. – Multi Functional Device (MFD)

Specification	Details
Function	PRINTCOPY SCAN (COLOR)
DUTY CYCLE IN PAGES	3000 PAGES per month
Print Speed PPM – BLACK(A4)	18 PPM or better
Resolution	600 X 600 DPI
Printing Technology	Ink Tank /laser
Custom media size	A4
Standard operating system supported	Compatible with Windows 11 professional or higher
Scan resolution	600 X 600 DPI OPTICAL
Bit/color depth	24 BITS
Copy speed	18 CPM or better
Copy resolution	600 X 600 DPI
Scan file format	Minimum PDF,JPEG,
BIS Registration under CRS of MeitY	Yes
Onsite OEM Warranty	Minimum 3 years

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## Item S.1.4. – White Screen

Specification	Details
Size	4 X 5 ft Stand mountable / wall mountable
Accessories	Stand
Non-Reflecting	Yes
Opaque	Yes

## Item S.1.5. – Focus Light

Specification	Details
Type	LED, minimum 5 W
Accessories	Stand, 2Mrts Wire and on/off Switch near the operator

## Item S.1.6. – Surge Protector Spike

Specification	Details
General	6 nos. of 5A sockets (4 Indian style + 2 International Style), Fuse, on/off Switch and ISO mark

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## Item S.2.1 – Iris Device Specification

Specification	Stationary (mounted: wall, tripod or stand) <sup>1</sup>	Hand_held <sup>2</sup>	Hand-held with alignment aid <sup>3</sup>
Standard compliance for image capture	ISO/IEC 19497-6 (2005 or preferable 2011 version)		
Iris Diameter (In pixel)	> 190		
Spatial Resolution Pixel Resolution	> 60% @ 4.0 Lp/mm > =18 Pixels/mm		
# of simultaneous captured eyes <sup>4</sup>	2		
Viewfinder	External	Internal	External or Internal
Capture distance	> 750 mm	> 50mm	> 20 mm
Capture volume (width/height/depth)	>250x500x500mm	> 20x15x12mm	> 20x15x12mm
Exposure time	< 15ms	< 33ms	< 33ms
Imaging wavelength	700-900 nm		
Spectral Spread	Power in any 100nm band > 35% of total power		
Scan type	Progressive		
Image margins	Left & right: 0.50x iris diameter, Top & bottom: 0.25x iris diameter		
Pixel depth	> 8 bits/pixel		
Image evaluation frame rate	>= 7 frames/sec, continuous image capture		
Capture mode	Auto capture with built-in quality check (incorporates NIST quality considerations)		
Sensor signal to noise ration	> 40 DB		
Connectivity <sup>5</sup>	USB 2 or higher, USB-IF certified or Networked (TCP/IP)	USB 2 or higher, USB-IF certified	

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Power	USB or independent PS		
Weight	NA	< 1 kg	< 1 kg
Dimension	<300 x 100 x 300mm	< 220 x 200 x 100 mm	< 220 x 200 x 100 mm
Operating temperature	0-49C		
Humidity	10 - 90% non-condensing		
Durability/Shock	IP54		
Safety Standard	Exempt Group per IEC 62471:2006-07		
Standards	FCC Class A, RoHS		
Liveness	Liveness detection compliance as per IEEE Std 2790™-2020 & ISO/IEC 30107-3		
Software AP	Compliant with latest UIDAI Device Capture API Specifications. Windows 11 Professional VDM ready certified by UIDAI		
<p><sup>1</sup>Stationary: Any capture process where the device is stationary and the subject is required to position and rest himself/herself</p> <p><sup>2</sup>Handheld: Operator operates and holds the camera and the subject is stationary.</p> <p><sup>3</sup>Alignment aid: Camera has mechanical fixture for alignment. Optical viewfinder is not considered alignment aid.</p> <p><sup>4</sup>Considered simultaneous if second eye is captured within 2 seconds of first eye done without moving the device.</p> <p><sup>5</sup>Total of only 1 USB port will be available for connectivity and power</p>			
Security – Digital Signature(Preferably at firmware level)			

## Item S.2.2 - Camera

Specification	Details
Standard compliance for image capture	ISO/ IEC 19794-5
Capture Mode	Plain live capture
Image Quality	Full Frontal (0x01) as per ISO/IEC 19794-5
Minimum Resolution	1920x1080
Capture Mode	Manual Capture with Auto Focus and Auto Lighting Adjustment



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Sensor	>2 Mega Pixel Native
Connectivity <sup>6</sup>	High Speed USB 2.0 or higher, USB-IF certified
Lens	Fixed, SLR
Power	Through USB/Independent PS/Lithium Ion
Mount	Tripod/Universal Clip
Operating Temperature	0 to 50 degree Celsius
Humidity	10 – 90%
Safety Standard	UL, IS 616:2017
Software API	Compliant with latest UIDAI Device Capture API Specifications
Durability / Shock	IP 54
<sup>6</sup> Total of only 1 USB port will be available for connectivity and power	
Security – Digital Signature(Preferably at firmware level)	

### Item S.2.3 – Finger Print Device Specification (Slap Scanner)

Specification	Details
Standard compliance for image capture	ISO/IEC 19794-4
Capture Mode	Plain live scan capture
Image Acquisition Requirements	Setting level 31 or higher (Section 9.1 of Biometric Design Standards for UID Applications V1.0)
Image evaluation frame rate	> 3 frames/sec, continuous image capture

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Capture mode	Auto capture with built-in quality check (incorporates NIST quality considerations)				
Capture area	>76mm x 80mm				
Capture sizes	Finger prints	Preferred width		Preferred height	
		(in)	(mm)	(in)	(mm)
	Roll finger	1.6	40.6	1.5	38.1
	Plain Thumb	1	25.4	2	50.8
	Plain 4 fingers (Sequence check)	3.2	81.3	3	76.2
Plain 4 fingers (identification flat)	3.2	81.3	3	76.2	
Pixel depth	1 to 16 bits (size 1 byte)				
Image resolution (horiz) and (vert)	<=scan resolution (horiz) --2 bytes size and <=scan resolution (vert) --2 bytes size				
Resolution of final output image	500 ppi, plus or minus 5 ppi				
Signal - to - noise ratio	Both the ratio of signal to white noise standard deviation and the ratio of signal to black noise standard deviation of the digital scanner >= 125				
Connectivity <sup>7</sup>	USB 2.0 or higher, USB-IF certified				
Power	Through USB				
Dimension (W X H X D)	<180MM x 180mm x 180mm				
Weight	Maximum 2.5Kg.				
Operating temperature	0 – 50 C				
Humidity	10 – 90% non-condensing				
Durability / Shock	IP 54				

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Standards	UL certified (if applicable). Meets ISO 19794-4:2005 Section7 and Annex A certification requirements (IAFIS Appendix F certified).
Software API	Compliant with latest UIDAI Device Capture API Specifications Linux/Windows 64 bit VDM ready certified by UIDAI
Platen Area Hardness	Hardness Test: 6H compliant Tested as per ASTM D3363; RCA Test: 175g, 400 cycles Abrasion test compliant as per ASTM F 2357-04
Liveness	Liveness detection compliance as per IEEE Std 2790™-2020 & ISO/IEC 30107-3
Note: 7Total of only 1 USB port will be available for connectivity and power	
Security – Digital Signature(Preferably at firmware level)	

## Item S.2.4 – GNSS Device

Specification	Details
<b>Environmental Specifications</b>	
Operating temperature	-10 ~ 85°C
Storage temperature	-40 ~ 85°C
Humidity	5% toUp to 95% non-condensing
Water proof	IP54 or higher
<b>GNSS+NavIC Specification</b>	
GNSS Chipset	SIRF Star III/SIRF Star IV GSD4e /Mediatek/u-blox/sky traq *Must support NavIC with other constellation
Frequency	L1&L5 Dual band
Position Accuracy	<5m 3drms
Time Accuracy	15 ns
Channels	>=34 channel + GAGAN SBAS(Preferable)
Acquisition Sensitivity (in – dBm)	-142dBm or better
Tracking Sensitivity (in –dBm)	-156dBm or better
Protocol/Standard support	NMEA 0183 V3.0or latest protocol@ 115200/9600 baud rate, and supports messages: GGA, GSA, GSV, RMC, VTG, GLL,ZDA v2.2
<b>Position fix time</b>	
Hot Start	1-2 sec

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Warm Start	< 30 sec
Cold Start	< 60 sec
<b>Position Update Rate</b>	>= 1Hz
<b>Electrical characteristics</b>	
Voltage	3.5V ~ 6.5V
Current draw	55-80mA
<b>Other Parameters</b>	
Type of connection and Range	Location and Time/NMEA data transmission to be Wireless with min. 50 m range For Wired min.20 m range
Ensuring Coordinate Accuracy	The coordinate must be captured with over 99% accuracy
Accessories	With all necessary required cables and accessories to connect to the PC/Laptop
Warranty	3 years Comprehensive on-site Warranty
<b>Note:</b>	
1.* GNSS receiver should be capable of computing location from NavIC constellation	
2. Total of only 1 USB port shall be available for connectivity and power	

### Item S.2.5 – Single Finger Print Scanner L1 Registered Device (RD)

S. No.	Name/Description	Specifications	Properties
1	Single Finger Print Scanner Registered Device (L1 Compliant)	Yes	Mandatory
2	Single Finger Print Scanner Registered Device for Aadhaar Authentication with STQC UIDAI certified RD Service to the L1 compliant Fingerprint Registered Device	Yes	Mandatory

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3	STQC Certified (STQC Certificate for the Registered L1 device must be submitted)	Yes	Mandatory
4	STQC Certificate Number & its validity(L1 compliant)	Yes	Mandatory
5	Connector Cable to connect the Device to Micro USB/Type C Port	Yes	Mandatory
6	Finger Print Device Connectivity	Through Integrated USB 2.0 or higher	Mandatory
7	Finger Print Device Power	Through USB	Mandatory
8	Sample application for Android platform to test sensor/extractor	Yes	Mandatory

Note: (Refer approved **Single Finger Print Scanner Registered Device** devices on UIDAI website)

## Item S.2.6 – Single Iris Scanner Registered Device (RD)

Note: (Refer approved **Single Iris Scanner Registered Device** devices on UIDAI website)

### SPECIAL TERMS AND & CONDITIONS FOR AADHAAR ENROLMENT KIT

1. Installation & commissioning: Bidder shall provide Remote support Facility for installation of Aadhaar Enrolment Kit
2. Delivery Period: - Bidder shall complete the entire delivery to consignee within 30 days from date of purchase order.
3. Performance bank guarantee – Bidder shall submit the PBG of 10% of the contract value to the purchaser before payment is released
4. Payments: 100 percent of the payment shall be made within 10 days of supply of Aadhaar enrolment kit to consignee after its acceptance & submission of PBG.
5. SLA: In case failing to replace/repair of faulty equipment's within 7 days (equipment's within warranty), Rs100 penalty per day per equipment till the replacement/repair shall be deducted from PBG.